

---

# DISTRIBUTION OF VALUE & POWER IN FOOD VALUE CHAINS

---

CHRISTOPHE ALLIOT  
SYLVAIN LY  
MATTHIAS CORTIN  
HUGO SEGRÉ  
MARION FEIGE-MULLER

BASIC (Bureau for the Appraisal of Societal Impacts for Citizen information)

**This study presents a first attempt to estimate use a comprehensive methodology in order to analyse historic and projected future trends in the distribution of value across a basket of 12 common food products purchased by retailers from 16 producer countries in the Global South, and sold into 7 consumer countries. It also assesses the necessary changes in the distribution of value and/or consumer retail prices to ensure that small producers and workers can achieve a sustainable livelihood.**

# CONTENTS

<b>Executive Summary .....</b>	<b>7</b>
<b>1 Introduction.....</b>	<b>8</b>
<b>1 Setting the scene: Evolution of modern food chains .....</b>	<b>9</b>
Extension of mass consumption & growing influence of retailers.....	9
Restructuring of food chains and concentration of power .....	10
Upstream market pressure leading to increasing social & environmental impacts .	11
<b>2 Objectives, perimeter and methodology of the study .....</b>	<b>12</b>
Objectives .....	12
Choice of products & countries.....	13
Methodological approach .....	14
Conceptual framework.....	14
Operational framework.....	15
Limitations.....	19
Reading guide for estimates.....	20
<b>3 Transversal analysis across products and countries .....</b>	<b>22</b>
Main outputs.....	22
Retailers own the largest share of value, and managed to increase it over the past 20 years whereas small farmers & workers earn a marginal decreasing share ....	22
Across countries and products, the retailers' share of value remains quite stable	23
In comparison, the small farmers' and workers share varies markedly.....	25
Over the years, consumer prices are flattened by retailers and disconnected from upstream price fluctuations .....	26
Key drivers .....	27
Market concentration at the level of retailers and brands .....	27
Types of agricultural producers.....	28
Vertical integration .....	28
Government's intervention .....	30
Gender .....	31
Estimates in 2030 in a 'Business-As-Usual' scenario .....	33
Alternative scenario to ensure small farmers & workers can earn a living income/wage.....	34

## **4 Distribution of value by product at global level..... 37**

Coffee .....	37
Coffee global value chain structuring and evolution .....	37
Coffee value breakdown in Colombia.....	39
Tea.....	43
Tea global value chain structuring and evolution.....	43
Tea value breakdown in India .....	45
Cocoa.....	49
Cocoa global value chain structuring and evolution .....	49
Cocoa value breakdown in Cote d'Ivoire .....	51
Rice.....	56
Rice value chain structuring and evolution .....	56
Rice value breakdown in Thailand .....	57
Shrimp.....	61
Shrimp value chain structuring and evolution.....	61
Shrimp value breakdown in Viet Nam .....	63
Shrimp value breakdown in Thailand .....	66
Shrimp value breakdown in Indonesia .....	69
Canned Tuna .....	73
Canned Tuna value chain structuring and evolution.....	73
Canned tuna value breakdown in Thailand .....	75
Canned tuna value breakdown in Indonesia .....	78
Orange juice.....	82
Orange juice value chain structuring and evolution .....	82
Orange juice value breakdown in Brazil .....	84
Banana.....	88
Banana global value chain structuring and evolution .....	88
Banana value breakdown in Ecuador.....	90
Table grape.....	94
Table grape value chain structuring and evolution .....	94
Table grape value breakdown in South Africa.....	95
Green bean .....	100
Green beans value chain structuring and evolution.....	100
Green beans value breakdown in Kenya .....	101
Avocado .....	105
Avocado value chain structuring and evolution .....	105
Avocado value breakdown in Peru.....	106
Tomato.....	109
Tomato value chain structuring and evolution .....	109
Tomato value breakdown in Morocco .....	110

## 5 Distribution of value by consumer country ..... 114

Germany .....	114
Overview of the food retail sector in the country.....	114
Overview of the food basket value breakdown .....	115
Coffee.....	115
Tea .....	119
Cocoa .....	122
Rice .....	125
Shrimp.....	128
Canned tuna .....	133
Orange juice .....	137
Banana .....	141
Table grape .....	144
Green bean.....	147
Avocado .....	150
Tomato .....	153
Netherlands.....	156
Overview of the food retail sector in the country.....	156
Overview of the food basket value breakdown .....	157
Coffee.....	157
Tea .....	161
Cocoa .....	164
Rice .....	167
Shrimp.....	170
Canned tuna .....	175
Orange juice .....	179
Banana .....	183
Table grape .....	186
Green bean.....	188
Avocado .....	192
Tomato .....	194
United Kingdom.....	198
Overview of the food retail sector in the country.....	198
Overview of the food basket value breakdown .....	199
Coffee.....	199
Tea .....	203
Cocoa .....	206
Rice .....	209
Shrimp.....	212
Canned tuna .....	217
Orange juice .....	221

Banana .....	225
Table grape .....	229
Green bean.....	231
Avocado .....	235
Tomato .....	237
United States of America.....	241
Overview of the food retail sector in the country.....	241
Overview of the food basket value breakdown .....	242
Coffee.....	242
Tea .....	246
Cocoa .....	249
Rice .....	252
Shrimp.....	255
Canned tuna .....	260
Orange juice .....	264
Banana .....	268
Avocado .....	271
South Africa.....	275
Overview of the food retail sector in the country.....	275
Overview of the food basket value breakdown .....	276
Coffee.....	276
Tea .....	279
Cocoa .....	282
Rice .....	285
Canned tuna .....	287
Table grape .....	291
Green bean.....	293
Thailand .....	298
Overview of the food retail sector in the country.....	298
Overview of the food basket value breakdown .....	299
Tea .....	299
Cocoa .....	302
Rice .....	305
Canned tuna .....	307
Orange juice .....	311
Indonesia .....	316
Overview of the food retail sector in the country.....	316
Overview of the food basket value breakdown .....	317
Tea .....	317
Cocoa .....	320
Rice .....	323

Canned tuna .....	325
Orange juice .....	329

<b>Notes .....</b>	<b>333</b>
--------------------	------------

<b>Acknowledgements .....</b>	<b>348</b>
-------------------------------	------------

# EXECUTIVE SUMMARY

At the beginning of 2017, Oxfam International has commissioned this study which is a first attempt – using a comprehensive methodology – to estimate and analyse historic and projected future trends in the distribution of value across a basket of food products purchased by retailers from international markets. It also aims at assessing the necessary changes in the distribution of value and/or consumer retail prices to ensure that small producers and workers can achieve a sustainable livelihood.

By estimating the distribution of value within supermarket supply chains in 7 consumer countries for a sample basket of 12 common food products sourced from 16 producer countries, this study presents extensive new evidence that the socio-economic conditions for small-scale farmers and workers have worsened over the past 20 years, largely to the benefit of supermarkets and to a lesser extent international brands, and are likely to deteriorate further in the years ahead in a business-as-usual scenario.

Our analysis suggests that a point of no return might be reached in which the very viability of small-scale farmers supplying global supermarkets is in question, with increasingly precarious forms of work taking its place. The rights of millions to a decent and dignified standard of living, as well as the health of the natural environment, are likely to be at stake in the short to mid-term.

Our research also investigated the opportunities to chart a different future, in which small-scale farmers and workers manage to make a decent living and realise their human rights, looking to what extent mechanisms and processes such as adequate statutory minimum producer prices and wages; increased bargaining power of small-scale farmers, workers and women; and redistribution of value along the chain, could provide effective solutions to the current situation.

# 1 INTRODUCTION

Over the recent decades, the supply chains of agricultural products have become more global, and tightly coordinated by a small number of food companies and retailing chains that connect agricultural producers with an ever-growing population of consumers.

Since the 1980s, the mergers between input suppliers, commodity traders, food companies and retail chains has made the international market place deeply asymmetrical. This growing concentration of power is not accidental but systemic in the food sector and has structured recurrent patterns of control of agricultural chains by transnational actors who have built a dominating position towards producers in many countries. This power concentration, combined with the growing liberalisation and financialisation of world food markets has also increased price pressure and volatility for most agricultural products, and accelerated the shift towards increasingly intensified and mechanised farming systems.

Even if this context favours medium and large size producers, agricultural products are still overwhelmingly produced by small holders organized in family farms. But the strong asymmetry of power in the world food market hinders their capacity to negotiate fair prices and to gain living incomes through their production. It also prevents them from developing longer term strategies, adapting to climate change and investing in sustainability and quality improvements. This is severely affecting the lives small farmers and rural workers in many regions – in particular women – generating unsustainable livelihoods, child labour, precarious employment..., and thereby leading to the violation of their fundamental rights.

As public opinion gets increasingly sensitive about the issues of social inequalities, human rights abuses and environmental degradation, voters and consumers expect private companies and public actors to engage in long term positive practices to address these critical challenges in the food sector.

However, the lack of transparency on value distribution in agricultural value chains represents an obstacle for citizens to understand the magnitude and drivers of the current problems, as well as for public actors and for those companies that are engaged for sustainability to design programs and policies for reducing the negative impacts and externalities on small holders and rural workers.



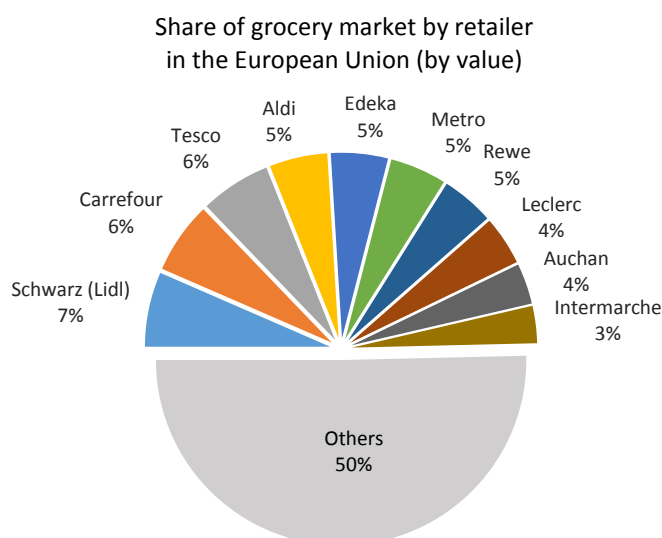
# 1 SETTING THE SCENE: EVOLUTION OF MODERN FOOD CHAINS

## EXTENSION OF MASS CONSUMPTION & GROWING INFLUENCE OF RETAILERS

The modern retailing sector – which covers hypermarkets, supermarkets and discount stores – plays a central role in world food chains, providing farmers with critical access to millions of consumers, and allowing consumers to access all types of food and drink goods<sup>1</sup>. In the European Union – one of the three biggest retail markets with the United States and China<sup>2</sup> – modern retail<sup>3</sup> sales today account for 54% of the total food sales<sup>4</sup>. Food retailers have become influential gatekeepers of trade in food; they choose which suppliers provide consumers through their stores, which food consumers can buy there, and they increasingly influence the conditions under which the food is produced.

While the creation of the first supermarkets dates back to the mid-20th century (first in the USA, then in Europe after the second World War), the movement of globalisation and market liberalisation under way since the 1980s has enabled supermarket chains to accelerate their development and achieve unprecedented international coverage<sup>5</sup>. This sector has also become increasingly concentrated in recent decades<sup>6</sup>. Wal-Mart, the world largest retailer, alone accounts for 6.1% of global retail sales<sup>7</sup>. At a pan-European level, the ten biggest retailers (five German, four French, and one British<sup>8</sup>) represent almost 50% of modern food retail sales<sup>9</sup>. At a national level, the share is even higher, the five largest retailers reaching 83% market share on average<sup>10</sup>. Discounters have the strongest rate of expansion, driven by the growth of private label products focused on every-day-low-price: in 2014, the Schwarz group - better known for its discounter chain Lidl - became the largest European retailer, while Aldi was the 4<sup>th</sup> largest<sup>11</sup>.

**Fig. 1 Market shares of grocery market retailers in the European Union**



Source: BASIC, based on based on Planet Retail, European Grocery Retailing (2014)

The development of supermarket chains appears to be much quicker in developing regions than it was in OECD countries. Driven by income growth, urbanisation and foreign direct investment, modern retail sales are strongly and rapidly increasing in emerging and developing countries, which have become strategic markets for the large international retailers looking for renewed growth opportunities. In addition, governments in the Global South are increasingly facilitating the establishment of supermarkets and deregulating their financial sectors in order to attract international retailers, boost local consumption and foster job creation. To illustrate, supermarket sales went from 5% to 50% of overall food sales in less than 20 years, first in Latin America, then in South-East Asia<sup>12</sup>. This process is currently under way in China, and just starting in India and Eastern Africa<sup>13</sup>. In other countries such as South Africa, supermarket chains already play a prominent role. Around 65% of all retail food sales, and 97% of all formal retail food sales, are estimated taking place through one of the “Big Four”<sup>14</sup>. The biggest supermarket Shoprite operates in more than 16 African countries<sup>15</sup> and global retailers are also moving in the continent.

The expansion of supermarkets in these regions takes normally place in three distinct “waves” of products: the first tends to be in packaged (processed) foods, such as canned meat and vegetables and dry items like rice; the second wave is in semi-processed foods, such as fresh milk and ready-packed fresh meat; the third is in fresh fruits and vegetables.

This ‘supermarket revolution’ is taking place at the expense of traditional shops and wet-markets<sup>16</sup>. While retailers start by purchasing from local wholesale markets, they quickly shift their sourcing to buy directly from a small number of preferred suppliers<sup>17</sup>. They gradually exclude small local producers from their supply chains and rely instead on large domestic and foreign farms that achieve high economies of scale, meet their private quality standards and accept to take responsibility for all post-harvest activities in order to remain on their Preferred Suppliers List<sup>18</sup>. The exact same process has been taking place in Europe for several decades and is accelerating further at present times.

## RESTRUCTURING OF FOOD CHAINS AND CONCENTRATION OF POWER

At the beginning of the 21<sup>st</sup> century, agriculture continues to be characterised by a strong atomisation of producers and consumers.

Despite rapid urbanisation and the increase in large-scale commercial farming, much of agriculture around the globe is still in the hands of small-scale producers<sup>19</sup>. Over a third of the world’s population is rural and 2.5 billion people worldwide depend on agriculture for their livelihoods (five-hundred million smallholder farms worldwide are supporting around 2 billion people<sup>20</sup> and 450 million workers are working globally in agriculture<sup>21</sup>).

On the other side of agrifood chains, the 7 billion consumers are increasingly urban people: more than half the world’s population live in cities<sup>22</sup>, and by some estimates more than half of this urban population is now middle class, thanks to rapid growth in emerging economies<sup>23</sup>.

Between producers and consumers, agricultural value chains have been undergoing a process of profound transformation, which is in constant acceleration. Supermarket chains are developing their networks and their offer of processed products; public regulatory tools of agricultural markets are being increasingly dismantled; distributors, processors, transporters and companies producing seed are undergoing a general trend of economic concentration.<sup>24</sup>

The growing concentration of these actors has made them ‘the narrow conduits through which goods must pass in order to reach the final consumer’. Their buyer power gives them a strong capacity to closely coordinate agrifood chains and set the prices of the agricultural products they buy<sup>25</sup>.

At the agricultural stage, the focus has switched from what the producers can offer to what the buyers require. Farmers no longer produce first and then look for a market. Instead, those who control supply chains decide what they believe the client or consumer needs, and then design the supply chains required to deliver those products<sup>26</sup>. Lead buyer requirements and standards have led to the restructuring of the chains, favouring the larger producers, exporters, manufacturers and input providers that can more easily meet their demands<sup>27</sup>.

## UPSTREAM MARKET PRESSURE LEADING TO INCREASING SOCIAL & ENVIRONMENTAL IMPACTS

The combination of power concentration in agricultural chains, combined with the liberalisation and financialisation of markets generates significant impacts on small farmers, workers and ecosystems.

The gradual dismantling of price-stabilisation tools (quotas, stocks) and the collapse of several international commodity organisations have created the conditions in which buyer power could accumulate and result in strong price pressure on suppliers in the name of consumer interest, while increasing the risks of unfair trading practices. It also facilitated speculation by large financial actors and fuelled price volatility on agricultural commodity markets over the past two decades.<sup>28</sup>

These profound evolutions have accelerated the shift towards more intensified and mechanised farming systems, in the search for economies of scale, productivity and financial gains. They pose critical challenges to the sustainability of many rural regions regarding farmers’ living conditions, workers’ labour rights, falling employment, pollution and depletion of natural resources.<sup>29</sup>

As public opinion gets increasingly sensitive about the issues of environmental degradation and inequalities, voters and consumers expect private firms and public actors to engage in long term positive practices to address social and ecological challenges. The lack of transparency along agricultural value chains, thus, represents an obstacle for those companies that want to invest in sustainability. At the same time, it hinders the capacity of public actors to design programs and policies for reducing the negative impacts and externalities of the value chains.

# 2 OBJECTIVES, PERIMETER AND METHODOLOGY OF THE STUDY

## OBJECTIVES

In this context, Oxfam International has commissioned this study which is a first attempt to estimate and analyse – using a comprehensive methodology – historic and projected future trends in the distribution of value across a basket of food products purchased by retailers from international markets. It also aims at assessing the necessary changes in the distribution of value and/or consumer retail prices to ensure that small producers and workers can achieve a sustainable livelihood.

The priority areas and main research questions investigated by this study are the following:

A. How has the distribution of value along food value chains changed over the last 20-30 years, and why? In particular:

- How do consumer retail prices compare today with 20-30 years ago?
- How does the proportion of the value captured by retailers compare today with 20-30 years ago, and what accounts for any change?
- How does the proportion of the final consumer retail price reaching producers/workers compare today with 20-30 years ago, and what accounts for any change?
- How do the costs of production and/or costs of living of the producers and workers in those value chains compare today with 20-30 years ago, and what accounts for any change?
- Is the proportion of value reaching producers/workers enough for them to achieve a living income/living wage?

B. How would redistribution of value towards producers/workers have an impact on incomes/wages? In particular:

- What impact would a return to the highest proportion of the consumer price reaching producers/workers over the last 20-30 years have on worker wages and/or smallholder incomes?
- In which products and/or under what circumstances is redistribution of value towards producers/workers insufficient to enable producers/workers to achieve a living income/wage?
- Under such circumstances, to what extent would consumer retail prices need to rise to enable producers/workers to achieve a living income/living wage?

C. Given the historic trends, what projections could be made about the distribution of value in 2030? In particular:

- What could the proportion of the final consumer retail price reaching producers/workers be in 2030?
- What could be the implications for such a scenario for consumer retail prices and the viability/sustainability of production?

# CHOICE OF PRODUCTS & COUNTRIES

To achieve these objectives, food products were identified and selected according to the following criteria:

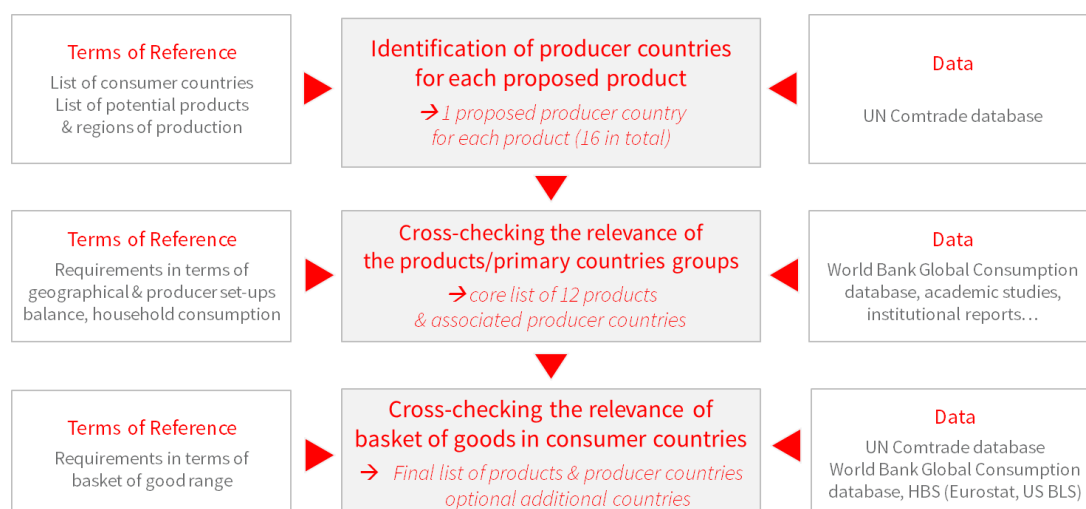
- products easily recognizable by consumers in order to enable them to make a more direct connection with agricultural farmers and workers (hence excluding heavily mixed and processed products such as ready meals...),
- products widely consumed in certain key regions identified by Oxfam: USA, UK, Germany, Netherlands, Thailand, Indonesia, South Africa,
- products cultivated in the 3 continents of the Global South (Africa, Latin America and Asia) in a wide geographic scope of countries,
- products cultivated in small holder-based as well as plantation-based farming systems, with a balanced representation of both situations,
- products characterized by women's participation,

The resulting scope of goods included in this study is the following:

- coffee
- tea
- cocoa
- rice
- shrimp
- canned tuna
- orange juice
- banana
- table grape
- green bean
- avocado
- tomato

In order to identify and select the associated producer countries, we have followed a 4-steps process which is illustrated below:

**Fig. 2 Identification & selection process of producing countries**



Source: BASIC

The resulting list of proposed producer countries, and associated products, is shown in the table below. As illustrated, this set of countries offers a good balance of origins across the 3 continents and a good balance of producer set-ups (small-scale farming and plantations using hired labour).

Continent	Countries of production	Products	Producer set-up
Latin America	Brazil	Orange juice	Small holders + plantations
	Ecuador	Banana	Small holders
	Colombia	Coffee	Small holders
	Peru	Avocado	Plantations
Africa	Morocco	Tomato	Plantations
	Ivory Coast	Cocoa	Small holders
	Kenya	Green bean	Small holders + plantations
	South Africa	Grape	Plantations
Asia	India	Tea	Plantations
	Indonesia	Shrimp Tuna	Small holders -
	Thailand	Rice, Shrimp Tuna	Small holders -
	Vietnam	Shrimp Tuna	Small holders -

## METHODOLOGICAL APPROACH

### Conceptual framework

Our analysis of value chains is both quantitative and qualitative, based on the conceptual frameworks of Global Value Chains and Global Production Networks.

The concept of Global Value Chains (GVCs) derives from the world systems theory developed by Immanuel Wallerstein in the 1970's. He introduced the concept of global commodity chains (GCCs) defined as 'networks of labour and production processes whose end result is a finished commodity'<sup>30</sup>. In 1994, Gereffi and Korzeniewicz revived the concept in order to better understand the impacts of growing trade liberalisation, focusing on the strategies and actions of lead firms conceived as the core actors in a globalised economy<sup>31</sup>. In 2005, Gereffi, Humphrey and Sturgeon consolidated the global commodity approach with the theory of Global Value Chains (GVC)<sup>32</sup>.

More recently, the related conceptual framework of Global Production Networks (GPN) has been developed by the Manchester school of geography, as a multi-dimensional approach to understand the structuring of value chains with a particular focus on "value generation/capture", "power" (corporate, collective and institutional) and "embeddedness" (territorial and network).

In comparison with other approaches, the theories of Global Value Chains and Global Production Networks provide a radically new view on international trade<sup>33</sup>:

- They enable to analyse the whole set of economic activities and actors ranging from the production of raw materials up to the end consumption of final products, whereas traditional economic trade theory only focuses on supply and demand.
- They offer a framework to investigate the interactions between the configuration of global chains (input-output, key nodes, territories, governance and institutions....) and their economic determinants (supply and demand, value and cost breakdown, price dynamics, income distribution...)
- They focus on the institutional context of power relations in which trade is embedded, the characteristics of economic governance and share of value, with key agents setting the rules of the game, while economic trade theory assumes that 'buyers and sellers in different markets meet each other as independent agents'.

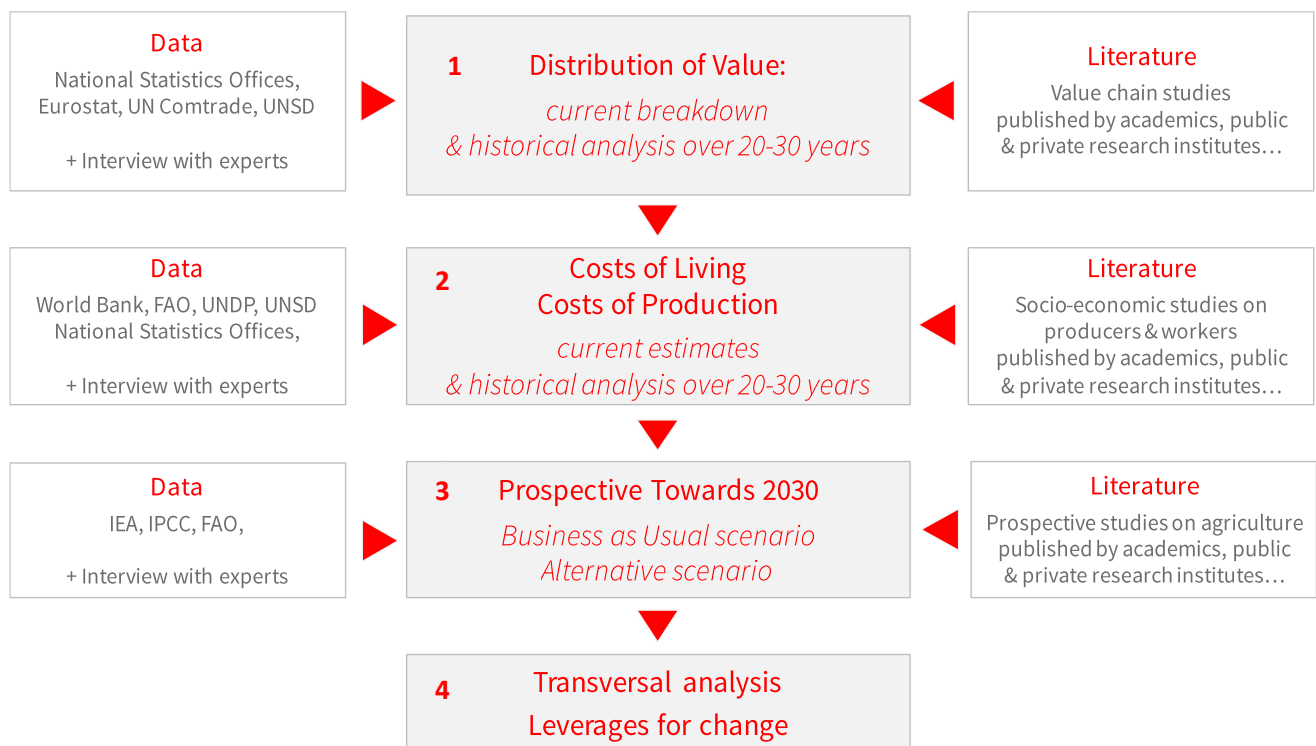
Over the past 20 years, Global Value Chain and Global Production Network analysis have been flourishing approaches used for studying the dynamics of globalisation and economic governance. Widely adopted by sociologists and geographers, it has also attracted growing interest from economists, anthropologists and historians to analyse the international organization of industries such as food, clothing and electronics<sup>34</sup>.

More recently, a number of international agencies such as the World Bank, the OECD, the ILO and the FAO have also started to use Global Value Chain analysis to investigate industrial upgrading and poverty alleviation.

## Operational framework

Operationally, we have implemented a 5-tier research process (see diagram below):

**Fig. 3 Operational research framework used for the study**



Source: BASIC

The **first phase of the work** has been to estimate and analyse the value distribution for each set of “product-consumer country-producer country”. In order to achieve this, we have collected information at a series of reference points (the same across all value chains):

- Average consumer prices in supermarkets (end price of the product)
- VAT rate
- Intermediate prices in consumer countries (wholesale prices for fruits & vegetables, price of semi-processed products e.g. chocolate couverture, cocoa mass...)
- Import prices (CIF and FOT)
- Export prices (FOB) and costs of shipping (including insurance)
- Intermediate prices in producer countries (price of semi-processed products e.g. frozen concentrated orange juice...)
- Average farmers’ prices
- Average workers’ wages

The necessary information has been collected through a combination of:

- Data extracted from public databases:
  - National Statistics Offices of all consumer and producer countries under investigation (e.g. Eurostat, UK ONS, DEStatis...) for data on consumer prices, VAT rate, intermediate prices (e.g. wholesale prices), farmers’ prices and workers’ wages between 1991 and 2015.
  - UN Comtrade for import and export data (volume and value) between 1991 and 2015 on the agricultural products analysed and the associated semi-processed goods (e.g. cocoa paste, cocoa butter and chocolate couverture for cocoa).
  - The World Bank pink sheet, UNCTAD, FAOStat OECD, CEPAL and IMF to build a comprehensive referential of price indices between 1991 and 2015 for all the cost components of products and countries analysed (e.g. indices for energy, transports, fertilizers, packaging, custom duties, labour...)

➔ **The statistical data consolidated for this study originates from more than 20 national and international public databases.**

- Extensive literature review: value chain analysis published by academics, public and private institutions (e.g. World Bank, FAO, OECD, USDA, CBI, BCEAO, Bank of Thailand, Nha Trang University, CEPAL, CIRAD, Humbolt University, Wageningen University) have been identified and analysed for each product and country under investigation in order to:
  - Understand the structure of the chain at the global level as well as in each producer and consumer country analysed (main actors, market shares, power relations, public and private governance tools...)
  - Understand the technical functioning of the chain from agricultural producers up to final consumers and collect complementary data on costs of processing at different point in time (in order to fill in the missing data in public databases).

➔ **More than 250 studies and papers were reviewed, analysed and cross-checked for the first phase of the work, on average around 20-25 for each product under investigation (see the references at the end of the report for more details).**



- Interviews with value chain experts and key informants from each industry and country under investigation in order to “fill in the blanks”, make up for missing data/elements and provide qualitative analysis and insights.

➔ **More than 15 interviews with experts were conducted to cross-check and consolidate estimates and value chains analyses.**

Based on these, we have conducted a quantitative and qualitative analysis of the distribution of value in the selected agricultural chains, and of its evolution over the last 20 years. We have investigated more particularly the causes of the observed changes in terms of business trends, value chain structure, institutional context, market governance and power concentration.

The estimates of prices and costs along the chain – from farm inputs up to consumer prices – were consolidated between 1991 and 2015 for the 12 products, 7 consumer countries and 12 producer countries under investigation. Results were expressed systematically in 3 currencies – dollar, consumer country currency (e.g. euros, British pounds, South African rands...) – adjusted for local inflation in each country and adjusted for real exchange rates in order to avoid potential currency distortions (see the boxed text below).

### ***Real Exchange Rate Adjustment method***

#### Objective

This method aims at correcting the effects of over/under valuation of the currency of any given country where the transaction occurs in comparison with another country chosen to express the results of calculations.

All estimated data in the graphs have to be adjusted on a same economic basis, i.e. using the same reference country whose currency is used to display the results of calculations (as an example, if we choose to express our data in US dollars, all data from other countries have to be adjusted based on the USA economic base). To adjust the data, we used the Consumer Price Indices (CPI) to calculate Real Exchange Rates (RER) in all countries.

#### Reference Countries

From the costs of farm inputs up to the FOB price (not included), the reference country for transactions is the producer country. From the FOB price up to the final consumer price, the reference country for transactions is the consumer country.

#### Method

The formulae to calculate  $LCU_{RER}$ , the local currency unit (LCU) adjusted by the real exchange rate method, is the following:

$$LCU_{RER} = USD \times \frac{\text{CPI country where the transaction is taking place}}{\text{CPI country chosen to express results in its LCU}}$$

#### Example

Conversion of the Vietnamese shrimp producer price, from VND to USDRER

$$USD_{RER} = \underbrace{VND \times XCR}_{\text{USD}} \times \frac{\text{CPI Vietnam}}{\text{CPI USA}}$$

Source: BASIC

The **second part of the process** has focused on investigating in more details the costs of agricultural production, the actual income/wages achieved by small-scale farmers and workers, their costs of living and estimates of living income/wages. To achieve this, we have used the following sources:

- Data extracted - when available - from National Statistics Offices in producing countries (as well as the FAO, UN agencies...) on the yields, costs of inputs, farmers' income and workers' wages... and their evolution over the past 20-30 years
- Socio-economic studies published by academics, public and private research institutes on:
  - Producer set-ups and costs of production for the different commodities and countries included in the study: sectoral diagnosis performed by trade or agriculture ministries in producing countries, by PhD/Masters students...
  - Living income / Living wage by country: studies commissioned by the Global Living Wage Coalition (based on the methodology developed by R. & M. Anker), absolute poverty analysis conducted in collaboration with the World Bank, studies conducted by the Ministries of Labour in producer countries, estimates of the World Banana Forum, surveys conducted by Trade Unions...

➔ **More than 60 additional studies were reviewed, analysed and cross-checked for this second phase of the work.**

- Interview with value chain experts and key informants from each producer country in order to "fill in the blanks", make up for missing data/elements and provide qualitative analysis and insights.

➔ **More than 10 additional interviews with experts were conducted to cross-check estimates and analyse costs of production and living income/wages**

Based on these, we have conducted a quantitative and qualitative analysis of the evolution of costs of production and costs of living vis-à-vis the evolution of the value left for the small-scale farmers and rural workers analysed in the previous stage. We have investigated more particularly the causes of the observed changes, the social consequences on farmers and workers – with a focus on women – and more globally the (un)sustainability of their situation.

On this basis, the **third phase of the work** has focused on a "Business as Usual" prospective scenario. In order to develop it, we have first identified and collected existing scenarios to 2030 that can serve as a basis of inspiration / reference, in particular:

- The scenarios and projections developed by the World Bank and the OECD on commodity price evolution towards 2030
- The scenario developed by the FAO (Food & Agriculture Organisation) on "World Agriculture towards 2030/2050"
- The models and scenarios towards 2050 on world agriculture & sustainability issues developed by the CIRAD (French agricultural research and international cooperation organization): "Agrimonde" and "duALIne", respectively published in 2009 & 2011

After reviewing these scenarios, we have chosen to use the estimates of the World Bank and linear regressions when these were not available, so as to project the "most probable" evolution toward 2030 of:

- Consumer prices in supermarkets
- Farmers' prices and Workers' wages
- Costs of agricultural production (in particular inputs)

For this phase of the work, we have interacted with IDDRI (Institute for Sustainable Development and International Relations) to strengthen our projection and analytical method.

Eventually, **in the final stage**, we have used the main results of the previous phases of the work to conduct a transversal analysis across the full range of products and countries analysed.

To achieve this, we have consolidated our estimates in three different stages:

- Firstly, we have calculated the value distribution for each product at the global level, using a weighted average of our estimations for each consumer country. This weighted average was calculated based on the value of imports recorded in the Comtrade database for the given product and consumer country for all years between 1991 and 2015.
- Then, we have calculated the value distribution for the whole basket of goods for each consumer country, using a weighted average of all the products included in the basket. This weighted average was calculated based on national CPI weights for each product (when this data was publicly available) or the average spending of households per category of products recorded in the World Bank consumption database (especially for consumer countries in the Global South).
- Finally, we have combined the two previous methodologies to consolidate our value distribution estimates at a global level, i.e. for the whole basket of goods and for all the consumer and producer countries analysed.

Based on this data consolidation work, we have analysed the global estimates and investigated the factors that were most influential on the end results: market concentration, level of vertical integration, government's intervention, gender...

We have also investigated the potential levers for change that could enable to ensure that farmers and workers could earn a living income/living wage, with a specific focus on:

- Need for consumer retail prices increases (while maintaining the same distribution of value)
- Possibility to redistribute value in favour of small farmers and workers (and thus reducing traders/processors and/or retailers shares of value),

## LIMITATIONS

The main challenge of the study has been to collect detailed and credible data along value chains from producers up to retailers. Indeed, prices, costs and margins are some of the most confidential information in business, very difficult to access from outside and to counter-verify.

To address this challenge, this is why we have chosen to:

- Start by collecting and analysing available statistics from public and private databases (Eurostat, UN Comtrade, World Bank, research institutes, ministries...)
- Combine this quantitative data with the qualitative analysis emerging from a wide range of literature through different angles of investigation (sociologic, economic, historic...),
- Cross-check and enrich this information/analysis through a network of experts on value chains and sectors

Another important issue is the specific approach needed to determine the value distribution of processed products (e.g. chocolate, orange juice, canned tuna...). This has required to develop a modelling of a "standard" product and associated value chain (e.g. dark chocolate bar with 70% of cocoa content) in order to calculate the raw material content of the final product through a set of conversion and dilution factors.

The modelled value chains only provide quantitative estimates/orders of magnitude for the most common set of actors and operations from agricultural cultivation by small farmers and workers, up to the consumer purchases in retail shops. A wide variety of other organisational frameworks

can be found in reality for each product analysed, leading to potential variations in the value distribution estimates. However, the prices and costs levels and trends calculated in this study provide a first comprehensive evaluation and a sound basis for discussion among actors and stakeholders of each of the value chain analysed.

Regarding the basket of goods analysed, it is not statistically representative of the most consumed products in each country (based on the dietary traditions and patterns); however, it covers a wide variety of products from very common items such as rice and bananas (which are also loss-leaders in Europe and the USA) to more exclusive products such as chocolate or table grapes. One of the consequences of this diversity is that some products had too small quantities imported in some consumer countries to conduct a meaningful estimate. This is why some products have not been analysed for some consumer countries, and the resulting basket of goods only takes into account part of the 12 products included in the scope of the study, but still provides meaningful orders of magnitude.

Regarding the estimation of living incomes and living wages in the different countries, our approach only gives a first estimate; a more refined methodology would be required to collect up-to-date ground data on specific costs of living in the relevant sectors and region. Given the objectives of the study, and the time & resource constraints, we have used the most recent studies conducted on this subject in the countries and product under investigation.

Finally, regarding the prospective work, the ambition of the study is not to make accurate forecasting of costs and prices towards 2030, especially given the uncertainty of the economic context since the crisis of 2008. Instead, the objective has been to develop a credible “image” of the probable evolution of value distribution in food chains, other things being equal.

## READING GUIDE FOR ESTIMATES

Our value distribution estimates are always displayed according to the following framework:

**Fig. 4 Operational research framework used for the study**

ACTOR	CONTENT OF THE SHARE OF VALUE
Retailer	<ul style="list-style-type: none"> <li>- profit</li> <li>- annual payroll of their employees</li> <li>- costs of their shops and offices</li> <li>- costs of storage and logistics from regional distribution centres to local shops</li> <li>- financial costs to cover foreign-exchange risks</li> <li>- payment of tax and other financial expenses</li> </ul>
Middle chain actor	<ul style="list-style-type: none"> <li>- profit</li> <li>- logistics and processing costs</li> <li>- annual payroll of their employees</li> <li>- financial costs to cover foreign-exchange risks</li> <li>- payment of tax and other financial expenses</li> </ul>
Producer	<ul style="list-style-type: none"> <li>- profit – income</li> <li>- social contribution</li> </ul>
Worker	<ul style="list-style-type: none"> <li>- wages</li> <li>- employer &amp; social contribution</li> </ul>
Cost of inputs	<ul style="list-style-type: none"> <li>- agro-chemicals &amp; seeds</li> <li>- energy &amp; water</li> <li>- Etc.</li> </ul>

Source: BASIC

It should be noted that share of value should not be mistaken for net profits or benefits: each actor along the chain uses the share of value that it manages to capture in order to cover its internal costs, and potentially make a net benefit, once all costs have been paid.

As illustrated in the previous diagram:

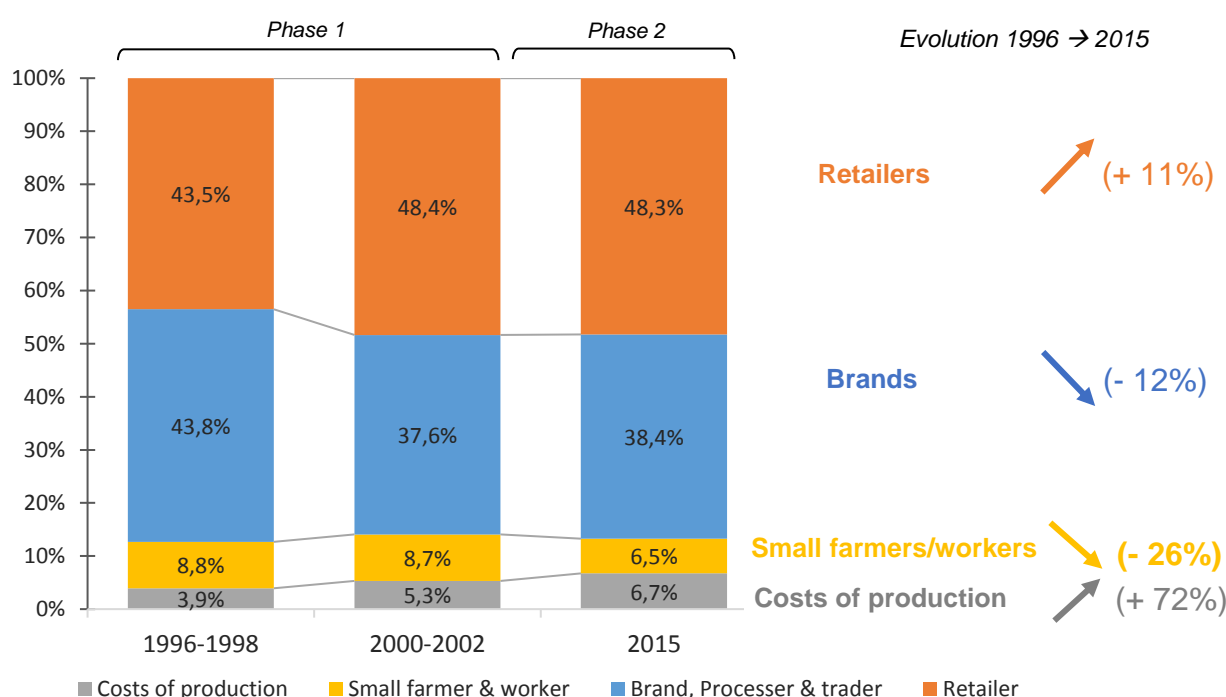
- The retailers' share of value is the money left when they have paid the products to their suppliers. They use this money to pay their employees, manage their stores, organise the logistics through their distribution centres, invest in marketing and communications, pay their taxes and their financial expenses...and potentially make a net profit on top of it.
- The brands" and processors' share of value is the amount of money they get after deduction of the payment of their own suppliers. They use this money to cover their costs of production (energy, packaging, machinery....), pay their employees, conduct marketing campaigns, pay taxes and financial expenses, plus a potential net profit.
- The small farmers" share of value in our estimates is what is left for them to make a living (for themselves and their family) after the payment of their workers and costs of farm inputs (agrochemicals, water, energy...)
- The workers share of value is the money allocated to both workers' wages, and the social contributions of employers and workers (hence it is not the net wage received by workers).
- The last component is the costs of farms' inputs (fertilizers, pesticides, water, oil....)

# 3 TRANSVERSAL ANALYSIS ACROSS PRODUCTS AND COUNTRIES

## MAIN OUTPUTS

**Retailers own the largest share of value, and managed to increase it over the past 20 years whereas small farmers & workers earn a marginal decreasing share**

Fig. 5 Evolution of the basket value breakdown across the countries analysed



Source: BASIC

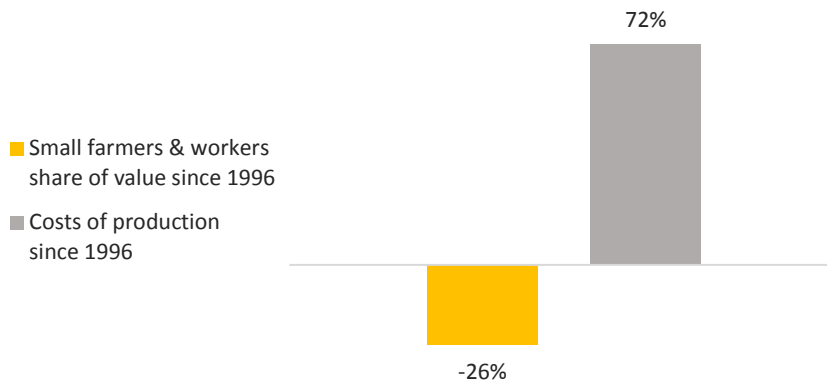
The **first key learning** of the study is that **retailers, according to our estimates, appear to be the actors who earn the biggest share of value across the countries and the basket of products analysed**, while small farmers and workers only achieve a marginal share (see sections 4 and 5 for more details on products and countries).

Looking at the evolution of the value breakdown of the basket of products at global level (see above diagram), our evaluation highlights two distinct phases over the last two decades:

- at the end of the 1990s and beginning of the 2000s, retailers have apparently managed to increase significantly their share of value from 43.5% up to 48.4% on average, while the share of value accruing to brands, processors and traders decreased notably. In this first phase, the share of value of small farmers and workers apparently resisted while the costs of production (fertilizers, pesticides, energy...) increased by 40%.
- Since 2002, the total value allocated to production has decreased from 14% to 13.2%. More specifically, the value accruing to small farmers and workers has been squeezed from 8.7%

down to 6.5% under the combined pressure of increasing costs of production on the one hand, and upstream buyers on the other (in particular brands, processors and traders who managed to regain some of their lost share of value while retailers maintained their share).

**Fig. 6 Comparative evolution of small farmers' & workers' share of value Vs costs of production between 1996 and 2015**



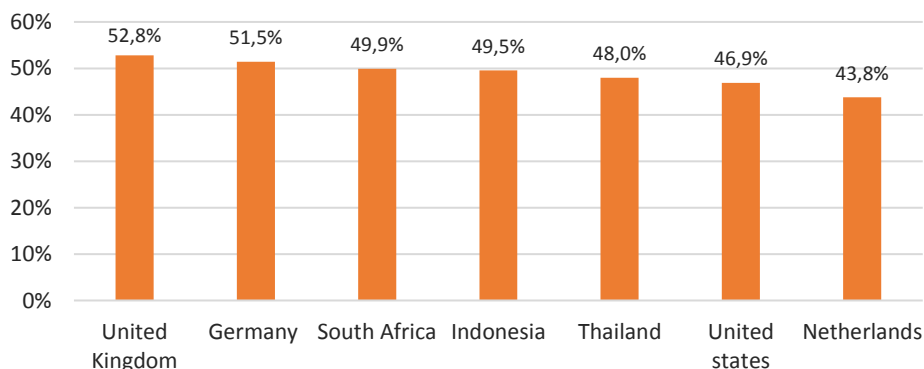
Source: BASIC

Looking more specifically at the agricultural costs of production (pesticides, fertilizers, energy, irrigation...), our research shows that they have significantly increased not only globally (by more than 70% since 1996), but in almost all the products and countries analysed (see the detailed estimates for each product and country in the section 4 of the report). In this context, our estimations tend to show that the small farmers and workers have played the role of adjustment variables by leading buyers in the chain, with significant consequences on their share of value and incomes/wages.

In contrast, internal costs of brands and processors (labour, energy, packaging, marketing...) appear to have increased on average by little more than inflation in the countries analysed (see sections 4 and 5 for more details in each country). In addition, several studies<sup>35</sup> document the tendency to offshore part of their activities to countries with lower labour costs when margins are very tight for certain products. This is for example the case of cocoa grinding activities displaced from Europe to Cote d'Ivoire, banana packing activities moved from Northern Europe to Ecuador, shrimp processing in Vietnam....

## Across countries and products, the retailers' share of value remains quite stable

**Fig. 7 Average share of value of retailers by consumer country (global basket - 2015)**

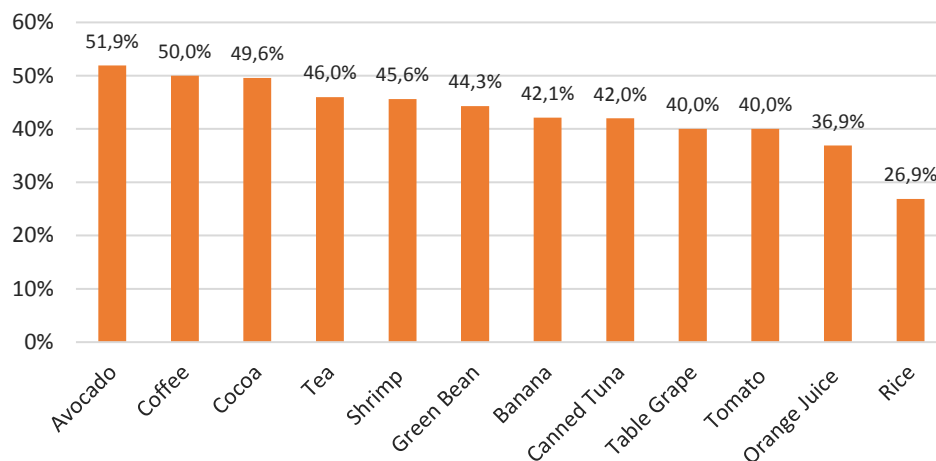


Source: BASIC

The **second key observation is the apparent ‘universality’ of the economic model implemented by retailers, which enable them to achieve a similar share of value across the countries** analysed, from mature markets such as in the USA and Europe, to emerging economies such as Thailand, Indonesia and South Africa.

According to our ‘basket of goods’ estimates in 2015, the retailers’ weighted average share of value reached more than 50% in Germany and the United Kingdom, close to 50% in Indonesia and South Africa, 48% in Thailand, 47% in the United States and 44% in the Netherlands.

**Fig. 8 Average share of value of retailers by product (global level - 2015)**



Source: BASIC

As illustrated above, variations in retailers’ share of value are slightly more pronounced when taking a product perspective, mainly because retailers apply different margins depending on the product category and compensate low margins on ‘loss leaders’ such as rice with more profitable products. Globally, across almost all the products analysed, retailers are the actors who earn the biggest amount of the value (see section 5 for more details on products and countries).

### ***The retailers’ share of value***

Our estimate of the retailers’ share of value should not be confused with their gross margin nor their net profit (see section 3 and 4 of the report for more information). Our estimate corresponds to the money left for them after deducting the price of the products purchased from their suppliers (brands, wholesalers...). This money enables retailers to cover:

- the costs related to the storage and logistics of products from their regional distribution centres to local shops.
- the financial costs to cover foreign-exchange risks for products they directly buy from foreign suppliers (namely for fruits and vegetables).
- the annual payroll of their employees, both in stores and in central services
- the costs of their shops and offices
- the payment of tax and other financial expenses
- potential goods loss due to their perishability (namely for fruits and vegetables)

As a result, our estimate of the retailers’ share of value is higher than the gross margin they report annually<sup>36</sup>, because gross margin calculation methods:

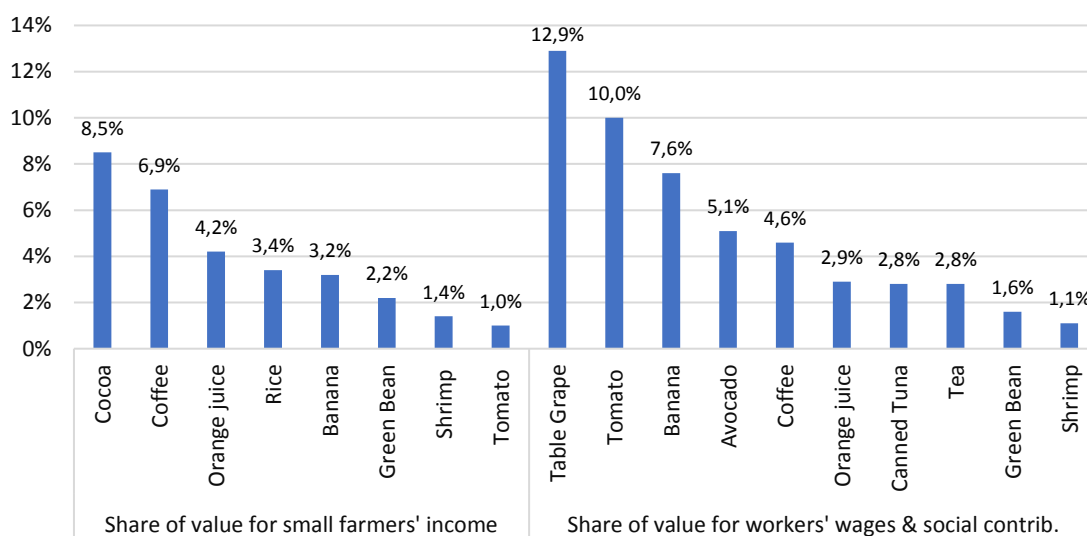
- exclude storage and logistics costs as well as the buying groups costs,
- provide an average result across the wide diversity of product categories sold in retailers’ stores.

Source: BASIC



## In comparison, the small farmers' and workers share varies markedly

Fig. 9 Average share of value of small farmers/workers by product at global level (2015)



Source: BASIC

In contrast with the previous point, the **share of value allocated to small farmers' income and workers' wages appears to vary more significantly** across the products analysed, and appears to be **most often the smallest** in comparison with retailers, brands and processors (see sections 4 and 5 of the report for detailed analyses per product and country).

According to our estimates in 2015, the average share of value accruing to small farmers' income varied from 8.5% in cocoa down to 1.0% in tomato, while the share of value allocated to workers' wages (including social contributions) varied from 13% in table grape to 1% in shrimp

*Note: these share of value in percentage do not indicate the amount of money earned by small farmers and workers, which depends on the price at which each product is sold to the end consumer, and the labour intensity to produce it.*

### **The small farmers' and workers' share of value**

Our estimate of the small farmers' share of value corresponds to the money left for them after deducting the costs of farms inputs (fertilizers, pesticides, energy, feeding...) and labour costs (mostly seasonal). Small farmers use this money to cover the costs of living of their family (food, housing, health, education...), but also pay back their loans and renew their equipment.

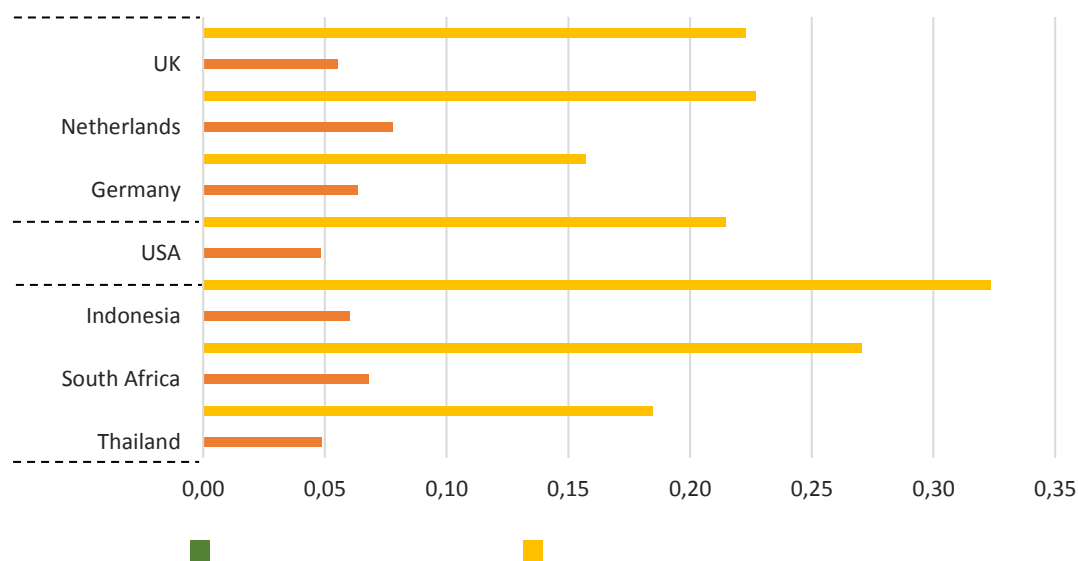
Our estimates of the workers' share of value corresponds not only to the wages they earn - and which enable to cover the costs of living of their family (food, housing, health, education...) - but also the employer and social security contributions. At times, this share of value can correspond to sub-contracting of temporary and casual workers to external agencies.

Source: BASIC

## Over the years, consumer prices are flattened by retailers and disconnected from upstream price fluctuations

Another salient output of the study is the outstanding difference in price volatility between the middle and the end of the chain. The volatility index displayed below is the standard deviation of annual prices – at import level and at consumer level – between 1996 and 2015. Calculations have been made in each consumer country for the whole basket of food products analysed.

**Fig. 10 Volatility Index of consumer Vs import prices by consumer country (1991-2015)**



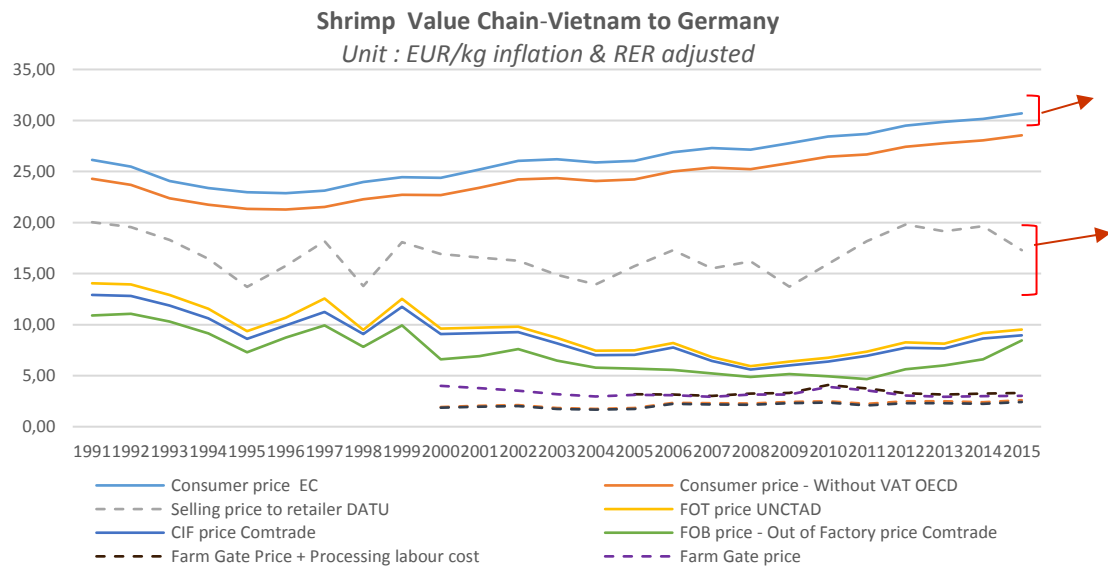
Source: BASIC

According to our estimates, **consumer prices appear to be largely disconnected from the volatility of agricultural prices**: price volatility is 3 to 5 times lower at the consumer end of the chain than at the import stage.

Moreover, this phenomenon appears to be further **amplified towards the beginning of the chain where farmers, especially the smallest ones, have very little capacity to face the unpredictability of prices** (which is much higher when considered on a weekly basis than on a yearly basis as in our estimates), except when public intervention schemes are in place (e.g. government's support price in Cote d'Ivoire for cocoa farmers and in Ecuador for banana growers).

Reversely, at the other end of the chain, our analysis shows that **retailers have a strong capacity to "absorb" short-term price increases of supply** - including significant spikes - and globally **maintain prices stable for consumers in the long run**. They manage to do so thanks to the high share of value they get on most products combined with the very large range of goods they sell in their stores (which enable them to compensate temporary lower margins on some items with more profitable goods).

**Fig. 11 Illustration of the difference in price trends between retailers, brands, small farmers and workers**



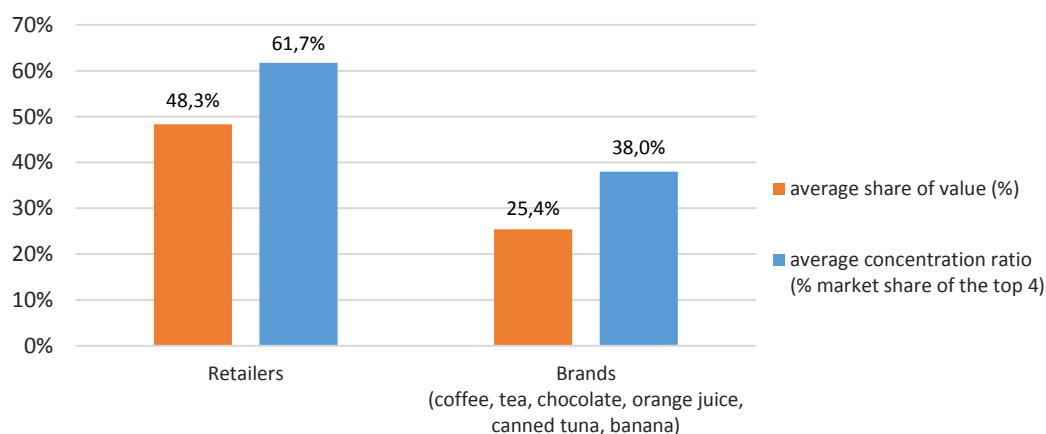
Source: BASIC

A typical illustration (amongst others) is provided above: the line chart shows the estimates of price breakdown for shrimps produced in Vietnam and sold in Germany since 1991, from consumer price (in blue) down to producer prices and costs of labour/inputs (in dotted lines). As per this example, in the majority of products and countries analysed in this study, **retailers appear to “cushion” price changes further up in the chain over the long run** (i.e. limiting increases in case of peaks, but also remaining relatively stable in case of drops).

## KEY DRIVERS

### Market concentration at the level of retailers and brands

**Fig. 12 Average share of value and market concentration (retailers Vs brands - 2015)**



Source: BASIC

**The first key driver of value distribution along the chain appears to be market concentration, which is especially visible at the level of retailers and brands:**

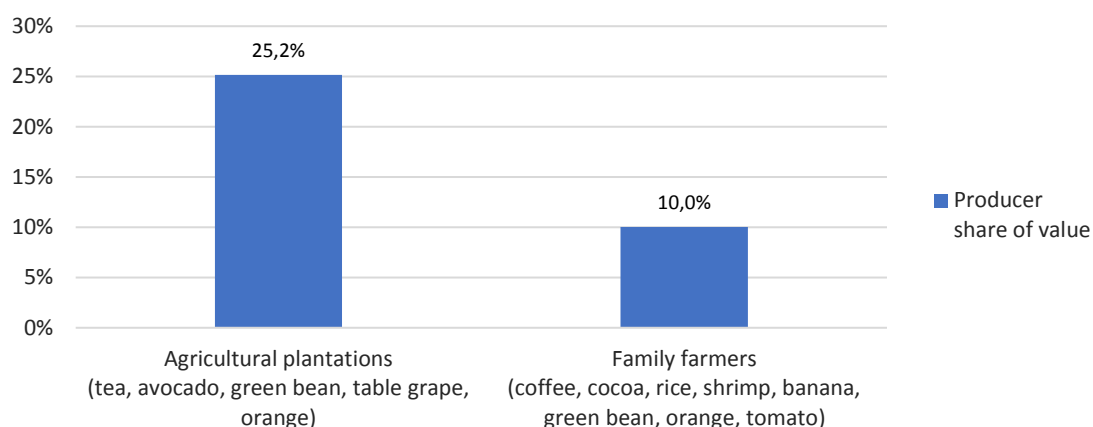
- retailers are both the actors who capture the largest share of value (around 48% in our global estimate) and the most concentrated link in the chain (the top 4 retailers reaching on average 60% market share of 'modern food retail'<sup>37</sup> in the consumer countries analysed).
- brands make up the second category of actors capturing the main share of value (around 25% on average) for which the top 4 actors represent almost 40% market share at global level (for products where public data is available).

In order to fully demonstrate the influence of concentration, more information would be needed on market concentration in the middle of the chain, in particular to compare the value distribution between food chains characterized by concentrated retailers, brands and traders on the one hand, and food chains organized around dispersed shops, local independent brands and small traders on the other.

## Types of agricultural producers

At the level of agricultural production, the first key driver that emerges from our analysis is the type of agricultural producer set-up: while agricultural plantations achieve 25% share of value on average, family farmers appear to reach only 10% across the products analysed (after payment of labour costs and costs of farm inputs).

**Fig. 13 Average share of value according to types of agricultural producers (2015)**

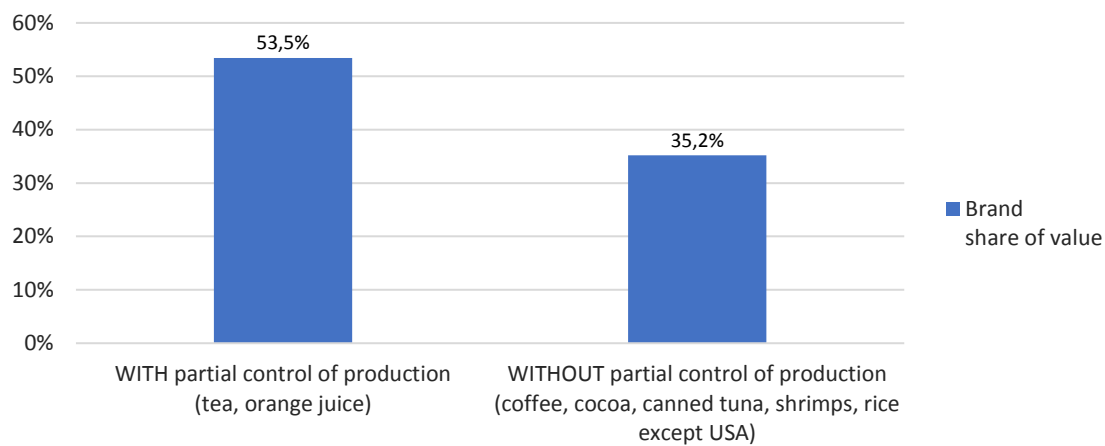


Source: BASIC

## Vertical integration

Another important driver of value distribution which is visible at different stages of the chain is the level of vertical integration which we analysed first for brands, then for agricultural producers.

**Fig. 14 Average share of value according to brands' level of vertical integration (2015)**

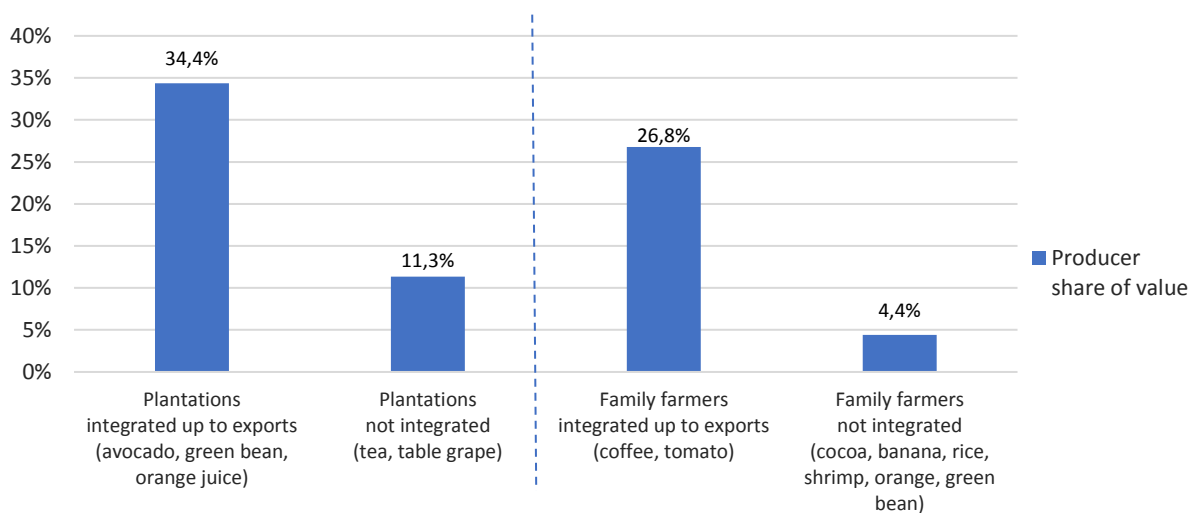


Source: BASIC

At the level of brands, the actors who have direct control over part of their supply through their own plantations (e.g. tea brands and orange juice companies) appear to earn a higher share of value (53% on average) than brands with fewer control over production (around 35% on average, e.g. coffee or cocoa).

In order to confirm and further analyse this driver, greater data availability would be required on vertical integration at different stages of the chain for different types of actors (brands, processors, traders).

**Fig. 15 Average share of value according to producers' level of vertical integration (2015)**



Source: BASIC

At the level of agricultural production, the influence of vertical integration appears to be even greater:

- As illustrated in the above diagram, the highest share of value (almost 35%) is associated with plantations which have integrated the chain up to the export stage (as in the case of avocado in Peru, green beans in Kenya and orange juice in Brazil). This percentage does not only reflect the additional value linked to the activities they have integrated, but also the stronger bargaining position they have acquired thanks to this integration, and the more direct trading relationships they have been able to develop with buyers in consumer countries.

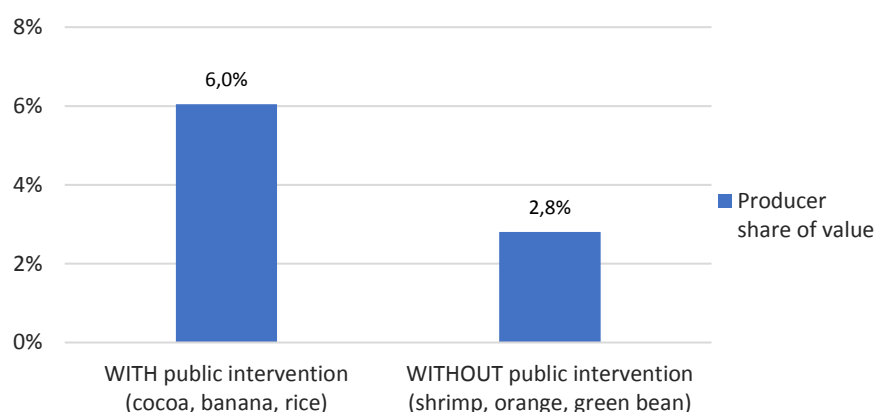
- In contrast, plantations that do not control export - such as grape in South Africa and tea in India - capture a much lower share of value, around 11.5% on average. This is apparently correlated with their weaker bargaining position in the chain, regardless of their production infrastructure.

A similar difference has been measured regarding family farmers.

- A high level of value share (around 27%) is achieved by farmers' cooperatives which are also capable of organising production and commercialisation up to exports with sufficient economies of scale and control over quality (as in the case of coffee in Colombia and tomato in Morocco).
- In contrast, family farmers who have much lower economies of scale and no control over export (being often dependent on private processors/exporters to channel their products to consumer markets) only achieve on average 4.4% of the total value.

## Government's intervention

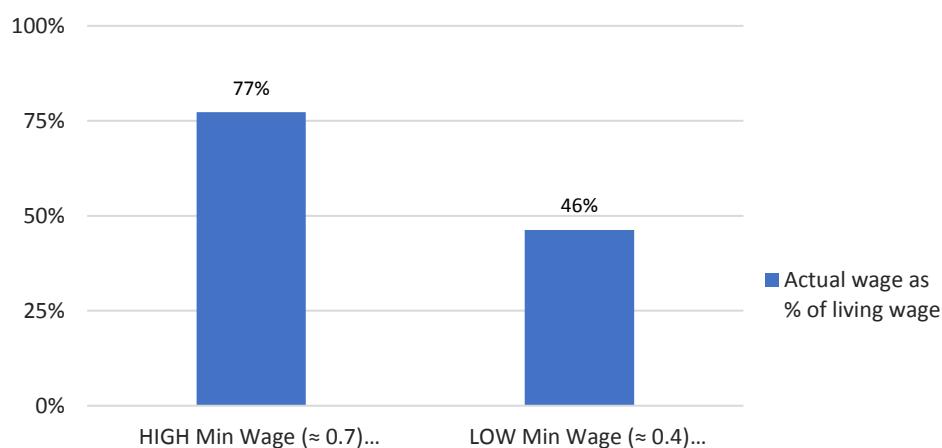
**Fig. 16 Small farmers' share of value according to public intervention systems (2015)**



Source: BASIC

Focusing on the family farmers with low economies of scale and no control over export, our estimates tend to show that the farmers benefiting from government intervention (such as cocoa in Cote d'Ivoire, banana in Ecuador and rice in Thailand) appear to be better off as their share of value is doubled compared to the countries and products where the market is liberalised (e.g. orange growers in Brazil, green bean growers in Kenya and shrimp farmers in Vietnam, Thailand or Indonesia).

**Fig. 17 Correlation between level of legal minimum wage and living wage gap (2015)**



Source: BASIC

In addition, in order to analyse the drivers influencing the share of value accruing to workers, we estimated the gap between the current wages they earn and the documented living wages for each product and country of production (this indicator is more relevant for workers than the share of value allocated to labour because the latter strongly varies among products depending on labour intensity differences).

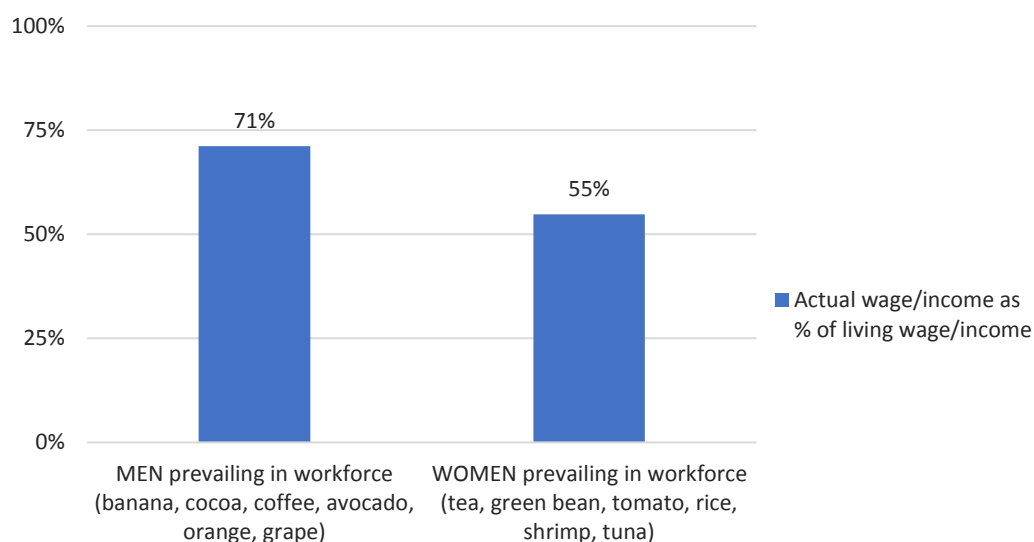
Then, we investigated the correlation between these estimates and the level of the legal minimum wage in each country. This level has been measured by the ratio between the minimum wage amount and the monthly GDP per capita, an indicator used by Oxfam to develop its new Commitment to Reduce Inequality Index published in 2017<sup>38</sup>. Two different groups of producer countries emerged from our estimates: a first group with a high average ratio of 0.7 where the level of the minimum wage can be considered as “high” (shrimps in Vietnam, banana in Ecuador, tomato in Morocco and avocado in Peru) and a second group with a low average ratio of 0.4 where the minimum wage can be considered as “low” (green bean in Kenya, tuna in Thailand, grape in South Africa).

The results indicate that workers earn on average 46% of the living wage in the countries where the level of minimum wage is “low”, whereas they earn more than 75% of the living wage where the minimum wage is “high”. This tends to demonstrate that the higher the legal minimum wage at national level, the bigger the capacity of workers to achieve a living wage.

We also investigated the correlation with the indicators consolidated by Oxfam on the respect of labour and union rights in each country. We did not find meaningful correlations in this field, most probably because the available data document the labour context at a global country level, whereas the situation in each product can strongly differ (e.g. the South African grape industry where the unionization rate is 10 times lower than the national average and 80% of the labour force is employed through third parties and external agencies<sup>39</sup>).

## Gender

**Fig. 18 Correlation between gender and living wage gap (2015)**



Source: BASIC

To investigate the influence of gender, we used the living wage gap indicator as for the analysis of the correlation with the minimum wage legislation. Our results show that the workers achieve more than 70% of the living wage in the product sectors where men prevail in the workforce (banana, cocoa, coffee, avocado, orange and grape), whereas they barely earn more than 50%

in the sectors where women prevail (tea, green bean, tomato, rice, shrimp & tuna processing). This demonstrates the persisting discrimination against women regarding salaries.

As in the previous case, we also investigated potential correlations with the indicators consolidated by Oxfam on legal protection of women workers, but the results were not meaningful because of the specificities of the product sectors analysed vis-a-vis the wider national context.

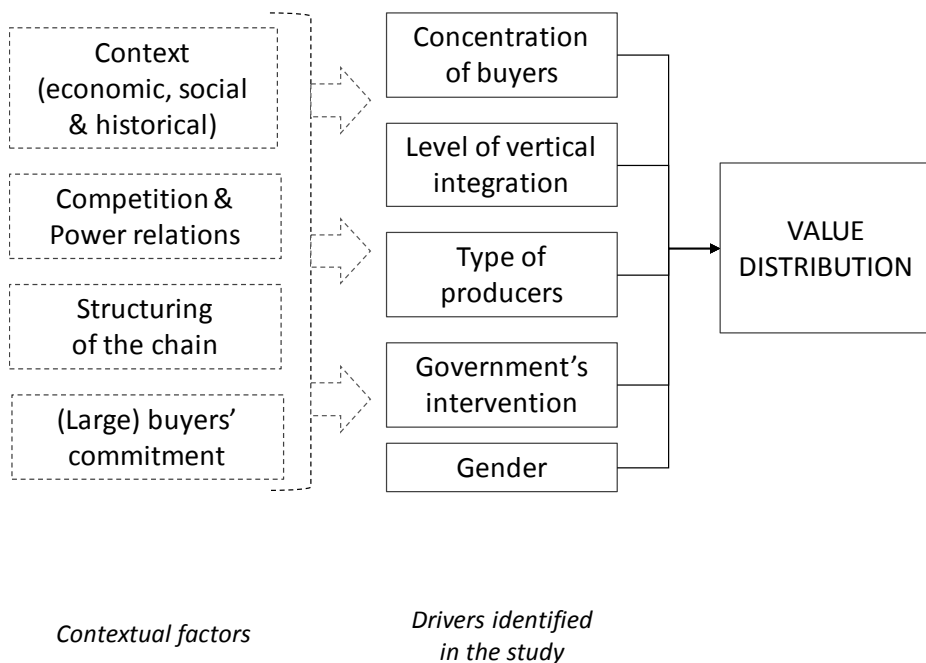
In addition to the key drivers previously identified, there are some complementary factors that could not be further documented through our estimates:

- the historical and social context of each producer country seems to also play an important role in the prevalence of plantations or small farmers, their level of organisation and integration...
- while government intervention seems beneficial in helping small farmers to secure a higher share of value, a parallel commitment of other actors in the chain, especially large buyers, seem to be critical (as demonstrated by the abrupt price fall of cocoa prices on world markets in March 2017, which obliged the Ivorian government to decrease its minimum support price for producers by 37% to avoid its regulation system to go bankrupt).

Finally, the lack of public data on market shares of private labels (supermarkets' own brands) did not enable us to analyse their influence on the retailers' and brands' respective share of value, although they are often cited as a key driver of value distribution by qualitative value chain studies (see section 3 for more details product-by-product).

Below is a global diagram that synthesizes the key drivers of value distribution identified:

**Fig. 19 Summary diagram of key drivers identified in the study**



Source: BASIC

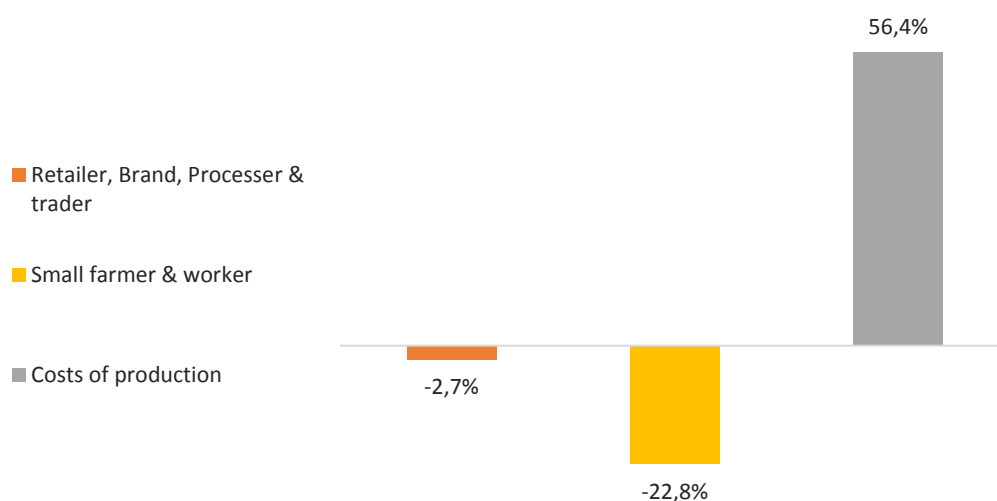


# ESTIMATES IN 2030 IN A 'BUSINESS-AS-USUAL' SCENARIO

Based on the previous estimates, we performed a projection of value distribution estimates in the year 2030 in a “Business as Usual” scenario:

- producer prices, wage levels and costs of inputs are based on the latest projections of the World Bank in 2030 (for FOB prices, fuel and fertilisers' prices...),
- price trends at different levels downward in the chain have been extrapolated based on the last 15-20 years and using a linear regression.

**Fig. 20 Evolution of the main shares of value between 2015 & 2030**



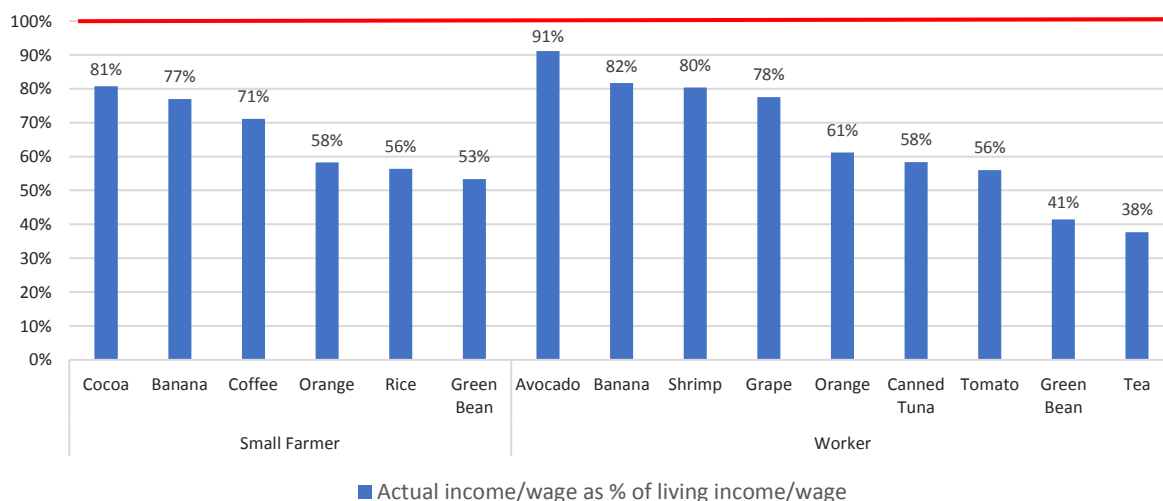
Source: BASIC

As illustrated above, the projection of the trends in the evolution of value distribution since the 1990s in a “Business as Usual” scenario indicate that in 2030:

- the share of value accruing to retailers, brands, processors and traders is likely to shrink by roughly 3% at the global level. This evolution would illustrate the continuation of the strong competition on prices between retailers to gain market share, and the related pressure on food prices from consumers down to agricultural producers (estimates in 2030 did not enable us to make a credible estimate of the split between retailers and brands/processors/traders given the uncertainties of data projections when consolidating data across the diversity of products and countries analysed and the multiple factors influencing it – see section 4 for more precise estimates by product and consumer country).
- the value accruing to small farmers and workers is likely to fall sharply by a further 22.8% compared to the current situation, while costs of production are likely to increase by more than 50%. This would illustrate the amplification of the current trends documented in the agricultural sector. This economic pressure on the beginning of the chain is likely to accelerate further the difficulties of small growers, the disappearance of the smallest ones, and the continuation of the casualisation and growing precariousness of labour conditions for workers.

# ALTERNATIVE SCENARIO TO ENSURE SMALL FARMERS & WORKERS CAN EARN A LIVING INCOME/WAGE

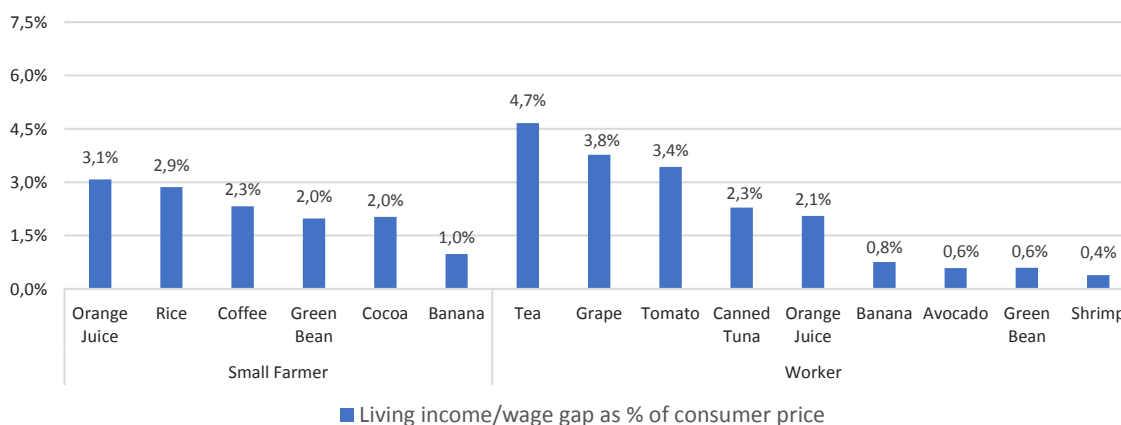
**Fig. 21 Actual income/wage as % of the living income/wage by product (2015)**



Source: BASIC

The starting point of our alternative scenario is the finding that across all the products analysed, small farmers and workers - on average - never appear to achieve a living income/wage: at best, they seem to reach 90% of the living wage in the case of avocado in Peru, and this ratio drops below 50% in the case of Kenyan green bean and Indian tea.

**Fig. 22 Living income/wage mark-up as % of consumer price (2015)**



Source: BASIC

Our analysis also demonstrates that the related amount of money that would be required to enable small farmers and workers to achieve a living income/wage is minimal compared to final consumer prices: from less than 1% in shrimp, green bean, banana and avocado, up to 4.7% in tea. We further investigated whether this mark-up in prices would have to be eventually paid by consumers.

**Fig. 23 Comparison of small farmer & worker share of value, living wage gap and retailer share of value**

Product	Small farmer/worker share of value (USD/Kg in 2015)	Living income/wage gap (USD/Kg in 2015)	Retailer share of value adjusted for inflation (USD/Kg)
Coffee	1.10	0.37	6.73 (in 2011) 8.11 (in 2015)
Tea	1.29	0.78	For UK & Netherlands 12.96 (in 2000) 13.44 (in 2015)
Cocoa	1.18	0.28	5.52 (in 2001) 6.00 (in 2015)
Rice	0.06	0.05	0.71 (in 2012) 0.89 (in 2015)
Shrimp (average of 3 origins)	0.50	0.15	7.93 (in 2001) 10,21 (in 2015)
Canned Tuna	0.25	0.18	4.22 (in 2012) 4.65 (in 2015)
Orange Juice	0.08	0.06	0.53 (in 2005) 0.83 (in 2015)
Banana	0.14	0.02	For Germany, UK, USA 0.34 (in 2011) 0.47 (in 2015)
Table grape	0.69	0.20	1.29 (in 2001) 1.96 (in 2015)
Green bean	0.23	0.20	3.13 (in 2000) 3.75 (in 2015)
Avocado	0.26	0.03	For Netherlands, UK, US 2.31 (in 2012) 2.39 (in 2015)
Tomato	0.12	0.10	0.88 (in 2006) 1.15 (in 2015)

Source: BASIC

Our estimations show that retailers have increased over the last 10 to 15 years their share of value by a bigger amount than what would be required to ensure the payment of living incomes/wages to small farmers and workers. As illustrated in the above table, this is true at the global level (with only one exception in tea where the retailers have a much lower increase than brands which have gained enough value to cover living wages in their supply chain), as well as for each specific consumer country analysed (see the corresponding evaluations by product and country in the section 5 of the report).

In addition, we have analysed the figures published annually by Deloitte on the top 250 retailers at the international level: the cumulated profits (net income) of the top 10 global food retailers (Walmart, Costco, Tesco, Carrefour...) have increased by 86% over the same period (since 2002), from 12.4 billion USD up to 23.1 billion USD. This demonstrates the success of the business model developed by retailers which enabled them to expand significantly their profits, in line with the geographical extension of their operations, while the small farmers and workers at the other end of the chain were suffering increased price pressure.

As a result, according to our analysis, there seems to be no obligation for consumers to bear the full costs of this responsibility as retailers could apparently afford to do so.

Although we were not able to make reliable quantitative projections in 2030 for this alternative scenario - because of its related large uncertainties - it appears that it could also provide solutions to the current rise in costs of production. Indeed, for most products analysed, this increase seems to be related to the low value received by producers that does not enable them to invest in their farms to maintain long-term performance (see section 4 for more details); in addition, the situation is apparently worsened by climate change, for which producers lack resources to adapt. Hence an alternative scenario aiming at ensuring living income/wages and greater environmental sustainability could also result in stabilised if not lower costs of production in 2030.

To implement a transition towards this alternative sustainable food production and consumption model, the key drivers identified previously in the transversal analysis provide a basis for potential leverages of change – amongst others - that could enable small farmers and workers to secure a living income/wage (see section 4 for more details on potential leverages for each product analysed).

# 4 DISTRIBUTION OF VALUE BY PRODUCT AT GLOBAL LEVEL

## COFFEE

### Coffee global value chain structuring and evolution

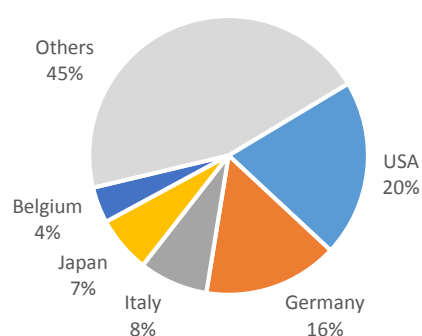
#### Coffee consumption, production and trade

At the consumer end, consumer sales of coffee are estimated over 100 billion USD per year<sup>40</sup>. Coffee consumption is highest in USA, Brazil and Europe. Rising income and increasing standards of living of the growing middle class, especially in Asia, have given coffee a boost. Global demand is on the rise for both specialty high-quality coffees and low-quality instant / flavoured coffee<sup>41</sup>. A profound change of consumption style has been triggered by the launch in Europe and North America of coffee capsules and single-serve systems by Nestlé in 1986 (under the brand Nespresso which now holds 18% of this sub-market). Beyond the packaging innovation, this entirely new concept succeeded in reviving coffee consumption in declining mature markets. The results were above expectations: the coffee-capsules business is now estimated to be greater than 13.5 billion USD at global level, and expected to grow by 45% until 2020. The biggest impact has been on consumer prices: while a typical 250g-pack of coffee costs around 10-12 USD/kg in retailers' outlets, soft coffee pods (e.g. Tassimo, Senseo) amount to 35 USD/kg and Nespresso's capsules reach 70-80 USD/kg and above.

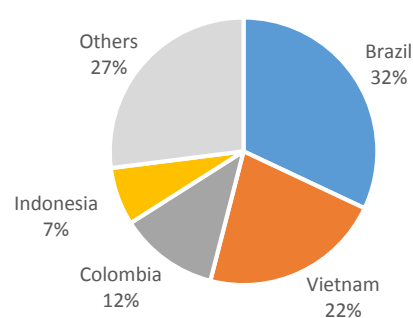
Coffee production is situated in more than 80 countries in Central and South America, Africa and Asia. There are two main types of coffee: Arabica (60% of world's production) which is mainly grown at high altitudes in Latin America and Northeast Africa, and Robusta (which has increased significantly over the last decade up to 40% of world production), much stronger in taste and well suited for products such as instant coffee<sup>42</sup>. More than 73% of the 150 million 60 kg-bags of coffee produced in 2015/16 were traded on the world's markets. Coffee ranks among the most valuable agricultural commodities quoted on the stock exchange: its export value amounted to 18 billion USD in 2015. Four countries dominate global coffee exports: Brazil (32% of total volumes, which produces 4/5 Arabica and 1/5 Robusta), Vietnam (22%, almost only Robusta), Colombia (12%, only Arabica) and Indonesia (7%, 3/4 Robusta and 1/4 Arabica).<sup>43</sup>

**Fig. 24 Main world coffee import and export countries**

Main world coffee importers



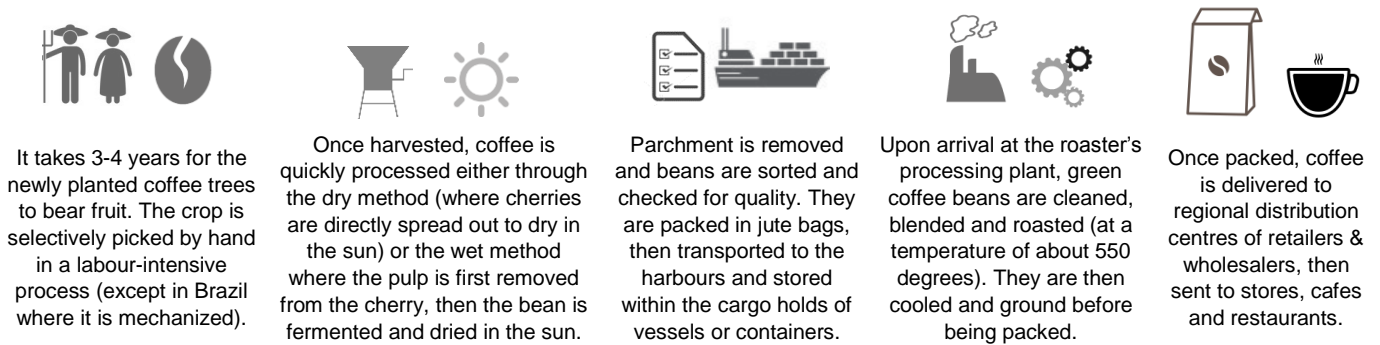
Main world coffee exporters



Source: BASIC, based on UN Comtrade data

## Structure of the coffee chain

Fig. 25 Technical description of the coffee chain



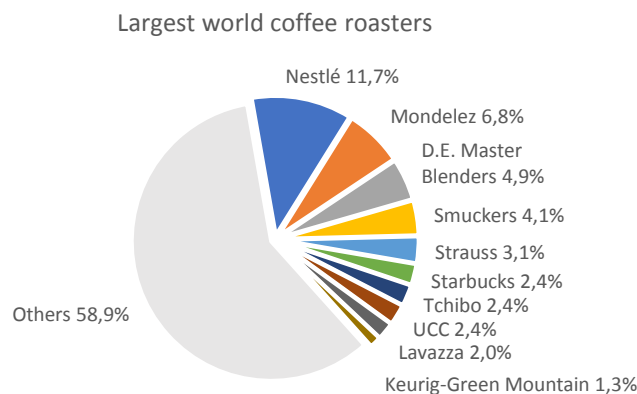
Source: BASIC

At the consumer end, the world coffee market is dominated by 3 large global corporations – Nestlé, Mondelez and DE Master Blenders – and a few big coffee roasters such as Smucker's, Strauss, Starbucks and Tchibo. The 10 largest roasters process almost 40% of the coffee consumed worldwide (from 1% market share for Keurig to more than 10% for Nestlé). The recent merger of Mondelez coffee division with DE Master Blenders in 2015 has created the world's largest coffee business: Jacobs Douwe Egberts.<sup>44</sup>

Coffee roasters have gained increasing control of the marketing chain in recent years, especially at the detriment of traders who historically had the biggest influence in the sector, and entered in strong competition with supermarkets and their own label coffees. However, the large roasters still tend to rely heavily upon global trading companies which are strongly concentrated: the 3 largest traders Neumann Gruppe, Volcafé and ECOM account for an estimated 50% of the world's green coffee trade. In most producing regions, the structure of the coffee chain is strongly driven by the combined influence of roasters and traders, in particular through the establishment of entry barriers (minimum volumes, supplier inventories...) and contracts clauses (price review at buyers' call...)<sup>45</sup>

At the beginning of the chain, coffee cultivation provides livelihoods for 20-25 million farming families<sup>46</sup>. Smallholder coffee farmers produce more than 70% of this labour-intensive crop and women comprise half the productive workforce and play a crucial role, often unnoticed. Generally, small coffee growers are not well organized, lacking market information and bargaining power. They suffer from the systemic high volatility of coffee prices and the increasing unpredictability caused by climate change.<sup>47</sup>

Fig. 26 Market shares of largest coffee roasters at global level

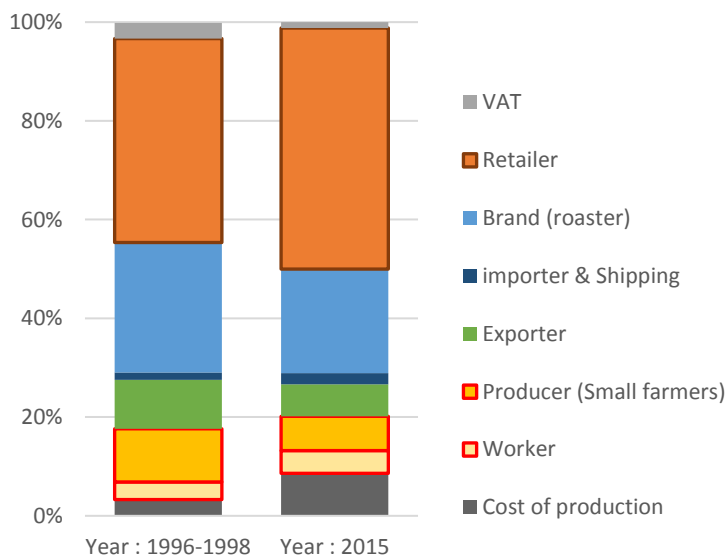


Source: BASIC, based on HIVOS (2014)

## Coffee value breakdown in Colombia

Our estimation of value breakdown of the coffee exported as green coffee beans from Colombia and processed and sold in consumer countries in the form of 250g-pack of ground coffee is detailed below (hence not reflecting the value breakdown for coffee capsules or pods). It is expressed in nominal currency to avoid distortions linked to correction for inflation in the different countries. The estimates have been calculated based on a weighted average of the value breakdown in the consumer countries included in this study (Germany, Netherlands, UK, USA, and South Africa – see section 4). The results are as follows:

**Fig. 27 Value breakdown of coffee produced in Colombia (average 1996-1998 and 2015)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

The lack of data availability in some consumer countries didn't enable to make a robust estimate prior to 1996. The above estimations seem to show a quite stable breakdown.

As illustrated above, the value breakdown mirrors the evolution of the coffee chain where supermarket chains have a growing influence (through the development of private label) as well as coffee brands and roasters. The share of value retained by retailers is the largest and has tended to increase since 1996 (from 41% in 1996-98 to 49% in 2015). In comparison, the share of value of brands/roasters is the 2<sup>nd</sup> largest but has somehow declined from 34% to 30% and the value remaining in Colombia has stagnated at approx. 20%. This is not taking into account the costs of inputs (fertilizers and pesticides) and labour (mostly seasonal during harvest) which have doubled in proportion, generating strong economic pressure on both coffee growers and workers.

As pointed out by Daviron and Ponte (2005) a "coffee paradox" emerges, characterized by decreasing and unstable prices to farmers on the one side and increasing consumer prices on the other side: the value of coffee on the final market today is not so much linked to the raw material (green coffee). Rather, it is connected to the ways of combining different coffees in blends, roasting and marketing (symbolic attributes), and by services provided in bars and coffee shops.<sup>48</sup>

To investigate further this situation, we have analysed the value evolution of the coffee producer prices, export FOB prices and costs of production since the early 1990s. The results for the main destinations of Colombian coffee are provided in the diagram on next page.

### Coffee production in Colombia

Colombia's geography, with three mountain ranges that stretch from North to South and proximity to the equator, is ideal for coffee production and enables harvesting almost year-round. Coffee has historically played an important role in Colombia's economy: it accounts for 16% of national agricultural GDP and provides a livelihood for an estimated 600,000 producers and their families (as a whole, nearly 4 million Colombians depend on the crop for their living). 95% of coffee growers own less than 5 hectares of land and are responsible for approximately 69% of coffee production in the country<sup>49</sup>. On the other end of the spectrum, plantations account for 1.7% of farmers and 23% of total production.<sup>50</sup>

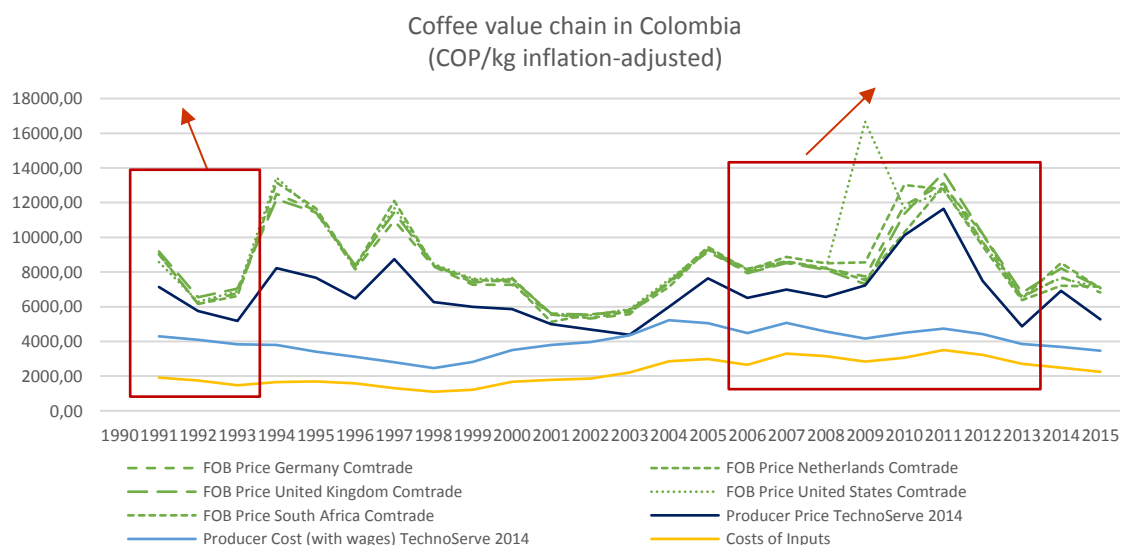
Current production exceeds historical averages of 13 million bags green bean equivalent (GBE), showing a complete turnaround of the devastating impacts of coffee rust which hit the country in 2008-2012. The United States is the major import country for Colombian coffee (43% of the country's coffee exports), followed by Japan (11%), Germany (8%), Belgium (8%), and Canada (4%).<sup>51</sup>

The coffee sector is heavily organized in Colombia around the National Federation of Coffee Growers of Colombia (FEDECAFE) that was created in 1927 to represent the interest of producers abroad and control and support the sector within the country. Domestic prices are managed by FEDECAFE: through a levy on exports, it guarantees coffee growers the purchase their coffee at collection points close to their farms at a price based on the daily quote of the New York Coffee, Sugar and Cocoa Exchange. FEDECAFE is also responsible for 1/3 of the country's coffee exports (in steady decline from well over 50% in 2000), followed by competitors Colcafé (19%) and Racafé (14%).<sup>52</sup>

FEDECAFE has developed strategies to position Colombian coffee in the top-quality segment: based on the success of its collective trademark 'Café de Colombia' which has enjoyed a good reputation on international markets for a long time, it was the first foreign food product granted a Protected Geographical Indication in the European Union in 2007<sup>53</sup>. Since then, Colombian specialty coffee is booming, comprising close to 40% of exports, as well as certified and organic coffees.<sup>54</sup>

Source: BASIC

Fig. 28 Evolution of coffee's value breakdown in Colombia



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).



As shown in the above diagram, the share of the coffee value accruing to farmers has been reduced by 25% since 1991, with a lowest-ever level in 2003.

The world coffee market was fairly stable until 1989, mainly because of the International Coffee Agreement (ICA), which kept the coffee market in balance by applying a system of export quotas and agreed minimum and maximum prices between major producing and consuming countries (especially Brazil). But in July 1989, the countries failed to reach consensus on the conditions of a new agreement, and the quota system collapsed, putting an end to a long period of market regulation: for the first time in 27 years, the market was controlled by the main private actors of the chain (traders and roasters). The coffee-producing countries almost immediately dumped the stocks accumulated onto the market. The result was plummeting world coffee prices, which reached an absolute low in the Autumn of 1992 when the price for Arabica coffee dropped below 50 USD cents per pound on the New York exchange - a level comparable to that of the 1930s.<sup>55</sup>

A price increase started one year later, initially brought about by an export restriction imposed coffee producing countries and reinforced by disappointing coffee harvests. In September 1994, Arabica coffee exceeded 250 USD cents per pound in New York, five times higher than in 1992, but declined again later that year, when it became clear that there would be no shortages. This drop in coffee prices continued until 2003-2004.<sup>56</sup>

Price went up very significantly in 2008 as Colombia was hit by one of the strongest coffee rust epidemics in the country (which also hit Central America at the same time), combined with anomalies in weather conditions due to El Nino and La Nina effects. Colombian production reduced considerably, by 30% on average in 2008-2012 compared to the levels of 2000-2006, thereby triggering a 50% rise in coffee prices on the stock market (which impacted more globally the arabica quoted price which went from 122 to 189 USD per 46 kg of green coffee between January 2008 and December 2011).<sup>57</sup>

This generated high loss for farmers which were bound to renovate their coffee plantations, with 3-4 years delay until the new plants were able to produce coffee cherries again. This explains why Colombian coffee production only recovered from 2013 onwards. Although the loss of money for farmers over the period 2008-2012 is not fully reflected on the above diagram (we didn't find quantitative estimates of the economic loss for farmers which is missing on the graph, on top of labour and input costs), the crisis had strong social impacts and led to food security issues because of the high dependence on coffee by most of the coffee farmers and labourers (according to FEDECADE, more than 500 000 families grow and obtain their livelihoods from the coffee crop, and for more than 200 towns, coffee is the only source of revenue).<sup>58</sup>

Coffee rust epidemics have been met with a strong response from coffee and government authorities in Colombia: since 2009, over 300,000 ha of the total 600,000 hectares planted with coffee have been replaced by the new resistant multiline variety, Castillo. Current production now exceeds historical averages of 13 million bags green bean equivalent, showing a complete turnaround of the impacts of coffee rust. Colombian coffee exports have been expanding significantly since 2013, paralleling the recovery in coffee production. Despite this production recovery, rising input costs for labour, fertilizer and insect pest controls, combined with lower prices, have effectively squeezed farmer margins to the point of unprofitability. However, internal prices are on an upward trend in 2016, primarily supported by the depreciation of Colombian peso and international price behaviour. Since 2014, coffee prices have been above the Government of Colombia (GOC) Protection for the Income of Farmers (PIC) trigger price.<sup>59</sup>

## **Ability of small farmers to earn a living income and levers for change**

On average, small coffee farmers in Colombia earn a base net income of 1,430 USD per year (after deduction of the costs of inputs, seasonal labour, wet milling...) <sup>60</sup>. According to the calculations made by the Colombian national institute of statistics (DANE), the living income per household in rural areas can be estimated at 4,024 USD per year <sup>61</sup> (but taking into account that coffee cultivation only requires 50% of the total number of days worked in rural areas) <sup>62</sup>.

Hence, to cover the costs of production and ensure that small farmers can achieve a sustainable livelihood, the income they earn from arabica coffee should be at least increased by 41% (from 0.9 USD/kg currently to 1.27 USD/kg), which would correspond to a mark-up of approx. 0,37 USD/Kg which appear to be very limited (2%) compared to the end consumer price of coffee (from 15.50 USD/kg to 16.80 USD/kg depending on the country). This does not require the consumer price to increase at the same level (more details on consumer countries, see the sections for: Germany, Netherlands, UK, USA and South Africa).

According to recent reports <sup>63</sup>, rising the minimum support prices for farmers to ensure they can achieve a living income, and increasing the minimum wage for coffee workers to the living wage level appear to be effective tools to secure a living income for both, provided that their level is sufficient, and enough resources are allocated for controls on the ground. Moreover, reinforcing the agroforestry model for coffee production and the development of geographical indication systems democratically governed by farmers' organisations (which have already begun to be successful on the market) seems to be important ways to address the social and environmental challenges at stake.

# TEA

## Tea global value chain structuring and evolution

### Tea consumption, production and trade

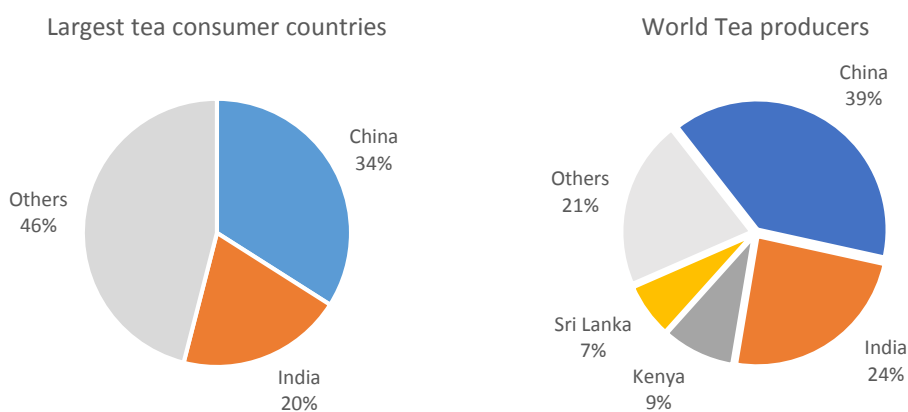
Tea is the second most consumed beverage after water at the global level. Tea drinking originated in China as far back as the Three Kingdoms epoch (AD 222-227). It only reached Europe in the 16th century. Breaking the Chinese monopoly on tea, the British and the Dutch established tea plantations respectively in India & Sri Lanka, and on Java & Sumatra.<sup>64</sup>

Today, world tea consumption is estimated at 5 million tonnes and expands at an average rate of 4.3% per year<sup>65</sup>. In Europe, the tea market is mature and per capita consumption has declined over the past decade as competition from other beverages has intensified (particularly bottled water and soft drinks). In contrast, demand has increased significantly in most emerging economies, underpinned by the rapid growth in income levels and the promotion of tea for its health benefits. China is by far the largest tea consumer country (1.7 million tonnes - 34% of global market) which has expanded most rapidly since 2005 (10.6% per year). It is followed by India with 1 million tonnes per year (20% of global market)<sup>66</sup>. More recently, worldwide consumer demand is on the rise for non-traditional tea products such as lemon-tea, iced-tea or herbal infusions seen as “healthier” alternatives to soft drinks (on estimate, more than 85% of tea imports in the USA are destined for ice-tea consumption)<sup>67</sup>.

World tea production has kept pace with this increase, and remains slightly above demand. Black tea is most produced (62% of volumes) followed by green tea (32%), but the latter is growing 3 times more rapidly and is expected to match black tea production by 2025. China is responsible for this growth in total output, as its production more than doubled since 2005 (from 0.93 million tonnes to 1.95 million tonnes). It now accounts for 38% of world production. India is the 2<sup>nd</sup> largest producer, but only increased its production from 0.95 to 1.21 million tonnes over the same period. Other major tea producers, such as Kenya and Sri Lanka, are much smaller in size (respectively 0.45 and 0.34 million tonnes).<sup>68</sup>

Only 1/3 of world tea production is traded internationally, the rest being consumed domestically. Kenya is the largest exporter followed by Sri Lanka, India, China, Vietnam, Indonesia, Malawi, Uganda and Tanzania. 50% of global tea exports being destined to the Middle East, North Africa and former Soviet Union countries.

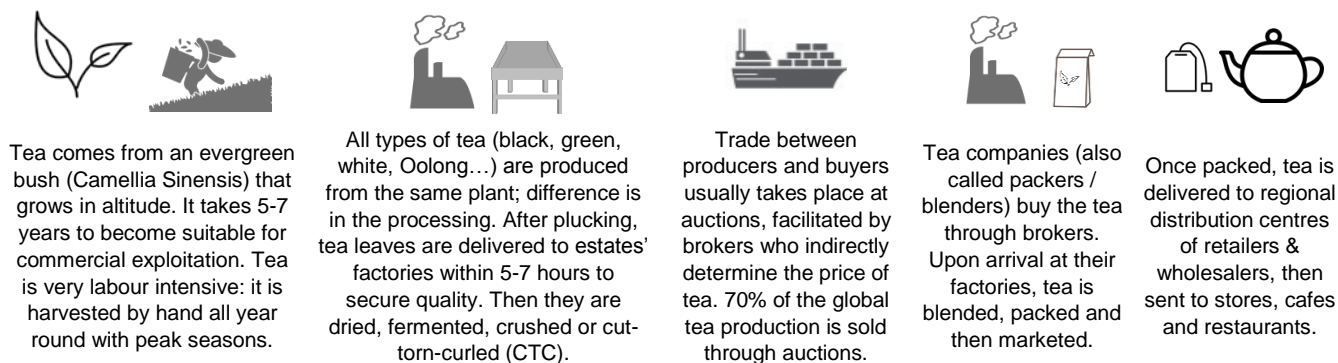
**Fig. 29 Main world tea import and export countries**



Source: BASIC, based on UN Comtrade data

## Structure of the tea chain

Fig. 30 Technical description of the tea chain



Source: BASIC

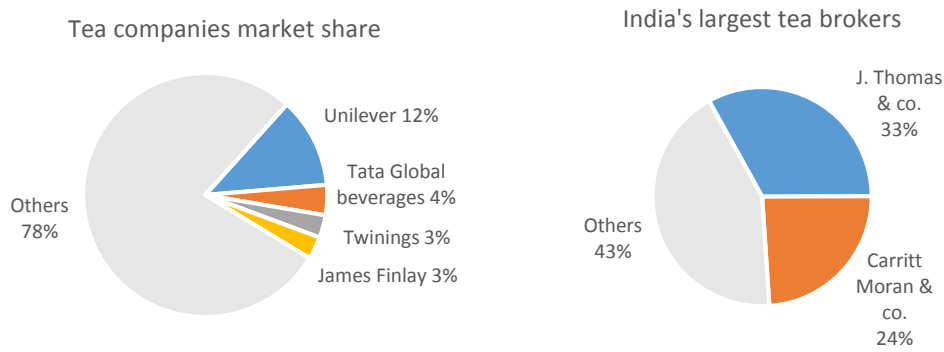
At the consumer end, the most popular brands (e.g. Lipton) can contain up to 36 types of tea blended in the consuming country, so as to keep their taste constant (exact composition is a guarded commercial secret)<sup>69</sup>. It is estimated that 80% of global tea production is marketed by large - often transnational - tea companies. The three leaders almost account for 20% of the market at international level: Unilever (12% global market share), Tata Global Beverages (4%, owner of the Tetley brand), Twinings (3%, owned by Associated British Foods) and James Finlay (3%)<sup>70</sup>. Market concentration appears to be higher when analysed on a regional basis: 7 companies are estimated to make up 90% of the tea sold in European and North American markets (Unilever, Van Rees, James Finlay, Tata Tetley, Twinings, Teekanne, Ostfriesische Tee Gesellschaft)<sup>71</sup>.

Historically, the supply chains of leading global brands have been vertically integrated from their own tea plantations all the way to the branded tea on the retailers' shelves. In recent years, they have started to outsource part of their production and processing capacity to focus instead on downstream activities, notably blending, packing and marketing which are the most lucrative parts of the tea value chain. This restructuring is designed to enable them to better defend their market position through brand development and product innovation<sup>72</sup>.

Unlike for other major agricultural commodities, there is no stock or futures market for tea. Almost 70% of global tea harvest is sold through auctions, the 3 biggest centres being the major references for the world market price (Kolkata, India; Colombo, Sri Lanka; Mombasa, Kenya). In all producing countries, local auction centres are key nodes in the chain for exchange of information on supply and demand, quality test and delivery. This stage is also highly concentrated: only a limited number of brokers are registered by national Tea Boards in each country: 11 in Kenya, and only 4 in Kolkata. The two largest tea world's brokers, J. Thomas & Co. and Carritt Moran & Co. respectively handle 33% and 24% of all tea auctioned in India.<sup>73</sup>

At the beginning of the chain, there are on estimate 13 million people involved in tea production worldwide, of which 9 million are smallholders. While large estates dominate in India (70% of production), smallholders are most prevalent in China (90% of production), Viet Nam (80%), Kenya and Sri Lanka (close to 70%)<sup>74</sup>. Since processing has to start within 5-7 hours after harvesting, small growers are in a very weak bargaining position vis-à-vis the nearby processing units of independent Bought Leaf Factories (BLFs) and tea estates who purchase their green leaves. The major players at this stage, Mcleod Russel, James Finlay, Tata Tea, Unilever and John Keells, all have their own tea estates and processing factories in producing countries<sup>75</sup>.

**Fig. 31 Market shares of largest tee companies at global level, and tea brokers in India**

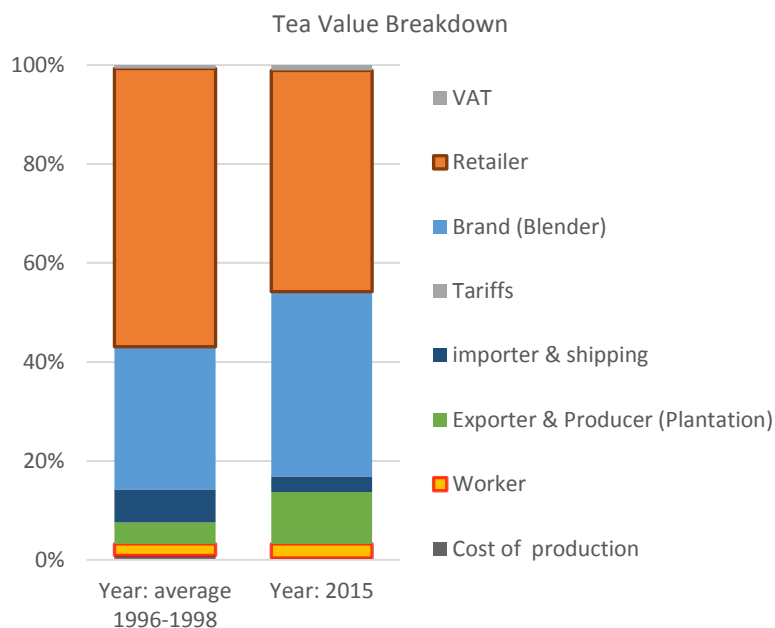


Source: BASIC, based on FIAN (2014) and IDH (2011)

## Tea value breakdown in India

Below is our estimation of value breakdown of the tea produced in estates in India, exported in bulk, blended and sold in consumer countries in the form of 100g-pack of tea. It is expressed in nominal currency to avoid distortions linked to correction for inflation in the different countries. The estimates have been calculated based on a weighted average of the value breakdown in the consumer countries included in this study (Germany, Netherlands, UK, USA, Thailand and Indonesia – see section 4). The results are as follows:

**Fig. 32 Value breakdown of tea produced in India (average 1996-1998 and 2015)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

The lack of data availability in some consumer countries didn't enable to make a robust estimate prior to 1996. The above estimations seem to show a quite stable breakdown.

As illustrated above, the value breakdown of tea seems to reflect a growing influence of tea brands and blenders over the chain and the relatively lower capacity of retailers to offset it (in particular because of the much lower success of private labels). The share of value retained by

retailers has tended to decrease significantly since 1996 (from 56% in 1996-98 to 45% in 2015), while the share of blenders/packers has increased from 29% to 37%, and the share remaining in India has risen from 8% to 14%. At the bottom of the chain, the share for workers, by far the weakest, accounts for less than 3% of the end value of tea.

Historically, the tea market has shown a persistent state of oversupply, which has kept a downward pressure on prices in producing countries. Low margins and under-investment have jeopardized productivity and quality and acted as barriers to the improvement of the working conditions and livelihoods of workers and growers. This trend has partially changed at the end of the 2000s due to the rising demand, resulting in an increase in export earnings. At the consumer end, intense competition among brands and retailers in mature markets has kept prices relatively stable.<sup>76</sup>

To investigate further this situation, we have analysed the value evolution of the tea producer prices, export FOB prices and costs of production since the early 1990s. The results for the main destinations of Indian tea are provided in the diagram on next page.

### ***Tea production in India***

Tea cultivation started in India on commercial scale in Assam in 1839 and was extended to other parts of the country in the following 2 decades under the British management. Due to soil and climatic requirements, tea cultivation was confined to certain parts of the country, mainly in the states of Assam, West Bengal, Tamil Nadu and Kerala (75% of total harvest is accounted by Assam & West Bengal). Thanks to the diversity of its microclimates, India produces some of the world's finest teas: Assam teas, Nilgiri teas Darjeeling teas, etc. Farm ownership is fragmented: listed companies account for roughly 40% of total tea production and some 80% of the farms have less than 8 hectares and contribute only 10% of the country's production.<sup>77</sup>

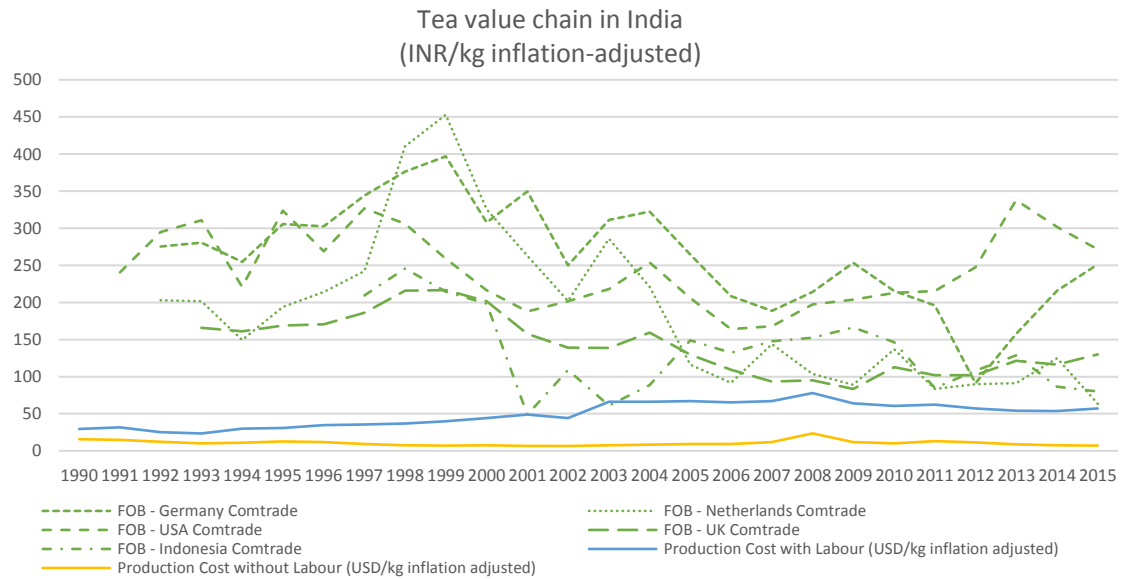
Labour cost accounts for about 60% of the total cost of production of Indian tea because the tea plantations are not just economic production units, but rather social institutions, controlling the lives of their resident work force to a large extent. Low cash wages supplemented by "social benefits" are one of the enduring legacies of the colonial system, which has defined many aspects of plantation work and life.<sup>78</sup>

Apart from employment, the plantations are also responsible for providing house, water, welfare and many other facilities that affect the daily lives of the workers. This is because most of the employees come from socially and economically weaker sections of the society or neighbouring countries, and because the majority of employees are women (Harvesting, generally referred to as plucking, is carried out almost exclusively by women, while male workers are employed for pruning, applying agrochemicals and hauling heavy loads).<sup>79</sup>

The wage reality of tea workers is mostly not based upon a long-term labour contract, but on less stable conditions: to a large degree, casual work is the norm in tea production today (on estimate, about 50% of workers are casual in the Indian tea sector). While tea workers are entitled to receive wages in monetary form under national law, "in-kind payments" are a common practice in all regions (housing, fuel, firewood, or subsidized staple food). Although minimum wages are defined for pickers in the different Indian states, cash wages are still typically determined based on piece-rates, i.e. calculated by the amount plucked, instead of working time. In addition, the daily wage for tea plucking generally stipulates minimum quantum of leaves to be plucked.<sup>80</sup>

Source: BASIC

**Fig. 33 Evolution of tea's value breakdown in India**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

The most important cause for decreasing tea prices is a persistent situation of oversupply on the international market, resulting in a fierce competition between major producing countries for market share.<sup>81</sup>

As illustrated above, the prices for tea leaf dropped dramatically at the end of the 1990s and beginning of the 2000s: from 275 INR/kg (7.6 USD/kg) on average in 1997 to 166 INR/kg (4.0 USD/kg) in 2007. This fall of prices combined with rising oil prices led many plantation companies to cut wages and reduce their investments. Plantations of limited productivity with old bushes and infertile soils were closed or abandoned in the following years (more than 100 cases in the whole of India), leaving tens of thousands of workers in destitution. But this tea crisis never reached the retail level: in sharp contrast, the prices paid by consumers for packaged tea rose steadily through this same period.<sup>82</sup>

An independent report commissioned by the Indian government identified “the cartelization in the tea industry and the dominance of big corporations in the international tea sector” as one of major causes of the crisis. The report targeted more particularly the tea giants Hindustan Lever (now Hindustan Unilever) and Tata Tea which were at the time vertically integrated with vast plantations in West Bengal and Assam. The tea crisis deepened even further when these two actors stepped out of plantation production and concentrated on the more profitable packing and blending stages of the chain. In the mid 2000-years, Hindustan divested from plantation business and laid off 12,000 workers, so as Tata tea which shed 24,000 jobs. Since 2011-2012, tea production has increased, and prices have stabilized or slightly recovered due to even higher increases in demand, especially in the USA which seems the more profitable market as illustrated in the above diagram (as opposed to the UK which remains the destination that pays less for Indian tea). However, the gap between export and retail prices remains very high.<sup>83</sup>

Tea pickers are in the weakest link in the chain, in a dramatically low bargaining position vis-à-vis their employers. In different regions, wages are negotiated and set in different forms but always involving the tea industry, the states’ authorities and some representation of workers. However, fully functioning representation through unions is the exception rather than the norm (e.g. in Assam where the Assam Chah Mazdoor Sangha, ACMS, has the union “monopoly” and has been strongly criticised by workers who feel not represented).<sup>84</sup>

Moreover, Workers are entirely dependent on the plantation for their basic needs, one of the enduring legacies of the colonial system. This colonial heritage of the plantation system partly explains the high degree of bad working and living conditions, namely inadequate protective clothing, lack of access to drinkable water, widespread malnutrition and discrimination on plantations against women as well as Adivasi, Dalit or descendants of migrants from Nepal.<sup>85</sup>

### **Ability of workers to earn a living wage and levers for change**

A study commissioned by Oxfam and Ethical Tea Partnership in 2013 demonstrated that in India (Assam), tea pluckers' net wage falls just above the World Bank extreme poverty line (1.25 USD/day), and receive additional in-kind benefits<sup>86</sup> that equal value to slightly more than 80% of the net cash wage they receive. In monetary terms, the tea pluckers' total income was estimated at 3,364 INR or 52 USD per month and per wage earner (i.e. around 40% of the Indian average income level).<sup>87</sup>

According to the study conducted by K. Mamkoottam and N. Kaicker in 2016 for the Global Living Wage Coalition, the living wage in rural India can be estimated at 8,929 INR or 139 USD per month and per wage earner<sup>88</sup>. This means that the tea pluckers, even when taking account in-kind benefits still earn little more than 1/3 of what is considered a sustainable living income for their family.

Hence, to ensure that workers can earn a living wage, the share of value for labour costs would require to increase from 0.78 USD/kg currently to 2.07 USD/kg, which would represent a limited mark-up of 5% on the end consumer price of tea in most countries (from 24.40 USD/kg to 37.30 USD/kg depending on the country). This does not require the consumer price to increase at the same level (more details on consumer countries, see the sections for: Germany, Netherlands, UK, USA, Thailand and Indonesia).

According to recent studies<sup>89</sup>, increasing the minimum wage for tea workers to the living wage level appear to be effective tools to secure a living income for both, provided that their level is sufficient, and enough resources are allocated for controls on the ground. The inability of the sector to do so despite of the growing coverage on workers' labour conditions in India lies very much in the long legacy of the unjust system that was put in place in the colonial times. Breaking-up with this industry-wide organization would require building alignment and engagement among all stakeholders in India (workers, trade unions, plantation managers and owners, states' governments), and as importantly among the other powerful actors in the chain, namely domestic and foreign traders, brands and retailers.



## Cocoa global value chain structuring and evolution

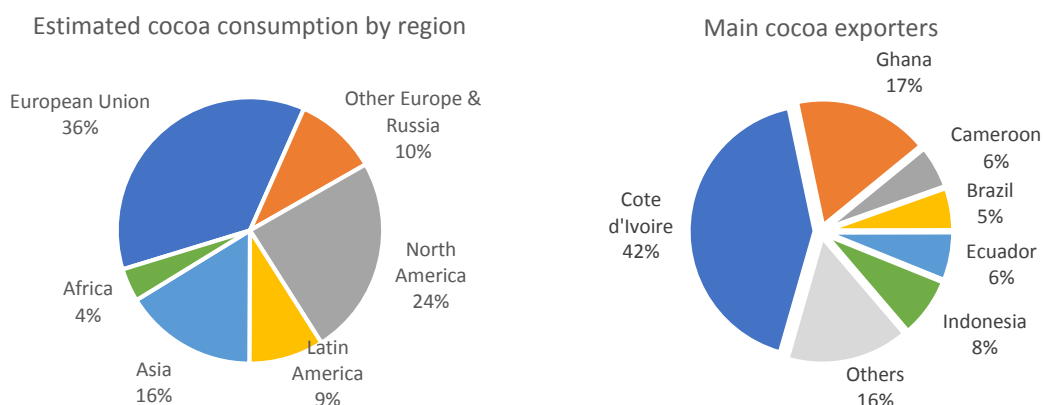
### Cocoa consumption, production and trade

Having long been the preserve of the rich, chocolate has become a common food item throughout the world, available in a wide variety of forms: spreads, sweets, chocolate bars, truffles, cocoa powder, etc. Its consumption has been multiplied by 16 since the beginning of the 20th century, a growth which has significantly accelerated in recent years. Some describes it as a “boom” of international cocoa demand: today, 4 million tons of chocolate are sold each year all over the world, an increase of 32% over the last ten years.<sup>90</sup>

Consumption is highest in traditional consumer countries in North America and Europe (around 12kg of chocolate are consumed by a German or a Swiss each year, and 8 kg by a British), but has a tendency to stagnate or even decline, except in the USA where chocolate consumption rose by 9% since 2009<sup>91</sup>. In these markets, competition is fierce amongst brands to keep their market shares and the promotional offers struggle to stimulate the sales<sup>92</sup>. As a result, leading manufacturers are now turning to emerging economies such as China and India, where the rise of global incomes and the tastes’ standardization galvanise consumption (which has grown by 75% in China and by 80% in India since 2009).<sup>93</sup>

Over the last decade, chocolate consumption has grown around twice as fast as cocoa production (on average 1.5% per year for the latter against 3% per year for demand), putting strong pressure on the sector and creating high volatility of cocoa prices<sup>94</sup>. This is mainly the case in the leading world cocoa producing countries, Cote d’Ivoire and Ghana which account together for almost 60% of the world annual supply.

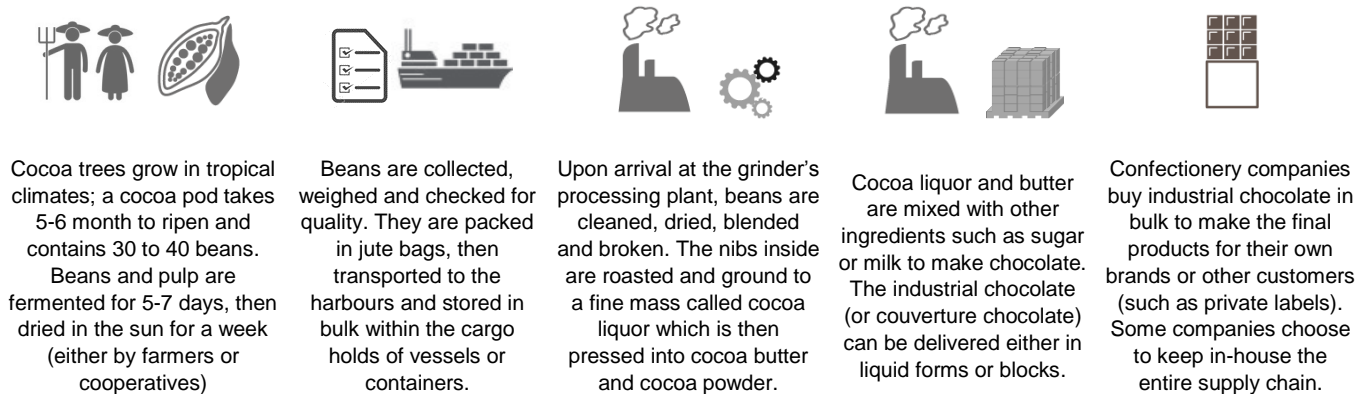
**Fig. 34 Main world cocoa consuming and exporting countries**



Source: BASIC, based on WCC data (2015) and ICCO data (2017)

## Structure of the cocoa chain

Fig. 35 Technical description of the cocoa chain



Source: BASIC

At global level, chocolate has become a mass-market product, now mainly used as an ingredient in a myriad of products that are marketed by a few dozen brands (spreads, sweets, chocolate bars, truffles, etc. most of them containing a high percentage of sugar and fats)<sup>95</sup>. Behind these brands lies a heavy concentration of production: the 6 largest manufacturers account for almost 50% of the global chocolate market: Mars (13.3%), Mondelez International (11.2%), Nestlé (8.8%), Ferrero (8.2%), Hershey (5.3%) and Lindt & Sprüngli (2.4%).<sup>96</sup>

The structuration of the cocoa-chocolate chain is a “bipolar value chain”, which means it is governed by both grinders and manufacturers. It is the result of an incremental process of merger and acquisition that happened throughout the 20<sup>th</sup> century. This process has been accelerated over the past 25 years due to two phenomena:

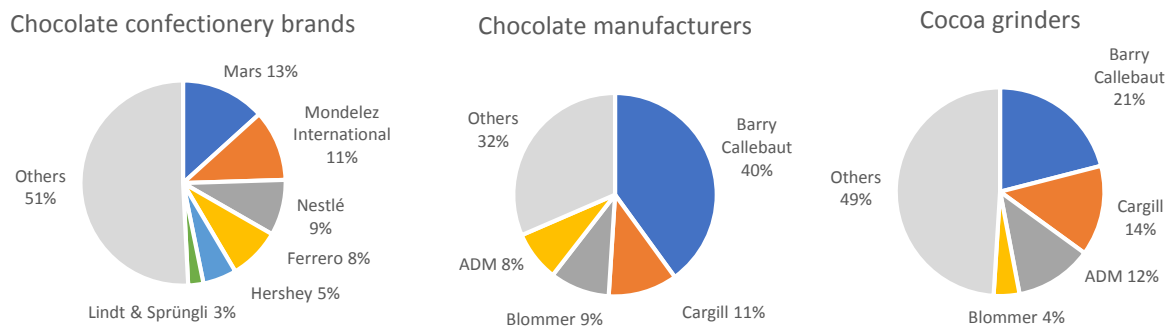
- Standardisation with the goal of assuring cocoa production of constant quality at the lowest possible cost, regardless of the origin of the bean or production methods. Cocoa beans have become a commodity that is subject to speculation, its price fluctuating according to developments on the world market.<sup>97</sup>
- The liberalisation of the cocoa trade in the late 1980s, which brought an end to various attempts at international regulation. This notably triggered the arrival of the major commodity traders, ADM and Cargill, on the market and, in response, to the merger of Cacao Barry and Callebaut (now Barry Callebaut, the world leader in cocoa processing). These 3 players have dominated world cocoa processing ever since and are currently strengthening their presence in producer countries by investing in ever larger, ever more powerful processing plants.<sup>98</sup>

Nowadays, only the largest companies have the logistical and financial capacity to cope with the volumes of cocoa required by the global mass market:

- At the end of the chain, it is estimated that the factories of confectionery companies (Nestlé, Mars, Mondelez...) only account for 50% of global chocolate production. They have progressively outsourced chocolate manufacturing to large-scale industrials, the 5 biggest accounting for more than 70% of the commercial market. Barry Callebaut is, by far, the leader (40% of volumes), followed by Cargill (11%), Blommer (9.5%) and ADM (8%).<sup>99</sup>
- In the previous stage of the chain, the 5 largest cocoa grinders account for 56% of global production of cocoa liquor, butter and powder: Barry Callebaut also leads the way with 21% of the total volume, followed by Cargill (14%), ADM (12%) and Blommer (4%). Confectionery companies such as Nestlé and Mondelez have almost left this part of the chain (each one accounting for less than 3% of total cocoa processing).<sup>100</sup>

At the beginning of the chain, over 5 million smallholder farmers and their families located in the tropical 'cocoa belt' along the equator produce more than 90% of world's cocoa. These farmers cultivate cocoa on farms smaller than 10 hectares, as most large plantations in South-East Asia struggle to demonstrate any economic advantage. The effect of this fragmentation of production is a lack of organisation that penalises smallholder farmers in their negotiations with cocoa bean buyers. Coordinated and financed by the major cocoa processing firms, it is hard for them to get a fair price for their cocoa.<sup>101</sup>

**Fig. 36 Market shares of largest confectionary brands, chocolate manufacturers and cocoa grinders at global level**

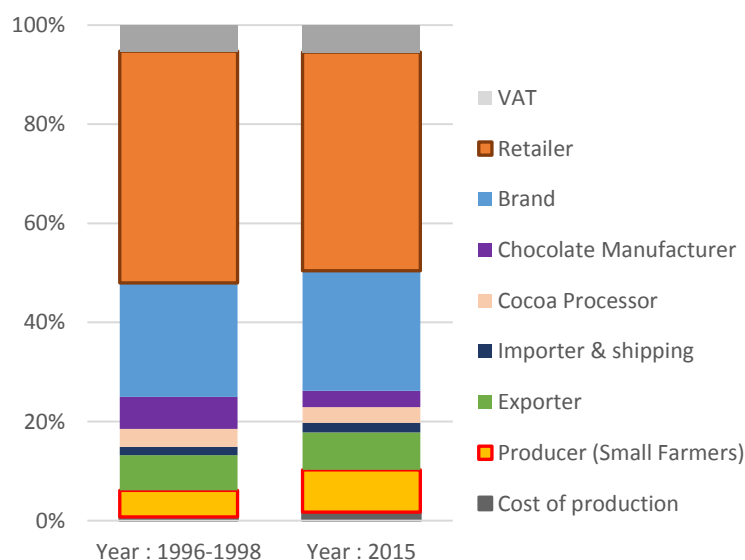


Source: BASIC, based on Hivos, Barry Callebaut and Candy Industry data (2015)

## Cocoa value breakdown in Cote d'Ivoire

Our estimation of value breakdown of the cocoa exported as beans from Cote d'Ivoire and processed and sold in consumer countries in the form of dark chocolate bars containing 70% of cocoa is detailed below. It is expressed in nominal currency to avoid distortions linked to correction for inflation in the different countries. The estimates have been calculated based on a weighted average of the value breakdown in the consumer countries included in this study (Germany, Netherlands, UK, USA, Thailand, Indonesia and South Africa – see section 4). The results are as follows:

**Fig. 37 Value breakdown of cocoa produced in Cote d'Ivoire (average 1996-1998 and 2015)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports

The lack of data availability in some consumer countries didn't enable to make a robust estimate prior to 1996. The above estimations seem to show a quite stable breakdown.

First, it should be noted that the average consumer price of chocolate bars in Europe and the USA was 5 times lower in the early 1970s than in the 1990s: around 2.0 USD/kg in 1973 compared to 10.0 USD/kg in 1996 in nominal terms<sup>102</sup>. It is now estimated to be in the range of 14.0 USD/kg in the countries analysed in this study (see section 4 for more details). This clearly makes the retailers and the brands the biggest winners of this evolution with 44.2% and 24.2% share of the end value of chocolate purchased by consumers (despite the relative stagnation of their share of value since 1996)

At the other end of the chain, the average price that Ivorian cocoa producers achieved in the 1980s was in the range of 400 Francs CFA, equivalent to 0.56 USD/kg of beans in nominal terms. In 1990, it fell to 200 FCFA, equivalent to 0.39 USD/kg<sup>103</sup>. It reached back a level of 1,000 FCFA (1.69 USD/kg) in 2015, representing approx. 8% of the end value of chocolate bars. However, it once again fell sharply to 700 FCFA (1.19 USD/kg) in 2017, which is likely to reduce their share to only 5% of the total value of chocolate bars.<sup>104</sup>

To investigate further this situation, we have analysed the value evolution of the cocoa producer prices, export FOB prices and costs of production since the early 1990s. The results for the main destinations of Ivorian cocoa are provided in the diagram on next page.

### ***Cocoa production in Cote d'Ivoire***

The Ivorian economy was gradually specialised and structured around export agriculture, especially coffee and cocoa, throughout the 20<sup>th</sup> century, first by the French colonial regime, and after independence by its own governments.<sup>105</sup>

Cote d'Ivoire became the first cocoa producer in the world in 1978 with more than 500 000 tons exported. It retained this position up until now, accounting for more than 40% of global cocoa production (almost 1.8 million tons in 2014/15).<sup>106</sup>

65% of the national production is exported as beans and the remainder 35% goes through grinding factories based in Abidjan. The major import countries are Netherlands, Germany, Belgium and France. The Ivorian cocoa market's is in the hands of a few transnationals and the concentration has been intensifying since liberalisation in 1989: today, the 4 leading cocoa industrials (Barry Callebaut, Cargill, Olam and Cémoi) account for more than 55% of cocoa purchases and 90% of the cocoa grinding capacity in the country.<sup>107</sup>

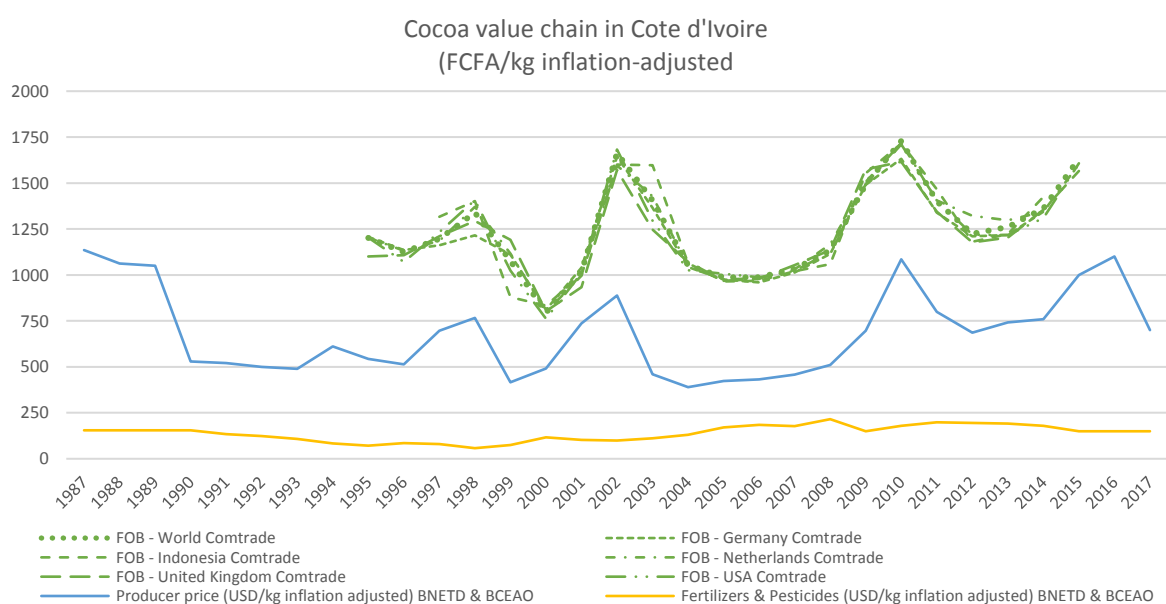
In order to secure the quality and regularity of supply, cocoa exporters and grinders work closely with intermediaries called *traitants* who organize networks of local middle men called *pisteurs* who themselves buy the cocoa beans to producers in rural areas. There are also farmers' cooperatives which centralise purchasing of cocoa and reselling to exporters and grinders, but they are increasingly competing with "alleged" cooperatives set-up by *traitants* and *pisteurs*.<sup>108</sup>

The cocoa farms are almost exclusively family farms where small producers and their families own between 5 and 10 hectares, grow the cocoa trees, harvest, ferment and dry the beans before they are sold to *pisteurs* or cooperatives. Highly specialised, these small farms are dependent on cocoa incomes even though producers always grow some subsistence crops (plantain, yam) or own a small shop to supplement the family income. Specialisation is even more problematic in Cote d'Ivoire as the yields of cocoa farms are among the lowest in the world: on average, the annual yield is 400 kg/ha.<sup>109</sup>

Today, estimates show that cocoa in Ivory Coast is cultivated on 4 to 8 million hectares by roughly 800,000 cocoa farms and almost 8 million people throughout the country who depend on cocoa for their living.<sup>110</sup>

Source: BASIC

**Fig. 38 Evolution of cocoa's value breakdown in Cote d'Ivoire**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

During the 1980s. Lacking a diversified economy, Ivory Coast was extremely dependent to the liberalising world cocoa market. Competition with new exporting countries was fierce and intensified, especially with Indonesia<sup>111</sup>. The Ivorian State then set as a public policy to pay twice the world cocoa price to the Ivorian producers, but the situation became untenable when the world cocoa price started to decline in 1985<sup>112</sup>. The Ivorian State tried to suspend external debt repayments and freeze the exports, but it was not sufficient. Finally, in 1989, the government was forced to reduce nearly by half the price payed to producers, from 400 FCFA per kg to 250 FCFA per kg<sup>113</sup>. The economic recession led to political conflicts which undermined the political and economic system and gave rise to a period of profound political and social troubles.

The international funding partners and organisations intervened and imposed the liberalisation of the Ivorian agricultural sector, especially the cocoa sector, with the objective to remove what was perceived as a price ceiling to producer, and enable a potential price increase<sup>114</sup>. However, after the liquidation of the public regulating body (called “Caistab”) in 1999, cocoa price endlessly continued to decline leading to a very troubled political context that continued throughout the 2000s<sup>115</sup>.

The situation became more and more difficult for the cocoa producers who feel the full brunt of the price fall of the Ivorian cocoa bean and the growing uncertainties of the world market fluctuations. Most of the producers finally sunk into poverty and vulnerability while Ivory Coast endured endless political crisis. Lacking alternatives, producers expanded their cocoa production to cope with poverty by deforesting<sup>116</sup>. Once peace was brought back to the country, Ouattara’s government initiated in 2011 a reform of the cocoa sector. A central part of the reform is the implementation of a new State-regulated quality control system in response to the 2000s crisis. Following the “Quantity, quality, growth” programme set up in 2009, the reform is based on the semi-liberalised Ghanaian model, its major component being the re-establishment of a guaranteed minimum price to producers equivalent to 60% of the FOB price, set by the State before the harvest season<sup>117</sup>. Since its implementation, the reform seems to have borne its fruits: the price paid to producers nearly doubled in 4 years, rising from 250 FCFA / kg at the heart of the crisis of the 1990s to 1100 FCFA / kg for the 2015/16 harvest.

However, despite the importance of Cote d'Ivoire on the world's cocoa market, it is vulnerable to rapid changes in the tight offer and demand equilibrium. In addition, as demonstrated in the analysis of the cocoa value chain, the most influential actors are the chocolate brands (Mars, Mondelez, Nestlé...) and the cocoa processors (e.g. Barry Callebaut, Cargil...) because of their global capacity to source and sell products on a worldwide basis (this is all the more true in Cote d'Ivoire as the latter hold the control over processing and export volumes). This was best illustrated at the beginning of 2017 when the quoted price of cocoa fell abruptly by 30% (apparently because of volume surplus and positive expectations on harvests), which cornered the government of Cote d'Ivoire and obliged it to decrease the minimum support price for producers by 37% (from 1,100 to 700 FCFA) to avoid its regulation system to go bankrupt.

As a result, most producers find themselves trapped in a model where they only receive a residual share of the consumer prices and suffer from the fluctuations and uncertainties of the market, being dependent on the cultivation of cocoa for their living and locked-in with their buyers. Despite the minimum price regulation implemented by the Ivorian government, most farmers still live below the poverty line and remain vulnerable to slumps in the world cocoa price. Low and unstable incomes deprive farmers of the finances they would need to maintain their plots, thereby exacerbating the natural reduction in yields as cocoa trees get older.

Cocoa farmers only manage to increase their production by expanding cocoa cultivation areas largely through deforestation, but the end of the forest resource in Cote d'Ivoire is envisaged within 15 to 20 years only, profoundly questioning the sustainability of the whole cocoa sector. The ones who give up cocoa cultivation are soon replaced by other migrant farmers whose situation is even more difficult (especially in Sahel).<sup>118</sup>

### **Ability of small farmers to earn a living income and levers for change**

Recent studies on the cocoa producers in Cote d'Ivoire estimate the average income earned by small cocoa farmers to reach approx. 2.5 million FCFA per family, or 227,000 FCFA (equivalent to 380 USD) per person in 2015. However, with the price fall in 2017, this is likely to drop to 160,000 FCFA (200 USD/year). These estimates are based on statistical studies showing that a typical Ivorian cocoa farm as a size of 5.7 hectares, a productivity of 444 kg/ha and 10 persons on average making their living of this cocoa farm).<sup>119</sup>

These numbers can then be compared with the World Bank evaluations of the absolute poverty line per country and per region which provide an estimate of the level of income required for an individual to meet his/her basic needs in terms of food (based on a daily caloric intake and a reference food diversity index) as well as education, health, housing and minimum savings. Based on this evaluation, we can observe that the average income received by Ivorian cocoa producers (even taking into account secondary income from other activities) is significantly below the absolute poverty line as the absolute poverty line could be estimated at 281,000 FCFA/person/year (475 USD/person/year).

Hence, to ensure that small farmers can earn a living income from cocoa farming, the share of value for farmers would require increasing by 25% when compared to its level in 2015 (from an estimated 1.18 USD/kg to 1.46 USD/kg). This would represent a very limited mark-up of 0.28 USD/kg or 2% on the end consumer price of chocolate in the countries studied (from 12.70 USD/kg to 17.70 USD/kg in the major consumer countries). This does not require the consumer price to increase at the same level (more details on consumer countries, see the sections for: Germany, Netherlands, UK, USA, Thailand, Indonesia and South Africa).

According to recent studies<sup>120</sup>, important breakthrough could be provided if the level of income of cocoa farmers in the different producer countries was monitored and publicized, and if this information was used as a basis for establishing a minimum support price for farmers in all major producing regions that ensure the costs of production and the living income are both covered.

In addition, the development of agroforestry models adapted to local realities and culture is another important leverage to countervail the constant increase of deforestation which is the only way for farmers to achieve sufficient yields to make their living. At the other end of the chain, this would require a stronger commitment of chocolate brands to offer less confectionery products where cocoa is just a commoditized ingredient, and more chocolate products that value the origin and quality of cocoa, hence the work of farmers paid at a fair price.

# RICE

## Rice value chain structuring and evolution

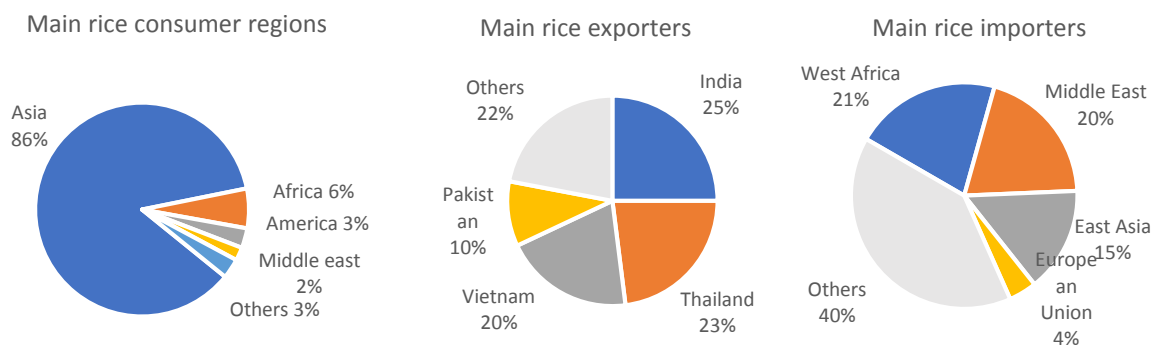
### Rice consumption, production and trade

Rice is the world's most common staple food. For more than half of the world's population, in 118 countries, rice is the main component of their diet. The global average consumption per person is 235 grams per day (equivalent to two meals or two full plates each day). Since the 1960s, the global rice production has increased considerably. Many countries which used to produce limited quantities have become self-sufficient, and sometimes managed to export surplus, while in others, people still do not have enough to eat. Asia accounts for about 86% of global consumption, followed by Africa (6%), South America (3%), and the Middle East (2%). In developed economies, rising incomes dampen rice demand as it is considered an inferior good and aging populations and increasing health concerns tend to shift preferences away from it.<sup>121</sup>

The world rice production is 740 million tonnes of paddy per year, equal to million 490 tonnes of milled rice. Almost half of it is grown in China (27%) and India (21%), the next biggest producers being Indonesia and Bangladesh. Over total production, only 44.5 million tonnes are traded internationally, in strong increase since 2010 when it amounted to only 33 million tonnes. Only four countries are responsible for more than 3/4 of this trade. India has become the biggest exporter in 2014 (25% of global trade, following a strong and sustained increase of its exports since 2012), followed by Thailand which was the historical rice export leader (now 23% of traded volumes), Vietnam (20%) and Pakistan (10%). Besides these traditional main exporters, a limited but relatively important part of rice traded worldwide comes from developed countries in Mediterranean Europe and the United States.<sup>122</sup>

In comparison, rice imports are widely dispersed among regions and countries, the leading importing regions being West Africa (21%), the Middle East (20%) and East Asia (15%). The European Union is a small importer (only 4%), but with a strong growth rate (+50% since 2010). It is almost self-sufficient in Japonica rice (short grain) and mainly imports long-grain (Indica) rice and aromatic varieties (basmati, jasmine). The main origins of imported rice in the EU are: India (19%), Cambodia (16%), Pakistan (11%) and Thailand (9%)<sup>123</sup>. The United States is a surplus rice producer, supplying its domestic rice consumption and only importing aromatic varieties (2% of world's traded volumes)<sup>124</sup>.

**Fig. 39 Main world rice import and export countries**

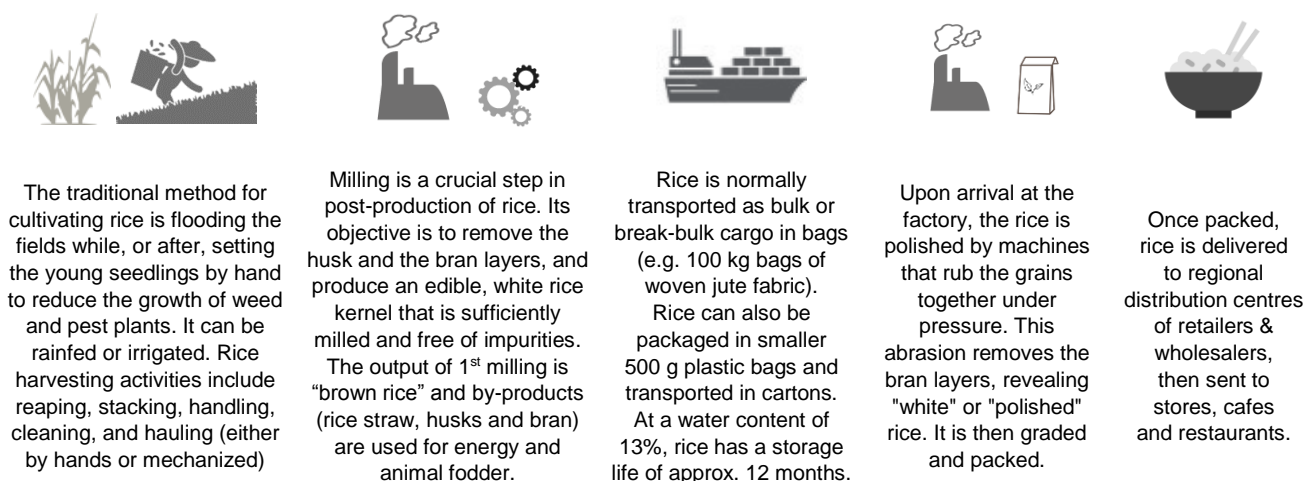


Source: BASIC, based on USITC, FAO and UN Comtrade data (2016)



## Structure of the rice chain

Fig. 40 Technical description of the rice chain



Source: BASIC

Most rice consumed in the European Union and the USA is sold through supermarkets. Large rice manufacturers dominate in the both retail markets. The market leader is the Spanish-based Ebro Foods SA which owns dozens of brands (e.g. Minute Rice, Oryza, Success Rice, Taureau Aile...) and is the n°1 brand in countries such as the USA (21% market share), Canada, France, Spain, Portugal, Morocco... Among its direct competitors are Mars Inc. (owner of the brand Uncle Ben's), Associated British Foods (owner of Westmill), Marbour group (leader of rice for retailer's private label in Europe).<sup>125</sup>

These manufacturers purchase rice to international specialised brokers and traders based in Europe and the USA such as Louis Dreyfus (one of the market leaders which handles approx. 8% of total Thailand's rice exports and 30% of African's imports), Jackson Sons & Co, Cargill, Action SA, Continental Grain or Schepens Co.<sup>126</sup>

The price of rice traded by these actors on international markets is highly volatile for a number of reasons: inelastic supply and demand throughout much of Asia where it is the dominant food staple and plays a critical role in food security, hence its political sensitiveness and vulnerability to government actions and private speculation. A major illustration took place in 2007/08, when India implemented a ban on non-basmati rice exports and the Philippines imported higher-than-normal volumes over a short period of time, the subsequent speculative rice price spikes endangered food security and triggered social unrest in a number of countries.<sup>127</sup>

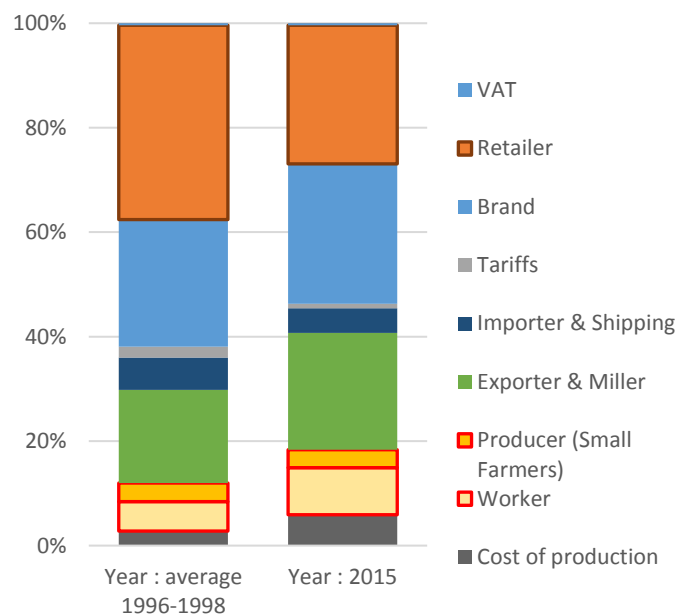
At the beginning of the chain, rice farming is hugely fragmented with very small holdings and scattered field plots: the average rice farm size is less than 0.5 ha in China and Indonesia, less than 1 ha in Viet Nam, Bangladesh and Eastern India and only exceeds 2 ha in Thailand Cambodia and Western India. Characterized by their weak bargaining power, small rice growers are most often bound to accept the commercial terms dictated by medium and large rice mills that belong to the private sector in order to access the market.<sup>128</sup>

## Rice value breakdown in Thailand

Below is our estimation of value breakdown of rice exported from Thailand and polished, packed and sold in consumer countries. It also includes the value breakdown of rice sold domestically in Thailand's retail stores. It is expressed in nominal currency to avoid distortions linked to correction for inflation in the different countries. The estimates have been calculated

based on a weighted average of the value breakdown in the consumer countries included in this study (Germany, Netherlands, UK, USA, South Africa, Indonesia and Thailand – see section 4). The results are as follows:

**Fig. 41 Value breakdown of rice produced in Thailand (average 1996-1998 & in 2015)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

The lack of data availability in some consumer countries didn't enable to make a robust estimate prior to 1996. The share of value retained by supermarkets seems to have decreased substantially since 1996 (from 37% to 26%) However, this only took place in the USA and South Africa which are very specific markets, whereas the retailers' share increased in all the other countries analysed, especially in Europe (see section 4 for more details). The other leading actors capturing an increasing share of the value are the brands (from 24.3% to 26.8%) and the millers/exporters (from 17.8% to 22.4%), mirroring the structure of the value chain analysed previously. Within Thailand seems to have increased especially for producers and workers over the same period (from 8.5% combined share in 1996 to 12.4% in 2015). However, this does not take into account the inflation of living costs in the country.

To investigate further this situation, we have analysed the value evolution of the rice producer prices, export FOB prices and costs of production since the early 1990s. The results for the main destinations of Thailand's rice are provided in the diagram on next page.

### ***Rice production in Thailand***

Rice is a dominant sub-sector of Thailand's agricultural economy and has also long been an important source of the country's export earnings. With a rapid economic progress in non-agricultural sectors over the past few decades, the importance of rice has been declining along with the agricultural sector. But agriculture, particularly the rice sub-sector, is still the dominant economic activity in rural Thailand: 2/3 of the 5.5 million rural household are engaged in rice farming which accounts for 1/3 of the total value from agricultural production in the country. The annual rice production is about 24 million tons of milled rice, 40% being exported.<sup>129</sup>

Rice is cultivated on an area of 13.28 million ha accounting for almost 50% of the total agricultural land. From 1967 to 2012, rice production nearly quadrupled thanks to progress in irrigation combined with the dissemination of modern rice varieties (MVs). Commercial

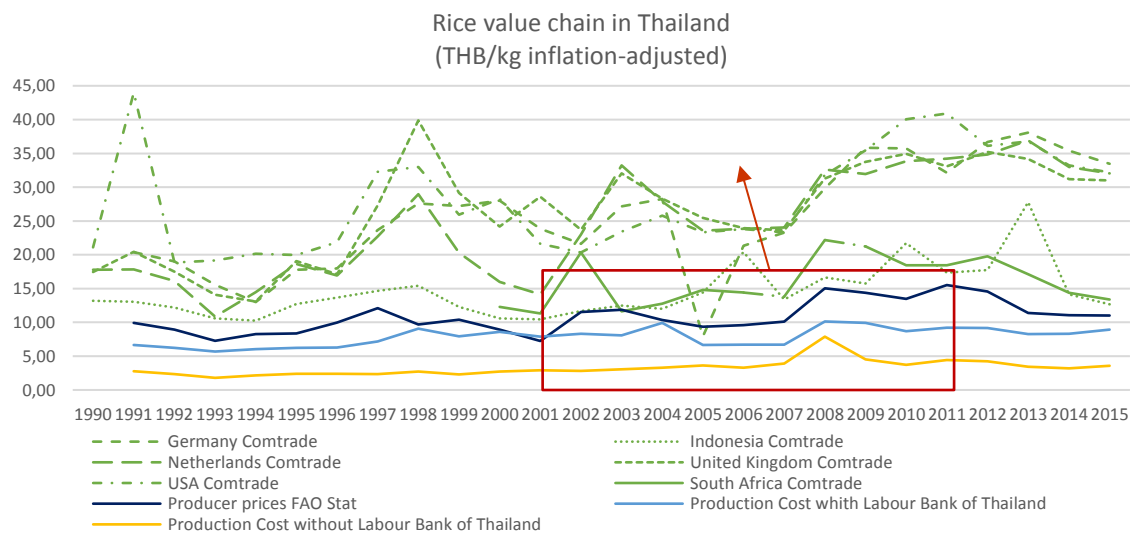
rice production is mostly concentrated in the irrigated areas of the Central Plain and lower northern regions. At least two harvests of rice per year are largely found in these regions with high yield (up to 4 ton per ha).<sup>130</sup>

After harvesting, paddy is distributed through farmer institutions, central paddy markets, and local assemblers before it is channelled to the rice mills: small facilities are established in villages and communities while private medium & large mills with high capacity (200 tonnes a day and more) are located along trading routes.<sup>131</sup>

Compared to other countries in the region, the supply chain for rice in Thailand is relatively well developed, encompassing a modern milling sector, infrastructure to support exports, and a private sector able to provide good customer service while meeting global market demand. Thailand has a reputation as a highly reliable supplier, although this reputation has been damaged in recent years by market disruptions brought about by the governments' rice policy in 2011-2014.<sup>132</sup>

Source: BASIC

**Fig. 42 Evolution of rice's value breakdown in Thailand**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

Between 1981 and mid-2014, the Thai government's carried out through a series of "paddy pledging programs," which provided price support to rice producers through a system of storage and loans which effectively allowed farmers to avoid selling their crop immediately after harvest (when seasonal prices are at their lowest) and acted as a floor price for them.<sup>133</sup>

In the 1990s, only about 7% of rice in the main crop was pledged annually to the programs, since the loan rates were most often below market prices. In 2001, the program was expanded to include rice grown in the dry season, and loan rates were progressively increased by the government; they were nearly doubled for wet season long grain rice between 2004 and 2008: from 6,600 THB/tonne (164 USD/t) up to 12,000 THB/tonne (360 USD/t). This transcribed in increased average prices for farmers (as illustrated in the above diagram) and led to massive build-up of government stocks.<sup>134</sup>

In 2011, Prime Minister Shinawatra established an expanding program that required the government to purchase rice to producers at 50% above the international market price, and reduced Thai exports of rice, in an attempt to drive up the world price of rice. As a result, huge

stockpiles developed, and exports of rice fell by 1/3 in the first year of the program. In addition, farmers began to substitute high-value aromatic rice varieties to higher-yielding long grain to maximize their support payments.<sup>135</sup>

By 2012, as the government was unable to sell its high-priced rice stocks and confronted with high storage costs (2 billion THB or 65 million USD per month), payments to farmers began to be delayed. Stockpiles reached 18 million tonnes (equivalent to 50% of the total yearly trade in rice) and losses under the program amounted to 158 billion THB (15.9 billion USD). In June 2014, the Paddy Pledging Program was suspended (except for aromatic and glutinous rice) after a military council took control of the government. New policies were put in place, aiming at lowering production costs (through fertilizer and pesticide discounts) and improving on-farm storage (through bank loans). However, they did not succeed yet in countervailing the continuous decline of producer price for rice since 2012, largely due to an overproduction estimated at about 6 million tonnes per year.<sup>136</sup>

Regarding export prices of Thai rice to major destinations, they all have increased substantially in 2007-2008, so as the difference with the average producer price has almost doubled once corrected for inflation (from approx. 10 THB/kg in 1997-2007 to almost 20 THB/kg since 2008; see above diagram). This illustrates the growing influence of millers and traders that apparently managed to capture a significantly higher share of the value at the detriment of small rice growers, all the more than costs of farm inputs have doubled since the early 1990s.

### **Ability of small farmers to earn a living income and levers for change**

Recent studies on the rice producers in Thailand estimate the average income earned by small farmers to reach approx. 113,000 THB per family (equivalent to 3,080 USD) in 2015. These estimates are based on statistical studies showing that a typical Thai rice farm as a size of 2.5 hectares, a productivity of 3,000 kg/ha/harvest, 2 harvests a year and 5 people making their living on the farm.<sup>137</sup>

These numbers can then be compared with the surveys on living income conducted by the Asia Floor Wage (based on a daily caloric intake and a reference food diversity index as well as education, health, housing and minimum savings). According to these studies, the cost of the basket of essential goods can be estimated at 200,000 THB (5,850 USD) per year for a family of 5 members<sup>138</sup>. This means that the rice farmers earn little more than half of what is considered a sustainable living income for their family.

Hence, to ensure that small farmers can earn a living income from rice farming, the share of value for farmers and workers would require increasing by 77% when compared to its level in 2015 (from an estimated 0.06 USD/kg to 0.11 USD/kg). This would represent a very limited mark-up of 0.05 USD/kg or 3% on the average consumer price of rice which is 1.75 USD in the countries studied. This does not require the consumer price to increase at the same level (more details on consumer countries, see the sections for: Germany, Netherlands, UK, USA, Thailand, Indonesia and South Africa).

Regarding agricultural workers, we have not been able to find data on the average wages and earnings per worker and household in the Thai rice sector.

# SHRIMP

## Shrimp value chain structuring and evolution

### Shrimp consumption, production and trade

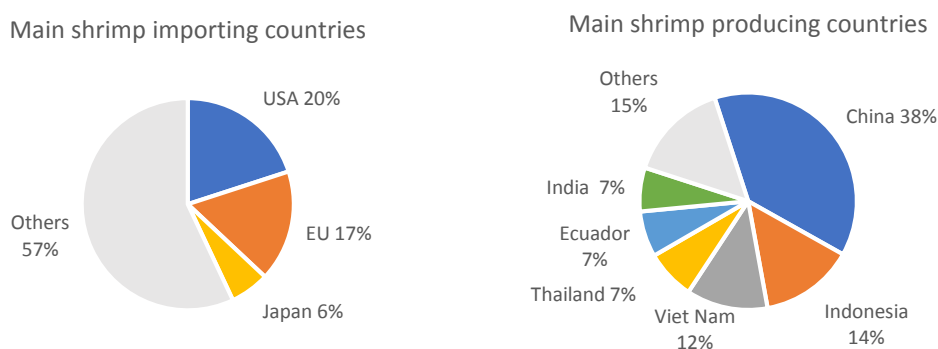
Shrimp is the most valuable fisheries commodity in the world, accounting for about 15% of the total value of internationally traded fishery products. It is estimated that the global production of shrimp is almost 8 million tons per year<sup>139</sup>. Wild-caught shrimp make up about 45% of the global supply, and generate incomes for an estimated 900,000 fishers worldwide<sup>140</sup>. The rest is produced on small and medium scale open-air farms, mostly in developing countries where land and labour costs are lower, and can support the global appetite for cheap shrimp.

Global shrimp production has expanded significantly over the past decades in response to the increasing demand, especially in emerging countries. The USA is the largest shrimp market (almost 20% of global imports), in slight increase since 2012, followed by the European Union (17% of imports) which is globally stagnating. Japan, the 3<sup>rd</sup> market (with 6% of imports), has declined significantly since 2012. In contrast, shrimp consumption is growing fast among emerging economies in East Asia, Russia and the Near East.<sup>141</sup>

The development of aquaculture (from 5% of global production in 1980 to 55% today) has enabled to multiply the traded volumes by 7 since 1980 (from 413,000 to 3 million tonnes)<sup>142</sup>. Over the same period, the price of shrimp has dropped by nearly 30%, transforming it into one of the most popular and affordable seafood products on the market. China is the world's largest producer, followed by Indonesia, Viet Nam, India and Thailand. While China produces in majority for its own domestic market, most of the shrimp produced in the other countries is exported. Ecuador and India are the leading world exporters (trading annually more than 350,000 tonnes each), followed by Thailand (which has not yet recovered from the outbreak of Early Mortality Syndrome in 2012), Indonesia, China and Viet Nam<sup>143</sup>.

The two most commonly farmed species are Whiteleg shrimp (also known as *L. Vannamei*) and Giant tiger shrimp (*P. Monodon*). White leg shrimp, originally farmed in South America and now mostly in Asia, is the most successful species for aquaculture. It now accounts for 72% of all shrimp farms' production worldwide, its total production having grown from 11,000 tonnes in 1980 to more than 3.3 million tonnes today. In contrast, the giant tiger prawn has lost predominance over the last 20 years (although regaining interest recently).<sup>144</sup>

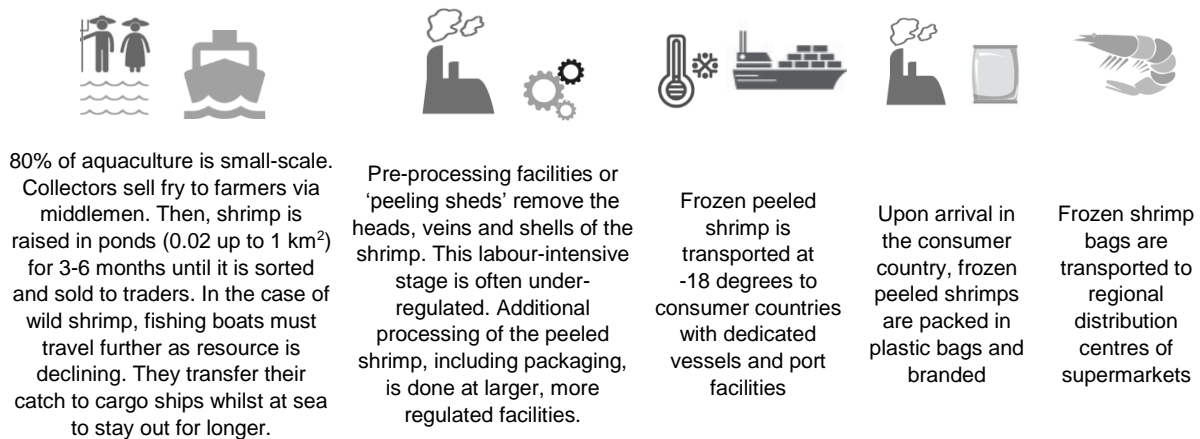
**Fig. 43 Main world shrimp import and producer countries**



Source: BASIC, based on FAO Globefish data (2015)

## Structure of the shrimp chain

Fig. 44 Technical description of the shrimp chain



Source: BASIC

Large retailers are the most influential actors in the chain because of the commodity status of frozen/chilled shrimps which are mostly sold as private label or unbranded products, making it difficult for manufacturers to bargain with large retail chains. A notable exception is Thai Union Group which has integrated multiple segments of the value chain (feed production, farming, processing and exports) and has acquired leading brands such as "Chicken of the Sea" (14.2% market share in the USA) and "John West" (37.1% in the UK)<sup>145</sup>. One of its main competitors, and the world's largest shrimp manufacturer, is Charoen Pokphand Foods (CPF), a Thailand-based vertically integrated group (from breeding stocks, to farms and processing, specialized in shrimp and poultry). Other large firms in Asia include Surapon Food, Pacific Fish Processing and Prantalay, most of them sourcing partly from their own farms or fishing fleets to secure access to the resource. Key North American actors are Ocean Garden Products (OPG), Red Chamber Co., Eastern Fish and Clearwater, while in Europe, Royal Greenland, Heiploeg and Alfesca are among the largest actors. Spain-based Pescanova, although primarily a whitefish producer, is also a key supplier of shrimp from its aquaculture facilities in Central America.<sup>146</sup>

These actors are the other key node in the chain after retailers, being responsible for manufacturing the finished product and exporting it to overseas markets. They conduct the secondary processing (cooking, breading, marinating) in their own plants which are increasingly situated in Asia where costs are lower (it was originally mainly done in USA, EU and Japan). Upstream, manufacturers often contract primary processing (de-heading, peeling and cleaning) to small and medium actors over whom they have great bargaining power. They source shrimps in two ways. Only a small proportion is purchased directly to farmers or fisheries, depending on the country. The majority is sourced through thousands of traders/brokers who buy shrimps to farmers/fisheries either at auction in centralized shrimp markets, or through other intermediaries (e.g. urban depot owners).<sup>147</sup>

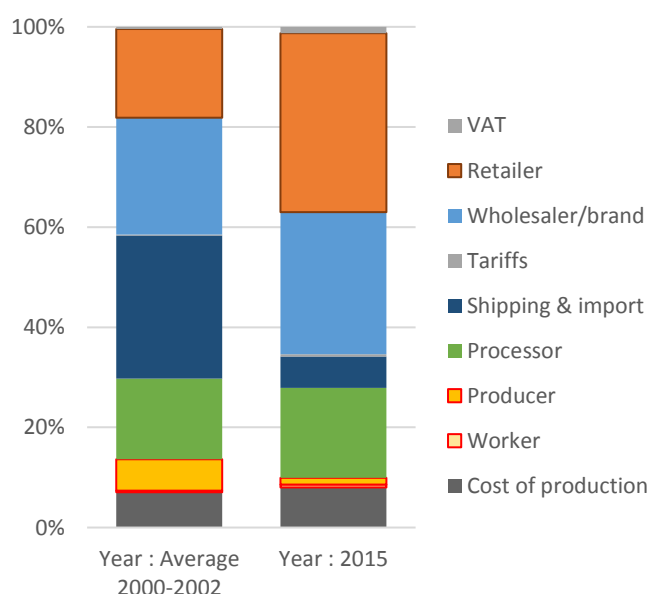
At the beginning of the chain, aquaculture relies predominantly on production done by small scale farmers (their proportion is estimated at 80% of total volumes in Asia) while some manufacturers get involved in farming to secure part of their supply and its quality (especially for white-leg shrimp which is more intensive and less risky). Contract farming is generally not popular among small farmers due to price fluctuations and the low level of trust with manufacturers and traders/brokers (although the largest ones can sometimes provide loans to small farmers, being in a position to exert pressure on them). As a result, in most countries, shrimp farmers are separated from the market by layers of intermediaries. Workers are mostly casual, hired and paid by contractors, and paid on a piece-rate basis for completing tasks. Most of them are migrants (like in processing).<sup>148</sup>

Upstream, shrimp fry/breeding is done in majority by small and medium-scale hatcheries. Whereas wild shrimps were used to produce offspring for farms prior to the late 1990s, genetic selection programs have provided more consistent supplies of resistant shrimp since then. In recent years, major shrimp processors such as Charoen Pokphand Foods and Thai Union Group have developed large capacities in the production of breeding stocks.

## Shrimp value breakdown in Viet Nam

Below is our estimation of value breakdown of shrimp produced, processed and exported from Viet Nam, packed and sold in consumer countries. It is expressed in nominal currency to avoid distortions linked to correction for inflation in the different countries. The estimates have been calculated based on a weighted average of the value breakdown in the consumer countries included in this study (Germany, Netherlands, UK, and USA – see section 4). The results are as follows:

**Fig. 45 Value breakdown of shrimp produced in Viet Nam (average 2000-2002 & in 2015)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

The lack of data availability in some consumer countries didn't enable to make a robust estimate prior to 2000. As the average consumer price of shrimp has risen by 50% in the countries analysed in this study - see section 4 for more details), the retailers appear to be the winners over the last 15 years, their share being multiplied by 2 from 22% to 43%. This is aligned with the previous analysis of the value chain which showed the growing power of retailers over the other actors in the chain. In contrast, the main losers in consumer countries over the past 15 years appear to be importers/brands (from 52% down to 31% of the value).

In Viet Nam, the remaining share of value has stagnated, with processors/manufacturers increasing their share from 13.5% to 15%. Shrimp farmers and workers appear to be the main losers being squeezed between the pressure of buyers (the share available for them has declined from 12% down to 9.5%) and the growing costs of inputs (from 6% up to 7%).

To investigate further this situation, we have analysed the value evolution of the shrimp producer prices, export FOB prices and costs of production since the early 2000. The results for the main destinations of Viet Nam's shrimps are provided in the diagram on next page.



### ***Shrimp production in Viet Nam***

Viet Nam became one of the world's top seafood exporters in little more than 10 years. Thanks to the country's advantageous geographical conditions, the fishery industry is now among the key national sectors: it ranks 3<sup>rd</sup> in terms of export value, after textile/ garment and crude oil industries, and creates jobs for about 5 million people. Aquaculture has become an important part of the national economy since its commercial orientation as part of the Blue Revolution in the 1990s. The country's seafood exports exceed 6 billion USD, shrimps accounting for 43% of the total.<sup>149</sup>

Almost 90% of the shrimp production is exported, mainly to the USA, Japan, the EU and China. Although black tiger shrimp used to be the main species produced in Viet Nam (especially in the Mekong Delta region), more and more farmers have switched to the White shrimp (in particular in the South-Central region), outweighing black tiger shrimp volumes for the first time since 2013 (253,100 tonnes Vs 251,000 tonnes in 2016)<sup>150</sup>. Shrimp production increased sharply during the period 2006-2010 by approximately 56% from 300,000 tonnes to almost 500,000 tonnes before it slowed down<sup>151</sup>.

Shrimp is farmed on a total surface of 600,000 hectares in all provinces throughout the country. The sector is very diverse, ranging from organic mangrove *Penaeus monodon* (black tiger shrimp) to small size *Litopenaeus vannamei* (whiteleg shrimp) from super intensive farms. The Mekong Delta is the most important farming area, accounting for nearly 80% of overall shrimp production<sup>152</sup>. The Vietnamese aquaculture sector faces important challenges in terms of access to capital, technology and knowledge (in particular when epidemic outbreak) and aqua feed (Viet Nam depends on foreign countries for over 50% of its supply of raw materials)<sup>153</sup>. Most shrimp processors and exporters nowadays have invested in one or more shrimp farms in order to secure a minimal stability of raw material supply to their establishments. Although some smaller farms are organized in associations, most operate independently and are linked to processors only through a network of intermediaries<sup>154</sup>.

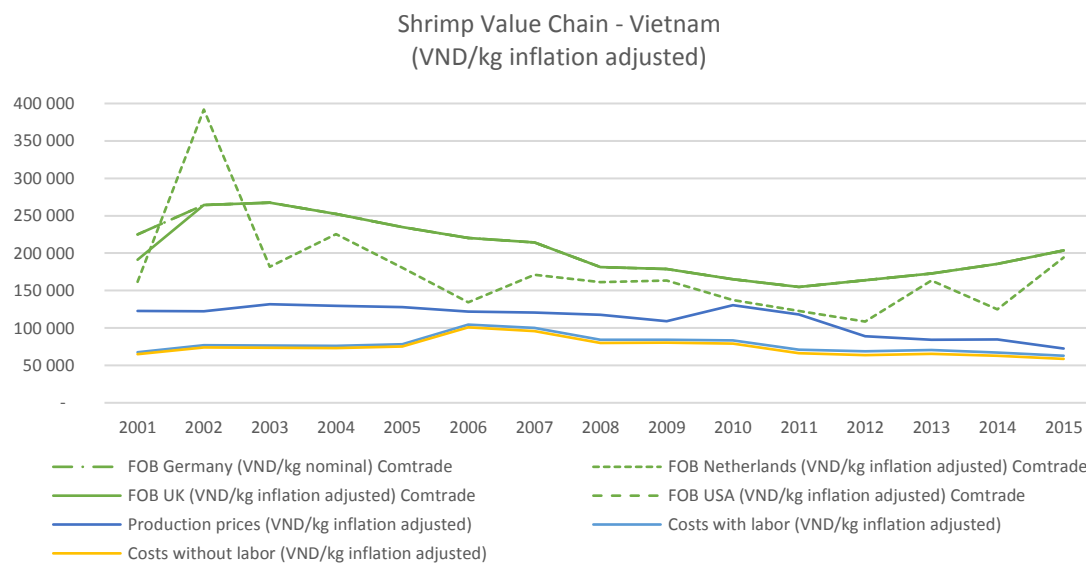
At the level of processing and export, the Viet Nam's industry is still under-developed and fragmented compared to other Asian competitors, in particular Thailand. There are 479 seafood manufacturing-exporting enterprises approved by the government (the two activities being commonly integrated). The 100 largest manufacturers account for 99% of the total value of seafood exports<sup>155</sup>. Most often, buyers sell to other collectors, and shrimp changes hands as many as five times before reaching the wholesaler who supplies the shrimp to the processors<sup>156</sup>. The leader in shrimp processing is Minh Phu Corp (10% market share, with 900 ha of industrial farming, purchasing from 12,000 ha of small farms and having a 76,000 t/year processing capacity), followed by "Ca Mau Seafood Processing & Service Corporation" (CASES). Other big shrimp producers are Quoc Viet, Stapimex and Camimex, all listed in the top thirty globally.<sup>157</sup>

Vietnam has also become an important processing hub. The country imports large volumes of head-on shell-on (HOSO) products from Ecuador (80,000 tonnes of shrimp imported to Vietnam in 2015) and India that are processed into many different value-added products, before being re-exported.<sup>158</sup>

Source: BASIC



**Fig. 46 Evolution of shrimp's value breakdown in Viet Nam**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

Although the shrimp industry plays an important role in Viet Nam's economic development and job creation, and is quite lucrative for the large actors, the pressure on shrimp small producers and fisheries is generating severe social and environmental impacts.

Since the early 1990s, advances in aquaculture and the subsequent rise in production of farmed shrimp have contributed not only to the increasing traded volumes, but also to a marked decline in the export price of shrimp. In the late 1990s White Spot Disease ravaged farms in Ecuador, causing a short spike in shrimp prices that rapidly fell when countries in Southeast Asia (in particular Viet Nam) ramped up production. Price volatility linked to outbreaks of disease remain a major risk in the sector up until today. Consequently, the large actors behave very short term and are very hesitant to enter into long term deals with shrimp farmers. More profoundly, the large buyers continue to respond by maintaining downwards price pressure on their suppliers in order to sustain low-priced shrimp in consumer markets, at the detriment of small producers.<sup>159</sup>

As illustrated in the above diagram, the producer price for shrimps in local currency once corrected for inflation has been divided by two, from 125,000 VND (8 USD) per kilogram to 60,000 VND (2.70 USD) per kilogram between 2001 and 2015. This is also the result of the low bargaining position of small shrimp farmers and fisheries who are bound to accept the price stipulated by large buyers situated further down in the chain. As shrimp production and processing is dominated by small enterprises where revenues are low, these falling prices have put further pressure on the incomes of the small shrimp farmers but also on the wages of the workers involved in fishing, shrimp farming and processing.<sup>160</sup>

According to industry leaders and observers, an insufficient supply of domestic workers reflects the reputation of the sector as one of undesirable working conditions<sup>161</sup>. Consequently, the seafood industry is largely supported by immigrant workers and, more recently, scandals around modern day slavery and human trafficking have been documented in the media both on shrimp fishing boats and in shrimp processing factories (on fishing boats, victims have described being forced to work long hours, subjected to beatings or drugged, and even witnessing murder)<sup>162</sup>. Regarding aquaculture, case studies in Viet Nam showed that the strong development of shrimp farming has led to people being displaced, farmland converted for shrimp-feeding production and environmental degradation due to excessive use of antibiotics and chemicals<sup>163</sup>.

## Ability of workers to earn a living wage and levers for change

Recent studies have shown that precarious work is widespread in seafood value chains, especially shrimps, from farm work and fisheries up to the processing stages: employees frequently work by piece rate, hardly receive minimum wage and is composed mainly of low-skilled women workers (75% of the labour force)<sup>164</sup>. In 2014, the Dutch NGO Fairfood International conducted a detailed study that found that 60% of workers received piece rates and 40% only daily wages<sup>165</sup>.

In 2016, the Research Centre for Employment Relations (ERC) conducted a detailed study - on behalf of the Global Living Wage Coalition - on the wages and living wages in the seafood processing sector in the Soc Trang district of Viet Nam. Their field investigation found that the prevailing wage of workers was 3,207,133 VND (148 USD) without overtime, based on 2,400,000 VND minimum/basic wage plus 358,800 VND common in-kind benefits (mainly lunch and transport) and 448,333 VND cash allowances (attendance, year-end and tet bonuses)<sup>166</sup>. Regarding living wages, the study estimated that the costs to achieve a basic and decent living standard (food, housing, utilities, education, health, transports and minimum savings) can be estimated at 3,991,841 VND (181 USD) per month and per worker in 2015, approximately 24% higher than the prevailing wages of workers in the seafood processing industry in Soc Trang when common in-kind benefits and cash allowances are taken into account<sup>167</sup>.

This means that workers in the shrimps' chain earn 20% less than what is considered a sustainable living income for their family. Hence, to ensure that workers can earn a living wage, the share of value for labour costs would require increasing from 0.53 USD/kg currently to 0.66 USD/kg, which would represent a very limited mark-up of 0.13 USD or 0.5% on the end consumer price of shrimps in most countries (from 28.2 USD/kg to 41.2 USD/kg depending on the country). This does not require the consumer price to increase at the same level (more details on consumer countries, see the sections for: Germany, Netherlands, UK, USA).

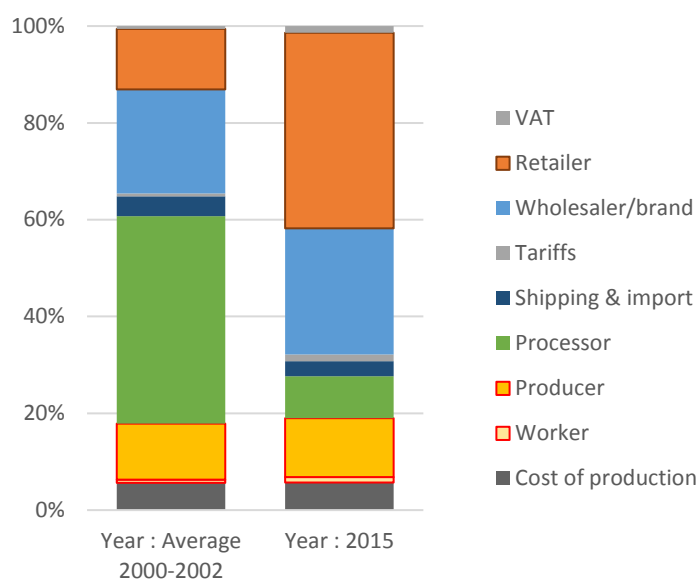
To address the current situation, there is a need to strengthen the due diligence provisions under the United Nations Guiding Principles on Business and Human Rights and the 2011 OECD Guidelines for Multinational Enterprises. There is also a need to recognize the right to living wage as a human right, establish living wage criteria and mechanisms and organize an ILO Tripartite Conference on the adverse impact of contracting and purchasing practices upon migrant workers' rights in the seafood sector.

According to recent studies<sup>168</sup>, increasing the minimum wage for shrimp workers (on vessels, in shrimp farms and in processing) to the living wage level appear to be the only effective tools to secure a living income for them, provided that their level is sufficient, and enough resources are allocated for controls on the ground.

## Shrimp value breakdown in Thailand

Below is our estimation of value breakdown of shrimp produced, processed and exported from Thailand, packed and sold in consumer countries. It is expressed in nominal currency to avoid distortions linked to correction for inflation in the different countries. The estimates have been calculated based on a weighted average of the value breakdown in the consumer countries included in this study (Germany, Netherlands, UK, and USA – see section 4). The results are as follows:

**Fig. 47 Value breakdown of shrimp produced in Thailand (average 2000-2002 & in 2015)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

The lack of data availability in some consumer countries didn't enable to make a robust estimate prior to 2000. As the average consumer price of shrimp has risen by 50% in the countries analysed in this study - see section 4 for more details), the retailers appear to be the winners over the last 15 years, their share being multiplied by 3 from 13% to 40%. This is aligned with the previous analysis of the value chain which showed the growing power of retailers over the other actors in the chain. In contrast, the main losers in the chain over the past 15 years appear to be processors (from 43% down to 9% of the value). As a result, the remaining share of value in Thailand appears to have fallen significantly over the last 15 years, affecting mainly the workers in processing factories. Shrimp farmers appear to have managed to maintain their small share (around 12% of the total value).

To investigate further this situation, we have analysed the value evolution of the shrimp producer prices, export FOB prices and costs of production since the early 2000. The results for the main destinations of Thai shrimps are provided in the diagram on next page.

### ***Shrimp production in Thailand***

Thailand was until 2013 the largest exporter of shrimp globally, primarily to the US (46%), Japan (20%) and the European Union (EU) (16%). The shrimp industry in Thailand remains highly labour-intensive, employing over 700,000 people throughout the supply chain.<sup>169</sup>

The latest severe outbreak of Early Mortality Syndrome (EMS) in 2013 has led to more than 1 billion USD losses and a rapid collapse of shrimp production to 200,000 tons, one-third of the peak of 600,000 tons per year reached in 2012. EMS has also induced shrimp farmers to switch from tiger prawns to Vannamei (white-leg) shrimp, which have higher resistance to local diseases. While 80-90% of shrimp farmed in Thailand in 2002 were tiger prawn, today 95% are white-leg shrimp.<sup>170</sup>

Around 90% of shrimp produced is farmed, mostly by family owned enterprises or small businesses with small land holdings of less than two hectares. There are approximately 30,000 registered farms in Thailand, of which only 10,000 are actively operating Shrimp fry

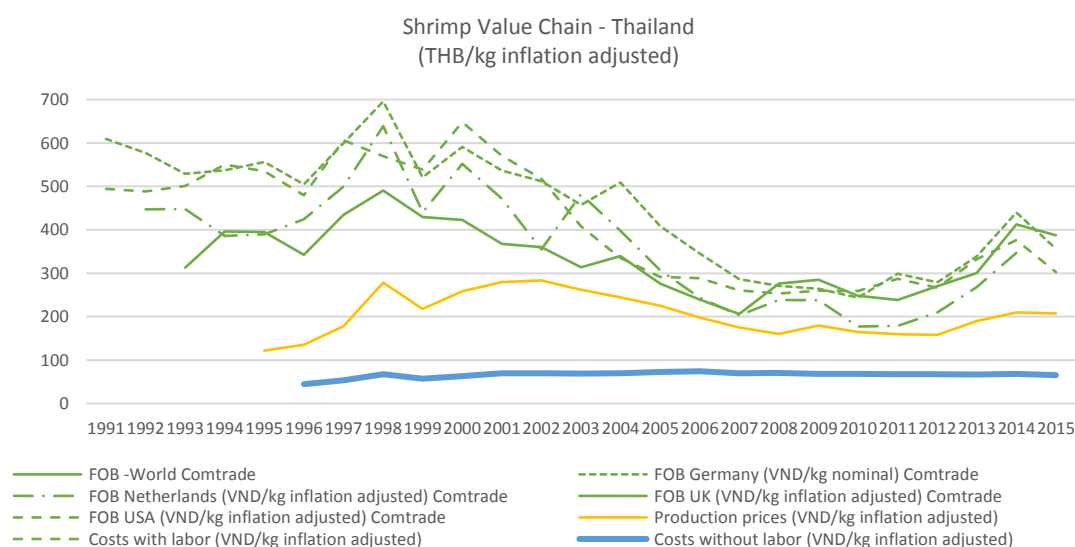
production is highly developed and based on more than 2,000 'backyard' hatcheries, which produce about 90% of the country's requirements annually (80 billion fry).<sup>171</sup>

Shrimp farmers sell their product to shrimp collectors, shrimp farmer cooperative or Pae kung (shrimp piers), the latter often selling the product onward to brokers. All these actors then sell to processors at centralized shrimp markets, for example at Samut Sakhon, which consolidates 75% of Thailand's raw shrimp from eastern and southern regions. Most of this shrimp is for export and only 10% is consumed in the domestic market.<sup>172</sup>

To gain access to international markets, processors and exporters must be registered with the Thai Frozen Food Association (TFFA), which imposes regulatory controls on health and safety. Nevertheless, according to independent estimates, there are as many as 2,000 unregistered, informal peeling sheds in operation.<sup>173</sup>

Source: BASIC

**Fig. 48 Evolution of shrimp's value breakdown in Thailand**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

Since the early 2000s, advances in aquaculture and the subsequent rise in production of farmed shrimp have contributed not only to the increasing traded volumes, but also to a relative decline in the export price of shrimp. In 2013-2014, Early Mortality Syndrome (EMS) ravaged farms in Thailand, causing a short spike in shrimp prices that fell when Thailand and other countries in Southeast Asia (in particular Viet Nam) ramped up production. Price volatility linked to outbreaks of disease remain a major risk in the sector up until today. Consequently, the large actors behave very short term and are very hesitant to enter into long term deals with shrimp farmers. More profoundly, the large buyers continue to respond by maintaining downwards price pressure on their suppliers in order to sustain low-priced shrimp in consumer markets, at the detriment of small producers.<sup>174</sup>

As illustrated in the above diagram, the producer price for shrimps in local currency once corrected for inflation has been divided by almost two, from 600 THB per kilogram to 350 THB per kilogram between 1998 and 2015 (more than 15% decrease between 2014 & 2015 alone). This is also the result of the low bargaining position of small shrimp farmers and fisheries who are bound to accept the price stipulated by large buyers situated further down in the chain. These falling prices have put further pressure on the incomes of the small shrimp farmers but also on the wages of the workers involved in fishing, shrimp farming and processing.<sup>175</sup>

According to independent studies, abusive labour conditions are commonly found in the 2,000 unregistered informal peeling factories, including child labour, bonded labour, the employment

of vulnerable refugees and poor working conditions. Such labour abuses are partly a result of increasing wealth and low unemployment rates which have often led Thai workers to choose better paid and less labour-intensive jobs, creating a labour shortage. Thus 90% of the seafood-processing workforce in Thailand comprises low paid migrant workers.<sup>176</sup>

### **Ability of workers to earn a living wage and levers for change**

Recent studies have shown that precarious work is widespread in seafood value chains, especially shrimps, from farm work and fisheries up to the processing stages: employees frequently work by piece rate, hardly receive minimum wage and is composed mainly of low-skilled women workers (75% of the labour force)<sup>177</sup>. In 2014, the Dutch NGO Fairfood International conducted a detailed study that found that 60% of workers received piece rates and 40% only daily wages<sup>178</sup>.

These numbers can be compared with the surveys on living wage conducted by the Asia Floor Wage (based on a daily caloric intake and a reference food diversity index as well as education, health, housing and minimum savings). According to these studies, the living wage enabling to cover the cost of the basket of essential goods for a family of 4 members can be estimated at 13,359 THB (390 USD) per income earner and per month<sup>179</sup>.

Even if assuming that workers in the shrimp processing factories receive the Thai daily minimum wage of 300 THB (or 8.76 USD) per day plus benefits, i.e. 9,000 THB/month (263 USD/month) based on 26 working days per month, this means that workers in the shrimps' chain earn 40% less than what is considered a sustainable living income for their family. Hence, to ensure that workers can earn a living wage, the share of value for labour costs would require increasing from 0.36 USD/kg currently to 0.52 USD/kg, which would represent a very limited mark-up of 0.16 USD or 0.5% on the end consumer price of shrimps in most countries (from 28.2 USD/kg to 41.2 USD/kg depending on the country). This does not require the consumer price to increase at the same level (more details on consumer countries, see the sections for: Germany, Netherlands, UK, USA).

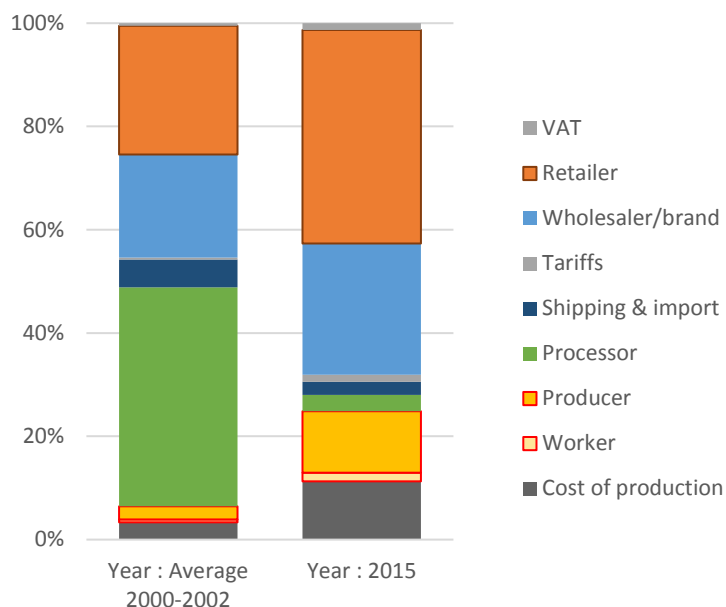
To address the current situation, there is a need to strengthen the due diligence provisions under the United Nations Guiding Principles on Business and Human Rights and the 2011 OECD Guidelines for Multinational Enterprises. There is also a need to recognize the right to living wage as a human right, establish living wage criteria and mechanisms and organize an ILO Tripartite Conference on the adverse impact of contracting and purchasing practices upon migrant workers' rights in the seafood sector.

According to recent studies<sup>180</sup>, increasing the minimum wage for shrimp workers (on vessels, in shrimp farms and in processing) to the living wage level appear to be the only effective tools to secure a living income for them, provided that their level is sufficient, and enough resources are allocated for controls on the ground.

## **Shrimp value breakdown in Indonesia**

Below is our estimation of value breakdown of shrimp produced, processed and exported from Indonesia, packed and sold in consumer countries. It is expressed in nominal currency to avoid distortions linked to correction for inflation in the different countries. The estimates have been calculated based on a weighted average of the value breakdown in the consumer countries included in this study (Germany, Netherlands, UK, and USA – see section 4). The results are as follows:

**Fig. 49 Value breakdown of shrimp produced in Indonesia (average 2000-2002 & in 2015)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

The lack of data availability in some consumer countries didn't enable to make a robust estimate prior to 2000. As the average consumer price of shrimp has risen by 50% in the countries analysed in this study - see section 4 for more details), the retailers appear to be the winners over the last 15 years, their share having increased from 25% to 41%. This is aligned with the previous analysis of the value chain which showed the growing power of retailers over the other actors in the chain. In contrast, the main losers in the chain over the past 15 years appear to be processors (from 43% down to 3% of the value). As a result, the remaining share of value in Indonesia appears to have fallen significantly over the last 15 years, affecting mainly the workers in processing factories. Shrimp farmers appear to have managed to increase their share of value in the past few years (around 12% of the total), probably because of the recent strong development of corporate farms at the expense of small-scale aquaculture farming in the country.

### ***Shrimp production in Indonesia***

In Indonesia, fisheries and aquaculture sector contributes to 2.5% of total gross domestic product in 2015. The production of aquaculture contributes to 68% of total fish production, directly involving 3,810,758 people in 2014.<sup>181</sup>

Shrimp production reached 600,000 tonnes in 2015, making Indonesia the second largest shrimp producer in the world after China according to FAO fishery statistics. While almost all semi-intensive farmers have shifted to the production of *Litopenaeus vannamei* (whiteleg shrimp) which now accounts for more than 75% of total shrimp production, farmers which use extensive mono- and polyculture ponds still grow *Penaeus monodon* (black tiger shrimp).<sup>182</sup>

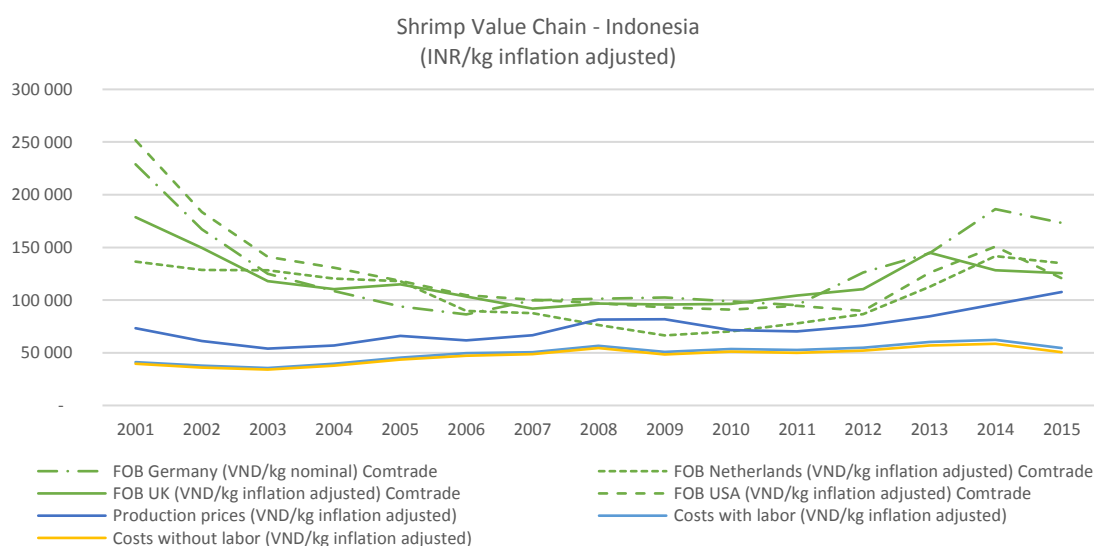
Most of the shrimp production is exported. Indonesia currently dominates the United States' shrimp market, as it is not confronted with antidumping duties which the USA has put on competitors in several other Asian countries (India, China, Thailand and Vietnam). In Japan, its second largest market, Indonesia is the third largest shrimp exporter mainly supplying *P. monodon* shrimp. In the European Union, its third largest market, Indonesia is only the 7th largest supplier of exotic shrimp due to the fact that it does not enjoy GSP status and has not yet engaged in a Free Trade Agreement with the EU.<sup>183</sup>

In 2010 it was estimated that small-scale farmers contributed 40% to the total shrimp production. Since then, the relative contribution of small scale farmers has decreased as many have not been able to make the transition from *P. monodon* to *L. vannamei* successfully. Intensive *L. vannamei* culture and *P. monodon* production by extensive farmers are located on East-Java and in some local areas of South Sulawesi and Sumatra (lampung), while corporate farms are concentrated in East-Kalimantan. CP Prima, Indonesia largest shrimp exporter and owner of one of the largest shrimp farms in the world, operates a lease construction with small scale farmers. Many shrimp exporters nowadays also have their own shrimp farms. This is the case for the bigger shrimp exporters such as CP Prima, Sekar Bumi, and BMI as well as for smaller companies such as ICS. The main goal of having their own farms is to secure some supply to the factories and to be less dependent on outside supplies.<sup>184</sup>

Exports are dominated by the big five shrimp processors and exporters: CP Prima, Sekar Bumi, Bumi Menara Internusa, Kelola Mina Laut and Bancar Makmur, all owning multiple processing establishments. IN addition, many smaller exporters also contribute significantly with smaller volumes, including companies like PT ATINA and PT Istana Cipta Sembada. The majority of shrimp exports is shipped as frozen, which includes very basic value-addition like peeling, tails and heads off etc.<sup>185</sup>

Source: BASIC

**Fig. 50 Evolution of shrimp's value breakdown in Indonesia**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

Since the early 2000s, advances in aquaculture and the subsequent rise in production of farmed shrimp have contributed not only to the increasing traded volumes, but also to a relative decline in the export price of shrimp. In 2013-2014, Early Mortality Syndrome (EMS) ravaged farms in Thailand, causing a short spike in shrimp prices that fell when Thailand and other countries in Southeast Asia (in particular Viet Nam) ramped up production. Price volatility linked to outbreaks of disease remain a major risk in the sector up until today. The large buyers continue to respond by maintaining downwards price pressure on their suppliers in order to sustain low-priced shrimp in consumer markets and have invested significantly in Indonesia to develop large intensive corporate farms at the detriment of small producers.<sup>186</sup>

As illustrated in the above diagram, the producer price for shrimps in local currency once corrected for inflation has been reduced by a third, from 209,000 INR per kilogram to 139,000 INR per kilogram between 2001 and 2015. These falling prices have put further pressure on the

incomes of the small shrimp farmers but also on the wages of the workers involved in fishing, shrimp farming and processing.<sup>187</sup>

### **Ability of workers to earn a living wage and levers for change**

Recent studies have shown that precarious work is widespread in seafood value chains, especially shrimps, from farm work and fisheries up to the processing stages: employees frequently work by piece rate, hardly receive minimum wage and is composed mainly of low-skilled women workers (75% of the labour force)<sup>188</sup>. In 2014, the Dutch NGO Fairfood International conducted a detailed study that found that 60% of workers received piece rates and 40% only daily wages<sup>189</sup>.

These numbers can be compared with the surveys on living income conducted by the Asia Floor Wage (based on a daily caloric intake and a reference food diversity index as well as education, health, housing and minimum savings). According to these studies, the living wage enabling to cover the cost of the basket of essential goods for a family of 4 members can be estimated at 4,684,570 INR (332 USD) per income earner and per month<sup>190</sup>.

The workers in Indonesian factories are paid on a piece-work rate according to the volume of shrimps they process. A study commissioned by Oxfam in 2017 estimated that the wage earned by workers in processing facilities of Bratasena was 3,418,800 INR per month for a reference yield of 7 tons/line and for medium-sized shrimps, but with strong variations depending on the size of the shrimp<sup>191</sup>. After deducting insurance pay and health insurance, the net wage was estimated at 3,152,100 INR<sup>192</sup>. Assuming that workers in the shrimp processing factories receive this wage, this means that workers earn 30% less than what is considered a sustainable living income for their family. Hence, to ensure that workers can earn a living wage, the share of value for labour costs would require increasing from 0.29 USD/kg currently to 0.44 USD/kg, which would represent a very limited mark-up of 0.15 USD or 0.3% on the end consumer price of shrimps in most countries (from 28.2 USD/kg to 41.2 USD/kg depending on the country). This does not require the consumer price to increase at the same level (more details on consumer countries, see the sections for: Germany, Netherlands, UK, USA).

To address the current situation, there is a need to strengthen the due diligence provisions under the United Nations Guiding Principles on Business and Human Rights and the 2011 OECD Guidelines for Multinational Enterprises. There is also a need to recognize the right to living wage as a human right, establish living wage criteria and mechanisms and organize an ILO Tripartite Conference on the adverse impact of contracting and purchasing practices upon migrant workers' rights in the seafood sector.

According to recent studies<sup>193</sup>, increasing the minimum wage for shrimp workers (on vessels, in shrimp farms and in processing) to the living wage level appear to be the only effective tools to secure a living income for them, provided that their level is sufficient, and enough resources are allocated for controls on the ground.



# CANNED TUNA

## Canned Tuna value chain structuring and evolution

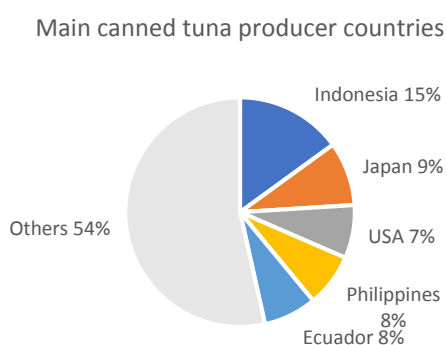
### Canned tuna consumption, production and trade

At the global level, tuna production and consumption are driven by both canned tuna and sashimi/sushi. Canned tuna is the main product of the sector consumed all over the world. Supermarkets dominate canned tuna sales in traditional markets, promoting it as an affordable and very convenient food with no refrigeration needed and a shelf life of up to a few years (like milk, coffee and bananas, canned tuna is a 'core category' for retailers in many countries)<sup>194</sup>. The EU, Japan and the US are by far the largest markets, although stagnating. Spain, Italy, UK and France are the largest per capita consumers, accounting for more than 25% of the world's consumption<sup>195</sup>. Despite retail concentration, canned tuna continues being a brand dominated market, although private labels owned by supermarkets are increasing their market share. To counterbalance declining sales, the processing sector has focused on product innovation, trying to transform this basic and low-cost product into specialised value-added applications such as sandwiches, pastas, salads and snacks. Alongside these traditional consumer countries, new markets in Asia, the Near East and Latin America have emerged helping to maintain growth in world canned tuna trade (+50% in the two latter over the last 5 years)<sup>196</sup>.

The tuna industry relies almost exclusively on wild-caught production and has no significant aquaculture production (except some tuna ranching of bluefin for the sushi/sashimi sector). There are 4 main species: skipjack (59% of catches), yellowfin (25%), bigeye (9%) and albacore (6%)<sup>197</sup>. The majority of the harvested volume is used in the canning industry, particularly skipjack which is almost exclusively canned. The tropical warm waters of the Pacific account for close to 70% of the world's supply which totals 4.5 million tonnes annually. Thailand is by far the largest exporter of processed tuna in the world. Since 2000, Thai exports have more than doubled, a similar trend as in China, Ecuador and Spain, its main competitors<sup>198</sup>.

At the fishery level, Skipjack volumes, used for canned tuna, are growing the fastest: landings have doubled since 1990 from below 1.3 million tonnes to close to 2.8 million tonnes. The 5 main production countries account for 45% of volumes, the largest producer being Indonesia (15% of volumes), followed by Japan (9%), the USA, Philippines and Ecuador (7.5% each)<sup>199</sup>.

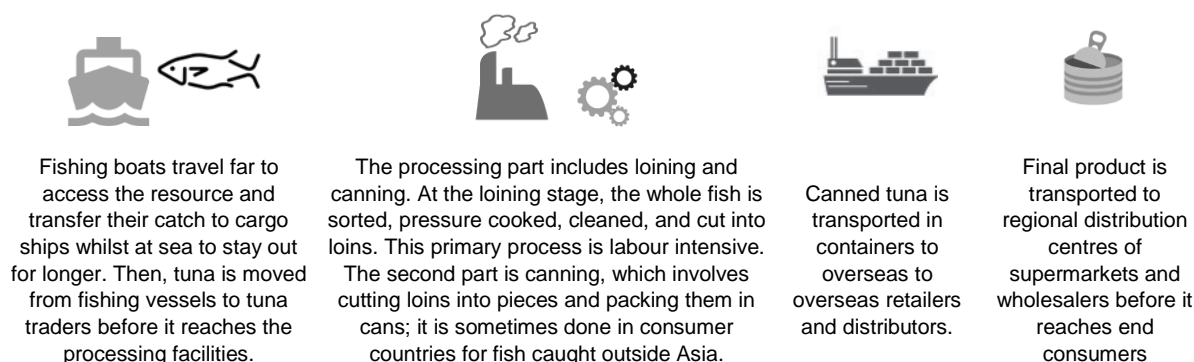
**Fig. 51 Main world canned tuna producer countries**



Source: BASIC, based on FAO data (2017)

## Structure of the canned tuna chain

Fig. 52 Technical description of the canned tuna chain



Source: BASIC

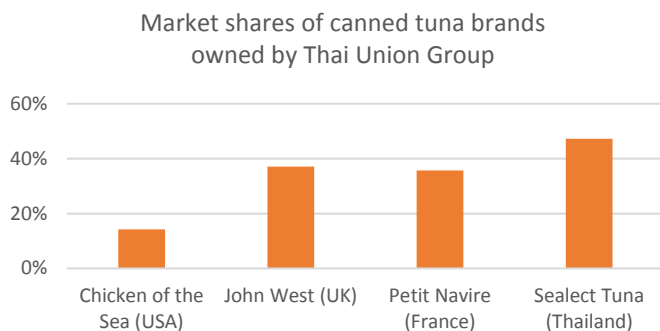
Canned tuna is a unique subsector of the seafood industry as it has a larger market penetration of brands than any other seafood product. However, the commodity status of canned tuna has increasingly made it difficult for processors to bargain with large retail chains since the introduction of private-label products by supermarkets (reaching market shares of 65% and beyond in some European countries such as Germany and Spain).<sup>200</sup>

In response to the strengthening position of retailers, and to capture more value, the largest actors of the canned tuna sector have started to extend their width of activities along the chain.

The 3 leading traders of raw tuna at the global level have opted for a strategy of “external coordination”. FCF Fishery Company Ltd. (Taiwan), Itochu Corporation (Japan) and Tri-Marine (USA), which together trade more than 50% of cannery-grade tuna worldwide, have started to leverage on their historical know-how and bargaining position to organize the chain from the fishing up to the manufacturing of canned tuna through contractual agreements with small and medium-sized operators (who are widespread in the sector). Upstream, these 3 trading firms provide funds, food and oil to fishing vessels, and in return, vessel operators are obliged to supply their catch to them. Downstream, they use their extensive logistical network to supply raw fish to manufacturers and to obtain in exchange canned tuna from them. Their sophisticated system of external coordination (combined with some minor ownership of fleets and processing plants) provides them with the necessary flexibility to address the price fluctuations on the market. They are not engaged so far in retailing at the end of the chain, choosing instead to become the preferred suppliers of supermarkets and brand owners.<sup>201</sup>

Some large domestic processors have defied this trend. In an effort to mitigate the power of both retailers and trading firms, they have developed a strategy of “internal integration”, extending their businesses from the processing of tuna up to the final consumer through mergers and acquisitions<sup>202</sup>. A key example is Thai Union Group (20% of global production) which has acquired a major US distributor (Empress International) as well as leading international brands such as “Chicken of the Sea” in the USA (14.2% market share), “John West” in the UK (37.1% share), “Petit Navire” in France (35.7% share) and “Sealect Tuna” in Thailand (47.2% share)<sup>203</sup>. Other large Asian manufacturers are Dongwon Industries (based in South Korea and owner of StarKist, the largest canned tuna brand in the USA) and Haboromo Foods Corporation (Japan). In Europe, Bolton Alimentari is the largest tuna canner, while in North America Bumble Bee Foods is the market leader. Consolidation has become quite strong at this level of the chain: the 3 leading brands in the USA account for 80% of sales, and the 5 European leaders account for 50% of the market at pan-EU level. Lacking scale, the smaller manufacturers either move to defensible niche markets, get under contract with leading traders or get acquired by market leaders.<sup>204</sup>

**Fig. 53 Market penetration of some major canned tuna brands**



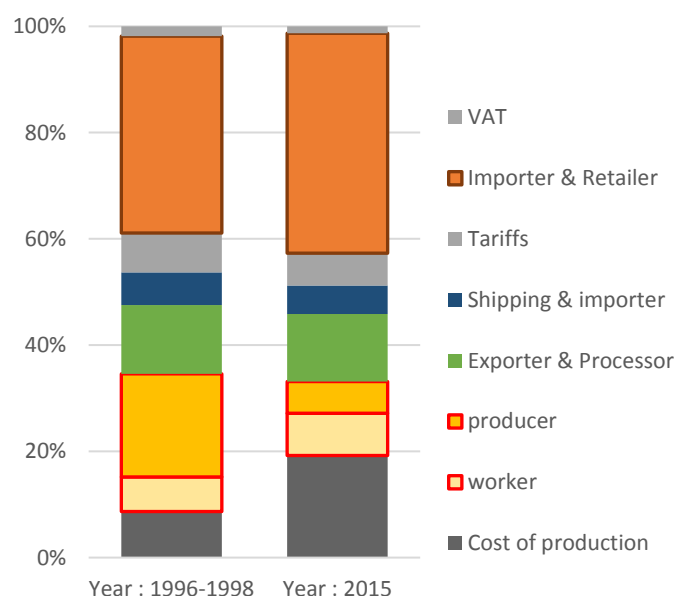
Source: BASIC, based on Thai Union Group annual report (2016)

At the beginning of the chain, Tuna fishing activity comprises a large number of small and medium operators having access to government licences in their country. A majority of them have low bargaining capacity and rely on dominant traders (FCF, Itochu, Tri-Marine...) for accessing the market. Over the past decades, technological development has played a crucial role in the rapid rise in total catches and increases in productivity. However, fishing remains highly labour-intensive (around 15% of costs compared to 8%-10% in processing) and many fishing companies, to reduce costs, have replaced their local fishing crews with foreigners from countries with lower wages, such as China, Myanmar, and Cambodia.

## Canned tuna value breakdown in Thailand

Below is our estimation of value breakdown of canned tuna produced, processed and exported from Thailand, packed and sold in consumer countries. It is expressed in nominal currency to avoid distortions linked to correction for inflation in the different countries. The estimates have been calculated based on a weighted average of the value breakdown in the consumer countries included in this study (Germany, Netherlands, UK, and USA – see section 4). The results are as follows:

**Fig. 54 Value breakdown of canned tuna produced in Thailand (average 1996-1998 & in 2015)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

The lack of data availability in some consumer countries didn't enable to make a robust estimate prior to 1996. As the average consumer price of canned tuna has increased by more than 1/3 in the countries analysed in this study - see section 4 for more details), the retailers appear to be the winners over the last 15 years, their share increasing from 37% to 41%. In contrast, the share of value remaining in Thailand has declined from 47.5% to 46% over the same period. The main losers appear to be the fisheries which, their share of value having shrunk dramatically from 13% to 3% as they have apparently been squeezed between the price pressure exerted by the other leading actors in the chain and the strong increase of costs of fishing raw tuna.

To investigate further this situation, we have analysed the value evolution of the canned tuna producer prices, export FOB prices and costs of production since the early 2000. The results for the main destinations of Thailand's canned tuna are provided in the diagram on next page.

### ***Canned Tuna production in Thailand***

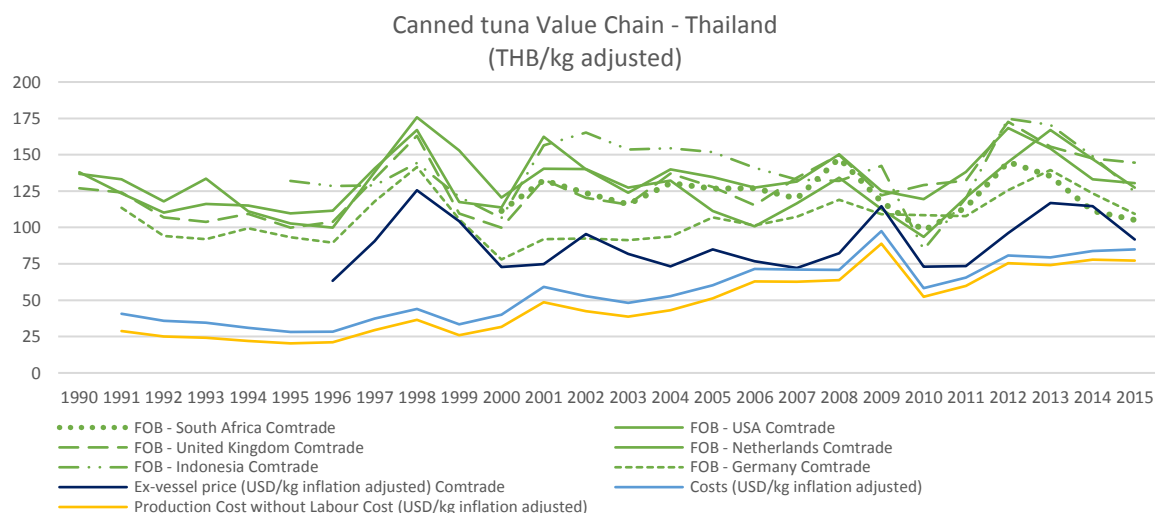
Fishing has traditionally provided an essential livelihood for those living along Thailand's fertile coastlines. Today, the country has the world's largest tuna canning industry and is home to the global market leader Thai Union Group. The country's canned tuna industry is strongly export-oriented with 95% of production bound for export and only 5% for domestic consumption. The sector is controlled by a small group of 18 Thai companies which are all members of the Thai Tuna Industry Association (TTIA). The majority of them are OEM suppliers (i.e. manufacturing canned tuna for foreign wholesalers/brands and private label of major retailers in the USA, Europe, Australia, and Japan); only Thai Union Group has its own global brands. In terms of supply, all Thai canned tuna manufacturers interact with the 3 global integrated traders (FCF, ITOCHU, and Tri-Marine) who control approximately 70% to 80% of the tuna supply in Thailand.<sup>205</sup>

Thailand has taken advantage of its access to low-cost, skilled labour from neighbouring countries to become the preferred hub for good quality and cost-effective canned tuna production. The processing facilities are largely concentrated in Samut Sakhon and Songkhla, which are close to the supply of fish and where labour is concentrated. Because of the low wages and low attractiveness for Thai workers, the industry relies heavily on immigrant workers, who represent an estimated 60%-70% of the 80,000 total workers in the processing stage of the chain. On Thai fishing vessels (which represent a very small part of the supply, most raw fish being imported from neighbouring countries), workers are also mostly migrants, primarily Burmese, followed by Cambodian and Laotian workers.<sup>206</sup>

These factors have all contributed to the vulnerability of fishers, and there have been several reports of abuse and exploitation on board Thai vessels in recent years. Cases of forced labour and trafficking reported in the media and through other channels have given rise to increasing pressure from the international community (even though the scale of the problem has been hard to assess due to the challenges of conducting research in this area). This has triggered pressure from overseas buyers on canned tuna manufacturers, compelling them with increasing standards on labour conditions and the environment, above and beyond existing requirements on the sanitary conditions of the product.<sup>207</sup>

Source: BASIC

**Fig. 55 Evolution of canned tuna value breakdown in Thailand**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

As illustrated in the above diagram, the fisheries in Thailand have been facing an ever-increasing margin pressure over the past 20 years due to the rising prices of raw material which have been multiplied by 3 since the early 1990s once corrected for inflation (from 25 THB/kg up to 75 THB per kg).

This has been a key driver for the strong consolidation that took place in the tuna industry.

The pressure put by European supermarkets, due to the increasing penetration of private-label products, has been transferred down the chain from brands to manufacturers, processors and ultimately fisheries.<sup>208</sup>

Both vertically integrated branded manufacturers and global traders (through their contractual structure) were able to manage price fluctuations and keep profitability, while the workers at the beginning of the chain have suffered the consequences. In processing, the pressure from overseas buyers has compelled Thai canned tuna processors to maintain higher standards than in the rest of the seafood industry, including on labour issues and environmental conditions, all the more than there are a few dominant players capable of controlling their value chains in the Thai canned tuna industry (and made authorities' inspections more effective).<sup>209</sup>

Looking at the fishing stage of the chain, the Thai fleet faces an annual shortage of about 50,000 mariners according to UN estimates, and this shortfall is filled in large part by migrant workers from Cambodia and Myanmar who enter Thailand with irregular migration status<sup>210</sup>. They typically do not speak the language of their Thai captains, do not know how to swim and are therefore captive<sup>211</sup>.

Due to overfishing and low fish stocks, boats can stay out for up to a year at a time. As a result, vessels elude regulatory oversight for extended periods and migrant workers on Thai fishing boats report extreme workplace violence and even murder: in a United Nations survey of 50 Cambodian men on Thai fishing boats, 29 workers said they had witnessed their captain or other officers kill a worker while other workers reported being beaten for small transgressions. Migrants have also reported government complicity in rights abuses. In response, the Thai government declares having increased investigations and prosecutions and has launched initiatives to provide identity cards to undocumented workers.<sup>212</sup>

## Ability of workers to earn a living wage and levers for change

Thailand currently has a nationwide minimum wage of 300 THB (or 8.76 USD) per day, i.e. 7,800 THB/month (228 USD/month), based on 26 working days per month. This minimum wage was implemented in two phases in 2012 and 2013. No data is available for the wages of the workers onboard the tuna vessels. In the processing factories, payment to workers is generally made based on output, and workers' seven to eight hours of work would entitle them to earn at least 300 baht only if employers adjust the amount of raw materials allocated to them accordingly.<sup>213</sup>

Even if considering that workers manage to earn the minimum wage in Thailand, it does not seem to be sufficient for them to achieve a sustainable livelihood. Indeed, according to the surveys conducted by the Asia Floor Wage, the living wage necessary to the basic needs of a family in Thailand has been estimated at 13,360 THB or 390 USD per month<sup>214</sup>.

This means that workers in the canned tuna chain only earn less than 60% of what is considered a sustainable living income for their family. Hence, to ensure that tuna processing workers can earn a living wage, the share of value for labour costs would require increasing at least from 0.25 USD/kg currently to 0.43 USD/kg, which would represent a limited mark-up of 0.18 USD or 2.5% on the end consumer price of canned tuna in most countries (from 7.30 USD/kg to 12.90 USD/kg depending on the country). This does not require the consumer price to increase at the same level (more details on consumer countries, see the sections for: Germany, Netherlands, UK, USA, Indonesia, Thailand and South Africa).

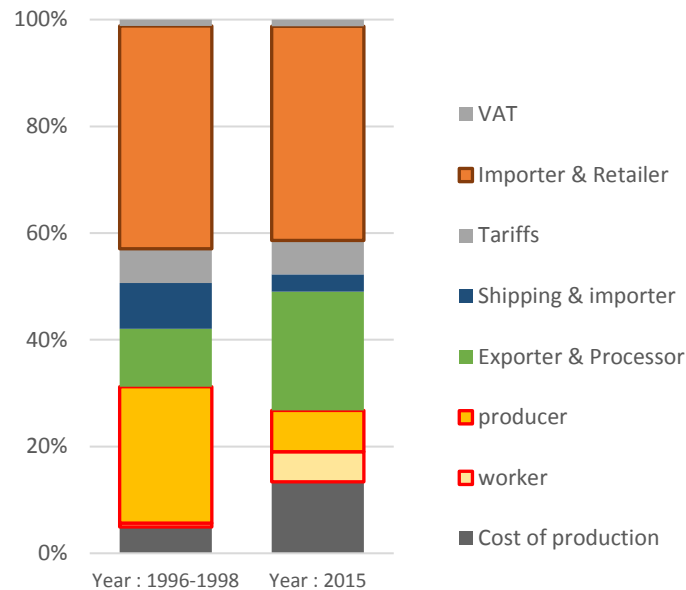
To address the current situation, there is a need to strengthen the due diligence provisions under the United Nations Guiding Principles on Business and Human Rights and the 2011 OECD Guidelines for Multinational Enterprises. There is also a need to recognize the right to living wage as a human right, establish living wage criteria and mechanisms and organize an ILO Tripartite Conference on the adverse impact of contracting and purchasing practices upon migrant workers' rights in the seafood sector.

According to recent studies<sup>215</sup>, increasing the minimum wage for workers (on vessels, as well as in processing) to the living wage level appear to be an important measure to secure a living income for both, provided that their level is sufficient, and enough resources are allocated for controls on the ground.

## Canned tuna value breakdown in Indonesia

Below is our estimation of value breakdown of canned tuna produced, processed and exported from Indonesia, packed and sold in consumer countries. It is expressed in nominal currency to avoid distortions linked to correction for inflation in the different countries. The estimates have been calculated based on a weighted average of the value breakdown in the consumer countries included in this study (Germany, Netherlands, UK, and USA – see section 4). The results are as follows:

**Fig. 56 Value breakdown of canned tuna produced in Indonesia (average 1996-1998 & in 2015)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

The lack of data availability in some consumer countries didn't enable to make a robust estimate prior to 1996. As the average consumer price of canned tuna has increased by more than 1/3 in the countries analysed in this study - see section 4 for more details), the processors and exporters appear to be the winners over the last 15 years as their share has doubled from 11% to 22%, while the retailers' share remains the largest one at 40% of the total value (having decreased only by 5% in proportion since 1996). In contrast, the share of value remaining in Indonesia has declined from 31% to 27% over the same period. The main losers appear to be the fisheries which, their share of value having shrunk dramatically from 25% to 8% as they have apparently been squeezed between the price pressure exerted by the other leading actors in the chain and the strong increase of costs of fishing raw tuna.

To investigate further this situation, we have analysed the value evolution of the canned tuna producer prices, export FOB prices and costs of production since the early 2000. The results for the main destinations of Indonesia's canned tuna are provided in the diagram on next page.

### ***Canned Tuna production in Indonesia***

Being the largest archipelagic country globally, with more than thirteen thousand islands, Indonesia is rich in marine resources. Indonesia scores among the top five of fishery and aquaculture producers in the world. Its tuna fisheries are among the largest and most productive worldwide. Indonesia is an important player in the fish canning industry, with a domestic production capacity of 750,000 tons per year: it produces canned sardines and mackerel for the domestic market and canned tuna for the export market. Indonesia is the biggest tuna landing nation in the world, contributing 18% or 1.38 million tonnes to the total global tuna production in 2014. Canned tuna exports held a volume of 70,814 tonnes in 2014 making Indonesia the 6th largest exporter of canned tuna products after countries like Thailand, Ecuador and the Philippines.<sup>216</sup>

The export of tuna and bycatch products from Indonesia has almost doubled between 2010 and 2014. The biggest contributors of this important growth were the European Union and the United States, both having doubled their import volumes from Indonesia since 2010. The European Union is the most important market and has started negotiations for a EU-Indonesian Free Trade Agreement in July 2016 that would improve further the



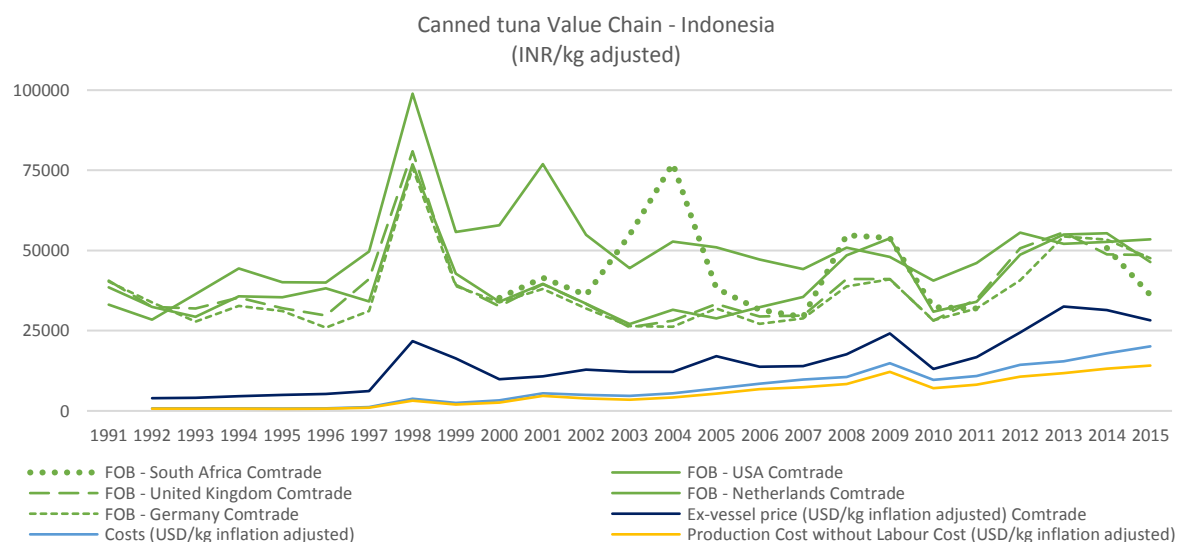
competitive position of Indonesian seafood if completed successfully. Western European countries predominantly import canned skipjack tuna, of which the United Kingdom is the primary buyer while South European countries like Spain and Italy import pre-cooked yellowfin tuna loins for their canning industry. For the United States, Indonesia ranks as 7th largest supplier of canned tuna products. Exports to Japan have been stable in recent years, of which Indonesia is the second largest supplier of canned tuna products after Thailand. Thailand have quintupled imports volumes of Indonesian tuna since 2010: the country is the biggest exporter of canned tuna globally but lacks tuna resources; it is therefore also the largest importer of frozen skipjack, namely from Indonesia, to serve as input for its domestic processing industry. <sup>217</sup>

Although some of the pre-processing of the tuna is done on board of the fishing vessels or in specialized companies that only produce precooked loins, in general all processing activities take place under the roof of the cannery. Most of the companies export canned tuna as well as other canned species (yellowfin tuna, albacore...). The Indonesian supply chain channels are complex, and depend on vessel type and gear, vessel ownership, tuna species, landing site, etc. Tuna canneries mainly purchase skipjack tuna and to a lesser extent yellowfin tuna, bigeye tuna and albacore. The biggest part of the catches is supplied by industrial fleets of purse seine and longline vessels. Canning companies may have their own vessels but most often contract independent ones. In general, the boat owners will sell their high grade and large/adult tuna to the fresh and the frozen market, only the low grade, juvenile and smaller tuna species are sold to the canneries. Catches from the artisanal fleet (ranging from small purse seine vessels to single person handline boats) are in general landed in the small ports and landing sites to be traded by the middleman to processing factories. <sup>218</sup>

Data from the Ministry in Indonesia suggests around 65% of catch goes to domestic canneries, 15% to domestic fresh markets, 10% to domestic smoked/dried/salted sales, and 10% is loined for export to canneries elsewhere. Export of catch takes place from North Sulawesi (Bitung Ocean Fishing Port), Surabaya and Jakarta. The largest of the canneries is PT. Aneka Tuna Indonesia [ATI] in Surabaya, with an installed canning capacity of 175 MT per day and actual capacity of 140 MT/day, amounting to approximate 33,600 tonnes per year. About 50% of exports from this cannery are to Japan, and the balance of product goes to Europe, North America and the Middle East. <sup>219</sup>

Source: BASIC

**Fig. 57 Evolution of canned tuna value breakdown in Indonesia**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).



As illustrated in the above diagram, the fisheries in Indonesia have been facing an ever-increasing margin pressure over the past 20 years due to the rising prices of raw material which jumped from 1,000 INR per kg in the early 1990s to more than 12,000 INR per kg, once corrected for inflation. This has been a key driver for the strong consolidation that took place in the tuna industry.

The pressure put by European supermarkets, due to the increasing penetration of private-label products, has been transferred down the chain from brands to manufacturers, processors and ultimately fisheries. Both vertically integrated branded manufacturers and global traders (through their contractual structure) were able to manage price fluctuations and keep profitability, while the workers at the beginning of the chain have suffered the consequences.<sup>220</sup>

Due to overfishing and low fish stocks, boats can stay out for up to a year at a time. As a result, vessels elude regulatory oversight for extended periods and migrant workers on fishing boats report similar workplace violence and working rights abuses as in Thailand.<sup>221</sup>

### **Ability of workers to earn a living wage and levers for change**

Indonesia currently has regional minimum wages, the highest being in Djakarta where it reaches 3,100,000 INR per month. No data is available for the wages of the workers onboard the tuna vessels. In the processing factories, payment to workers is generally made based on output, and workers' seven to eight hours of work would entitle them to earn at the minimum wage only if employers adjust the amount of raw materials allocated to them accordingly.<sup>222</sup>

Even if considering that workers manage to earn the minimum wage in Indonesia, it does not seem to be sufficient for them to achieve a sustainable livelihood. Indeed, according to the surveys conducted by the Asia Floor Wage, the living wage necessary to the basic needs of a family in Indonesia has been estimated at 4,864,570 INR (332 USD) per income earner and per month<sup>223</sup>.

This means that workers in the canned tuna chain only earn 70% of what is considered a sustainable living income for their family. Hence, to ensure that tuna processing workers can earn a living wage, the share of value for labour costs would require increasing at least from 0.45 USD/kg currently to 0.64 USD/kg, which would represent a limited mark-up of 0.19 USD or 2.5% on the end consumer price of canned tuna in most countries (from 7.30 USD/kg to 12.90 USD/kg depending on the country). This does not require the consumer price to increase at the same level (more details on consumer countries, see the sections for: Germany, Netherlands, UK, USA, Indonesia, Thailand and South Africa).

To address the current situation, there is a need to strengthen the due diligence provisions under the United Nations Guiding Principles on Business and Human Rights and the 2011 OECD Guidelines for Multinational Enterprises. There is also a need to recognize the right to living wage as a human right, establish living wage criteria and mechanisms and organize an ILO Tripartite Conference on the adverse impact of contracting and purchasing practices upon migrant workers' rights in the seafood sector.

According to recent studies<sup>224</sup>, increasing the minimum wage for workers (on vessels, as well as in processing) to the living wage level appear to be an important measure to secure a living income for both, provided that their level is sufficient, and enough resources are allocated for controls on the ground.

# ORANGE JUICE

## Orange juice value chain structuring and evolution

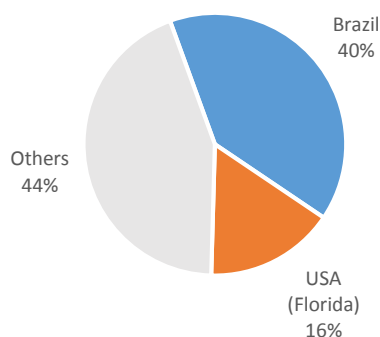
### Orange juice consumption, production and trade

At global level, fruit juice and nectar consumption make up approximately 5% of the global consumption of beverages and amounts to 38.5 billion litres (compared with more than 470 billion litres for soft drinks). The European Union and North America are the biggest markets for fruit juice, both regions accounting for a quarter of the world's consumption, but in constant decline because of the shift from fruit juices and nectars towards other perceived healthier beverages by consumers. In contrast, demand is strongly rising in the Asia-Pacific region (22% of world's market - expected to become the leading region in 2018) as well as in the Middle East, Africa and Latin America. Per capita consumption of fruit juice and nectar is still highest in North America (26 L/person/year), followed by Western Europe (20.5 L/person/year) whereas it is ten times lower in Asia Pacific and Africa (2 L/person/year), showing the high potential for growth in emerging economies.<sup>225</sup>

The most important flavour is orange juice, representing 34% of the world fruit juice market<sup>226</sup>; Regarding the consumption of orange juice, North America and the European Union largely surpass the other world's regions, but are in significant decrease (by respectively 18% and 5% since 2003)<sup>227</sup>. Commercial orange juice is available in 3 forms<sup>228</sup>: it can be either made from directly squeezed fruits, reconstituted from concentrate (also called FCOJ - Frozen Concentrate Orange Juice, an industrial process developed in 1945) or pasteurized juice (also called NFC - Not From Concentrate). While NFC juices surpassed FCOJ in market share at the end of the 1990s, the readily storable and easy-to-ship FCOJ remains the industry's pricing benchmark<sup>229</sup>. At the global level, the main producing region is Brazil which accounts for 1/3 of world's orange cultivation, 40% of world's orange juice and 80% of FCOJ. Its major competitor is Florida in the USA (which accounts for 16% of world's juice, mainly NFC), other producing countries being much smaller in size<sup>230</sup>. In terms of supply routes, while the North American market is mainly supplied by Florida (and 20%-25% by Brazil), the European market is almost completely sourced from outside the EU, Brazil serving more than 80% of orange juice demand<sup>231</sup>.

**Fig. 58 Main world orange juice producing countries**

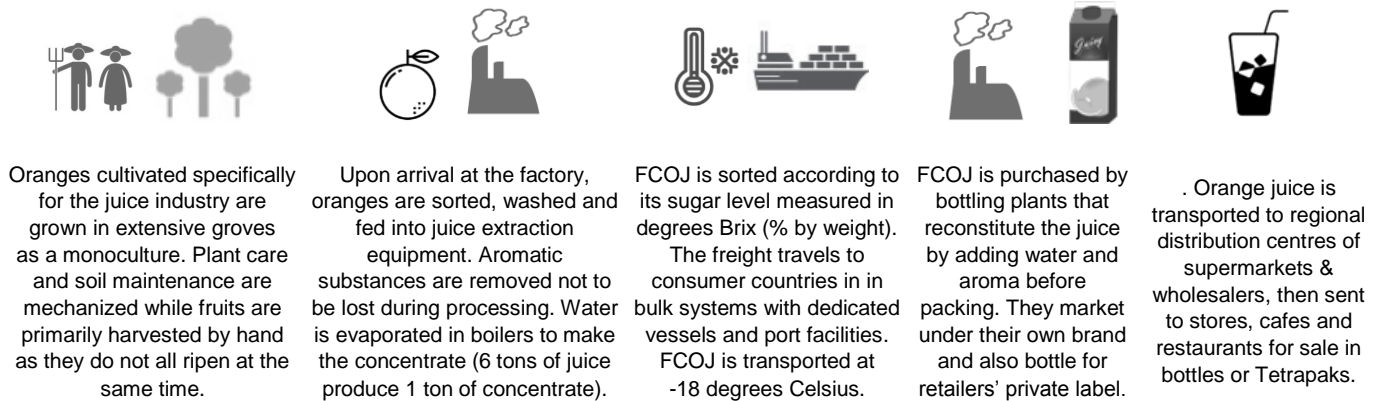
World Orange Juice producing countries



Source: BASIC, based on Neves (2014)

## Structure of the orange juice chain

Fig. 59 Technical description of the orange juice chain



Source: BASIC

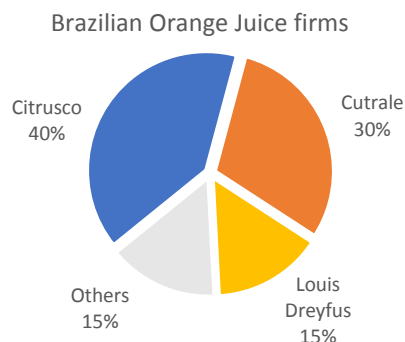
There are two major distribution channels for orange juice: the retailing sector (supermarkets, discounters...) and the foodservice sector (hotels, cafes, restaurants...). Retailing is responsible for approximately to 70%-80% of juice consumption (with the notable exception of the USA where it only reaches 50%). In the beginning of the 1990s, the increased retailer concentration, the emergence of private labels (which today account for roughly 40% of the market) and the intensification in the competition with other juices affected the profitability of the FCOJ industry and triggered the need to reduce costs which resulted in a strong consolidation process.<sup>232</sup>

The bottling industry varies depending on the consumer country. It is highly concentrated in the USA with the 3 biggest bottlers accounting for 50% of the sector. Among them, Coca Cola (owner of the brand Minute Maid), and Pepsi (owner of the brand Tropicana) have strong links with Brazilian juice producers to whom they sold their orange juice facilities in Florida in the 1990s<sup>233</sup>. In Europe, the sector is much more fragmented: there is still a large number of bottlers operating, characterized by low margins and general excess capacity. Over the last decade, with the declining demand and increasing concentration of retailers putting pressure on prices for their private labels, more than 100 bottlers sold their businesses<sup>234</sup>. Following its merger in 2013, Refresco Gerber has become the leading European bottler of soft drinks and fruit juices, employing around 4,100 staff with production facilities in the Benelux, France, Germany, Spain, Italy, the UK, Poland and Finland. At a global level, it is estimated that 30 bottlers purchase and pack 70% of the world's orange juice, and out of this total, the 10 largest bottlers account for more than 50% of the orange juice market (Refresco-Gerber, Coca-Cola, PepsiCo)<sup>235</sup>.

In order to survive in a highly competitive market, there is also increasing concentration upstream. The wave of consolidation peaked in 2012 when a major Brazilian manufacturer, Citrovita, was taken over by its competitor Citrusuco. Whereas 15 to 20 firms were still active in orange juice production until 1990, three processing multinationals, Citrusuco/Citruvita, Cutrale and Louis Dreyfus Commodities, now dominate the global orange juice market and supply over 50% of the juice used by major bottling companies. In order to retain their position, the three companies possess their own terminals at ports in Europe, the USA and Asia.<sup>236</sup>

At the beginning of the chain, vertical integration is quite significant as it is estimated that on average 30% of oranges are grown by the largest juice manufacturers on their own plantations (less than 15% for Louis Dreyfus). Manufacturers purchase the rest of the oranges they would need to small and medium-size independent growers.<sup>237</sup>

**Fig. 60 Market shares of largest Brazilian orange juice manufacturers**

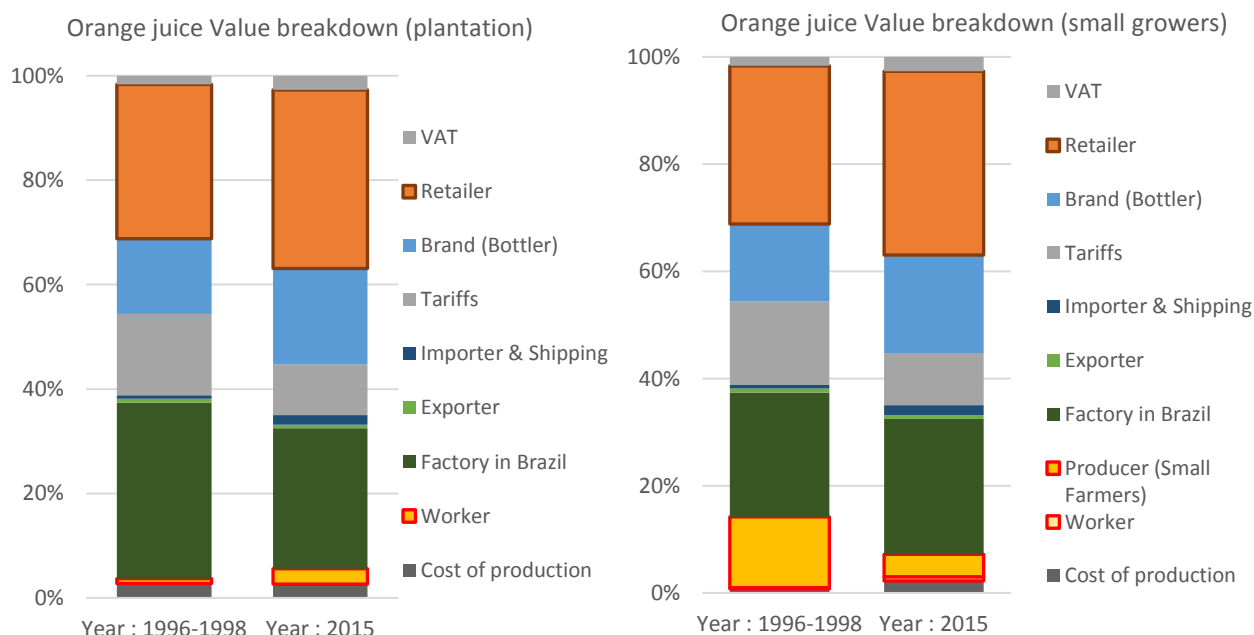


Source: BASIC, based on Neves (2014)

## Orange juice value breakdown in Brazil

Below is our estimation of value breakdown of the orange juice exported as FCOJ (66° Brix) from Brazil and bottled and sold in consumer countries in the form of 1L-tetrapack juice made from concentrate. It is expressed in nominal currency to avoid distortions linked to correction for inflation in the different countries. The estimates have been calculated based on a weighted average of the value breakdown in the consumer countries included in this study (Germany, Netherlands, UK, USA, Thailand and Indonesia – see section 4). The results are as follows:

**Fig. 61 Value breakdown of orange juice produced in Brazil (average 1996-1998 & in 2015)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

The lack of data availability in some consumer countries didn't enable to make a robust estimate prior to 1996. While the average consumer price of orange juice made from concentrate has increased by 50% in nominal terms between 1996 and 2015 (from 1.39 USD/L to 1.95 USD/L in the countries analysed in this study - see section 4 for more details), the share of value remaining in Brazil has declined from 38% to 33% of the end consumer value over the same period. The two main winners of this evolution are retailers and the brands/bottlers, their share increasing respectively from 29.6% to 34.2% and from 14.4% to 18.3%. This seems to be quite aligned with the previous analysis of the evolution of the value chain structure over the

past 2 decades. At the beginning of the chain, small growers appear to be the main ones losing out: our estimates show that their share of value has shrunk from 17% to little more than 4%.

To investigate further this situation, we have analysed the value evolution of the orange producer prices, export FOB prices and costs of production since the early 1990s. The results for the main destinations of Brazilian orange juice are provided in the diagram on next page.

### Orange juice production in Brazil

Orange is one of the most produced fruits in the world. Brazil represented almost 30% of the world orange production, with more than 2/3 of the total harvested area situated in the state of Sao Paulo. The Brazilian orange juice industry, which origins can be traced back to the 1940s, accounts for approximately 4 billion USD per year and maintains more than 400,000 direct and indirect jobs.

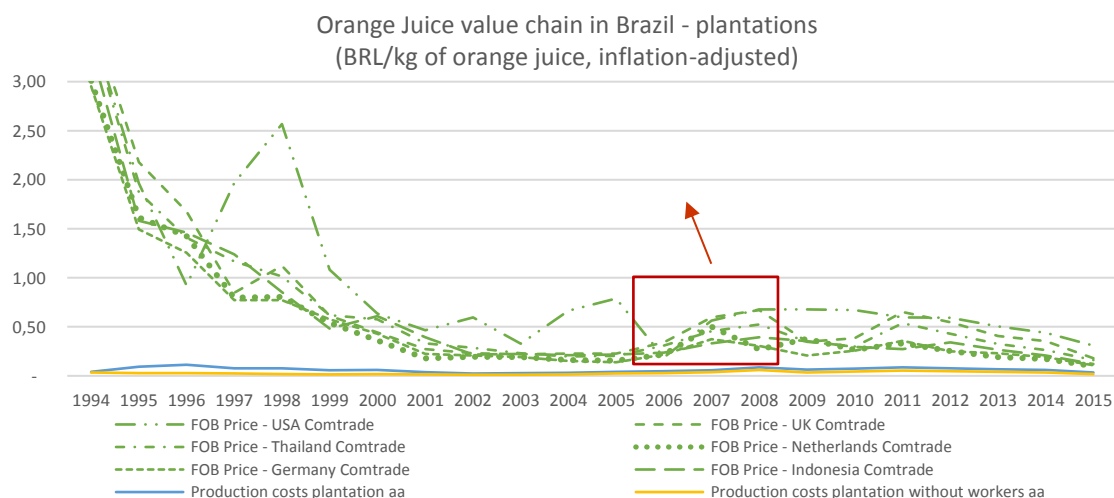
A major consolidation phase started in the 1990s, because of the intensification in global competition and pressure on prices. From 20 operators in the 1980s, the sector is now dominated by 3 large firms, Citrusco (which merged with Citruvita in 2012 – 40% of Brazilian’s orange juice output), Cutrale (30% of the country’s output) and Louis Dreyfus (a French firm that entered the market after buying Frutesp, initially set-up by the main cooperative of orange growers – 15% of the output). Together they also own 30%-40% of orange groves in the country.<sup>238</sup>

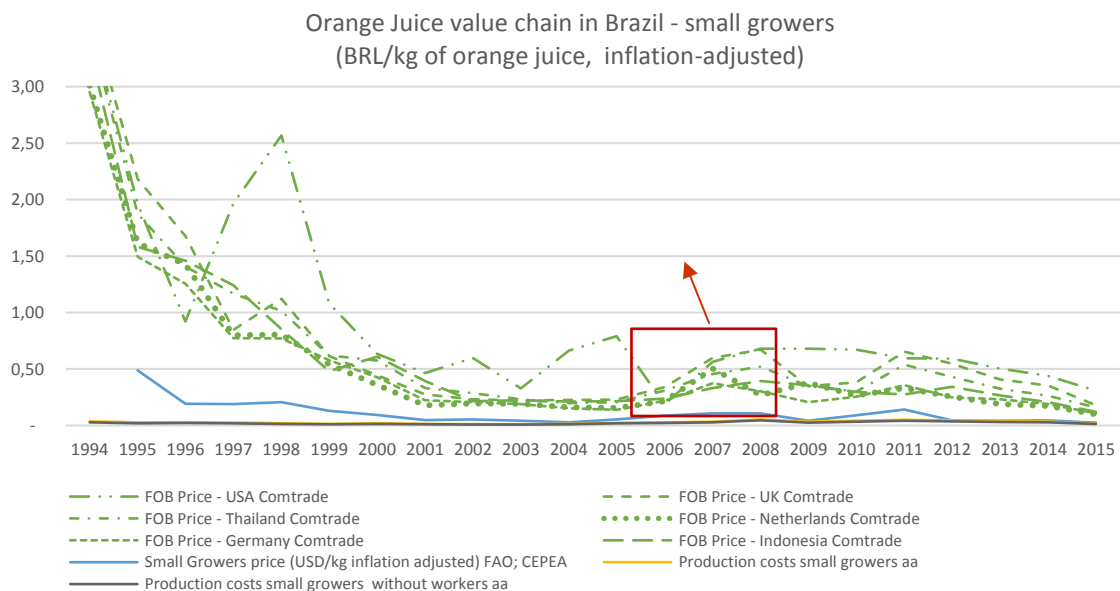
Pressure on prices have also led to changes in the structure of the orange production sector with the number of farms having decreased from 28,000 to less than 17,000 in the last decade<sup>239</sup>. The increased intensity in the competition for land also presents a problem for the orange production sector: estimates suggest that sugarcane for biofuels has captured 50,000 to 100,000 hectares from citrus production during the last decade.<sup>240</sup>

Farmers are not well coordinated. There is only one association, Associtrus, in which only 10% of orange growers belong and one large cooperative, Coopercitrus, which is only involved in the collective purchase of farm inputs and no longer in fruit market transactions (although it used to be an important price regulator in the sector in the 1970s and 1980s)<sup>241</sup>.

Source: BASIC

Fig. 62 Evolution of orange juice’s value breakdown in Brazil





Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

The volatile nature of FCOJ pricing is what makes this market so vital for hedgers and so interesting for speculators. The market is prone to sharp price spikes in anticipation of weather-related disruptions in supply, including freezes and hurricanes, and to retracements of those spikes when the damage was not as bad as feared initially, or when imports of FCOJ from Brazil and other suppliers enter the US market.<sup>242</sup>

Although the international price of FCOJ has remained somehow stable until 2006, the value in local currency and corrected for domestic inflation in Brazil has declined sharply between 1994 and 2006, illustrating the fall of profitability for Brazilian processors mainly due to wider changes in exchange rates and strong inflation in the country (cf. diagram above).

In 2006, hurricanes in Florida have had a significant impact on the structure of trade flows: North American bottling industry strongly increased its demand for imports of Brazilian FCOJ while international prices reached historical levels. This resulted in the Brazilian orange juice export revenue for the season 2006/07 increasing by 65 percent to over US\$2 billion from US\$1.2 billion in the previous season (also illustrated in the above graph).<sup>243</sup>

This also benefited small orange growers for a limited period of time: in 2006 and 2007, the average price of a box of oranges in the Brazilian market rose by 68%, when measured in USD. Nevertheless, for the majority of growers who are tied in contracts with the industry, spot market prices are not entirely relevant. There is a large variation in the price per box of oranges paid by the FCOJ firms to contracted producers. In this respect, the orange market is different than the grains and sugar markets where shocks in international prices may be fully transmitted upstream. Growers with fixed price contracts do not benefit from an increase in the international FCOJ price, with the industry capturing the difference (35%-45% of the growers are estimated to prefer fixed price contracts for 3-4 years, depending on the grower's expectations on international prices and the extent to which he/she is risk averse). Contracts that stipulate a price with a fixed as well as a variable component were partly more remunerative for growers, but with increased risks.<sup>244</sup>

In January 2012, the US Food and Drug Administration denied entry to some Brazilian imports following discovery of traces of a fungicide prohibited for use in oranges. The factories apparently prioritized the processing of the fruits cultivated on their own plantations for their sourcing, at the detriment of small growers used as buffer supply, which have apparently translated in a sharp decrease of the price to orange growers in Brazil which dropped from its historical high level of 7.30 USD to less than 3.00 USD for a 40.8kg box. Prices have not

recovered since this time, and orange producers end up entrenched between the intense pressure from orange juice producers and increasing costs due to higher disease rates that require frequent applications of agricultural chemicals<sup>245</sup>.

Regarding workers, studies conducted in the state of Sao Paulo by CIR in 2013 demonstrated that less than 2% of workers had permanent contracts, most of them being migrant workers from peripheral rural areas in adjacent districts. They are most often recruited by local labour contractors who constantly monitor their performance which determines whether or not they will be taken on again during the next harvest. On 26th March 2013, a labour court condemned the three orange juice giants to pay a fine equivalent to around 180,000 USD for systematic labour outsourcing – and thus outsourcing of responsibility – to subcontractors. The workers must harvest 60 sacks (of up to 30kg) a day to earn the standard minimum wage in the state of São Paulo, which is 690 BRL (300 USD) per month. In terms of health and safety, there are frequent injuries and accidents associated with falling off ladders during harvest. Chemicals are often sprayed whilst the workers are harvesting in the fields, causing allergic reactions and other health problems, and protective clothing is often either not available or inadequate.<sup>246</sup>

In contrast to the plantations, systematic outsourcing is proscribed by law in the factories (outsourcing does however occur in the areas where this is legal, such as cleaning work, warehousing or security services). Wages are higher in factories than for rural jobs, usually between 900 and 970 BRL (370 to 400 USD). The study also showed that women are often discriminated against, male employees in the juice plants generally having open-ended contracts of employment, whilst most of the women only have fixed-term contracts.<sup>247</sup>

### **Ability of small farmers and workers to earn a living income/wage and levers for change**

Regarding small orange farmers, based on the latest research on the sector, the average net income they earn reaches approx. 22,800 BRL per year (6,850 USD), after deducting costs of farm inputs, labour costs, etc. These estimates are based on statistical studies showing that a typical Brazilian small orange farm as a size of 20 hectares with 5,000 trees, a productivity of 280 boxes/ha and 4 persons on average making their living of the orange farm.<sup>248</sup>

In 2016, the ISEAL Alliance with other certification organisations commissioned a study on living wage benchmarks in the Minas Gerais and Southwestern regions in Brazil. Their living income estimate for small farmers was 3,258 BRL per month (980 USD), or 39,100 BRL/year (11,607 USD).<sup>249</sup>

Hence, to ensure that small farmers can earn a living income from orange farming, the share of value for farmers would require increasing by 69% when compared to its level in 2015 (from an estimated 0.08 USD/kg to 0.14 USD/kg). This would represent a very limited mark-up of 0.06 USD/kg (or 3%) on the end consumer price which is 1.95 USD/L on average in the countries analysed (from 1.14 USD/kg to 3.42 USD/kg in the major consumer countries).

Regarding workers in plantations, their current wages amounts to little more than the minimum wage of 300 USD/month, to be compared with the estimated living wage of 490USD/month estimated by ISEAL. Therefore, to ensure that workers can achieve a sustainable livelihood, the share of value available to cover labour costs should be at least increased by 63% (from 0.06 USD/kg currently to 0.10 USD/kg). This would correspond to a very limited mark-up of approx. 0,04 USD/Kg to be compared to the average consumer price which is 1.95 USD/L on average in the countries analysed.

In both cases, these levels of mark-up do not require the consumer price to increase at the same level (more details on consumer countries, see the sections for: Germany, Netherlands, UK and South Africa).

# BANANA

## Banana global value chain structuring and evolution

### Banana consumption, production and trade

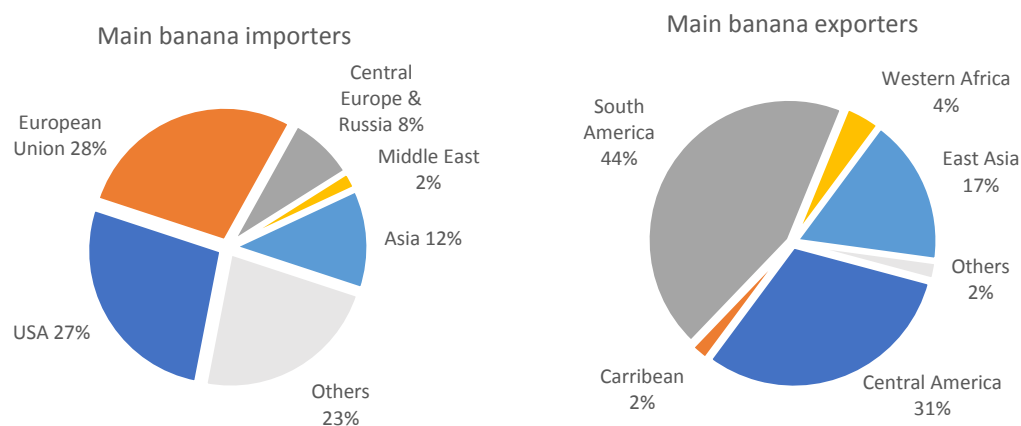
Banana is a major staple as well as an important cash crop in developing countries, providing thousands of farmers with a regular income throughout the year<sup>250</sup>. The biggest banana producing countries such as India or Brazil export very little and keep it for domestic consumption and only 15-20% of global production is exported.

Bananas are also the most eaten fruit in the European Union and Northern America, the two main regions consuming traded bananas (which account respectively for 36% and 35% of all traded bananas worldwide).<sup>251</sup>

The development of the world banana trade dates back to the end of the 19th century. It relies only on one banana variety, the Cavendish, which was selected for its high yields, resistance to Panama disease, durability in long distance transport, and consistent quality appearance<sup>252</sup>.

The majority of exported bananas come from countries in the so-called “dollar zone” (Ecuador, Colombia, Costa Rica, Guatemala...), the rest from the Philippines and the African and Caribbean countries of the ACP group. The 5 leading banana-exporting countries (Ecuador, Philippines, Guatemala, Costa Rica and Colombia) account for more than 80% of global banana exports. Ecuador is by far the main supplier of bananas in the world market, supplying more over a third of the total volume of bananas traded internationally.<sup>253</sup>

**Fig. 63 Main world banana import and export countries**

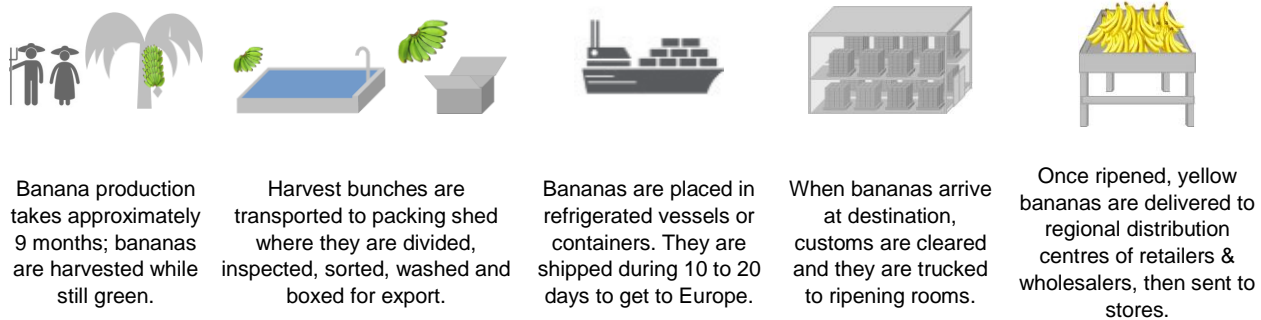


Source: BASIC, based on FAO (2017)



## Structure of the banana chain

Fig. 64 Technical description of the banana chain



Source: BASIC

Given the perishable nature of the banana, world banana trade has been historically dominated by vertically integrated companies that controlled all operations along the chain - production, packing, shipping, import and ripening. In the 1980s, only 5 companies – Dole (formerly the Standard Fruit Company), Chiquita (formerly the United Fruit Company), Del Monte, Fyffes and Noboa - traded 80% of world bananas<sup>254</sup>.

In the early 1990s, those companies sought to take advantage of the opening of the EU market to expand their sales. Yet the European consumption did not increase as expected following the reforms adopted in 1993<sup>255</sup>. These failed forecasts put these companies in a difficult situation and led them to sell part of the banana farms they owned and to leaseback their reefer fleets, removing the main barrier to entry for business actors at both ends of the banana chain<sup>256</sup>.

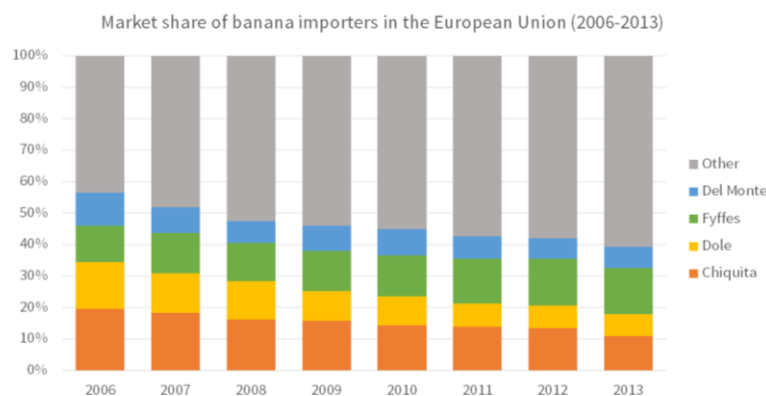
More recently, the availability of a competitive offer of liner shipping services, the creation of technical quality standards (namely GlobalGAP) by supermarket chains who are increasingly concentrated and the deregulation of the EU banana market in 2006<sup>257</sup> have enabled some retailers to buy bananas independently of the historical banana multinationals.

Several large supermarkets, mostly in the UK, have started to build more direct chains from consumers down to producers: since 2010, Tesco sources its entire conventional bananas directly in Costa Rica, Colombia, Ecuador, Guatemala, Cameroon and Côte d'Ivoire; Morrisons sourced for even longer bananas from independent growers through its wholly owned sourcing company Global Pacific Produce and owns ripening facility in the UK<sup>258</sup>.

The increased competition between large fruit companies to remain the 'preferred suppliers' of supermarkets has led to the governance structures of global banana chains being turned on their heads so that they are increasingly being driven by retailers instead of by integrated fruit companies.

This has triggered a decline in the market share of the 4 historical banana multinationals (while Chiquita, Dole, Del Monte and Fyffes still controlled 62.4% of total banana world exports in 2002, this share declined to only 42.3% in 2013), and a renewed trend of concentration among banana companies (the most notable example being the attempted merger - which eventually failed - between Chiquita and Fyffes in March 2014, which resulted in Chiquita's buy-out by 2 Brazilian groups, Cutrale and Safra, newcomers in the industry).

**Fig. 65 Market share of banana importers in the European Union**

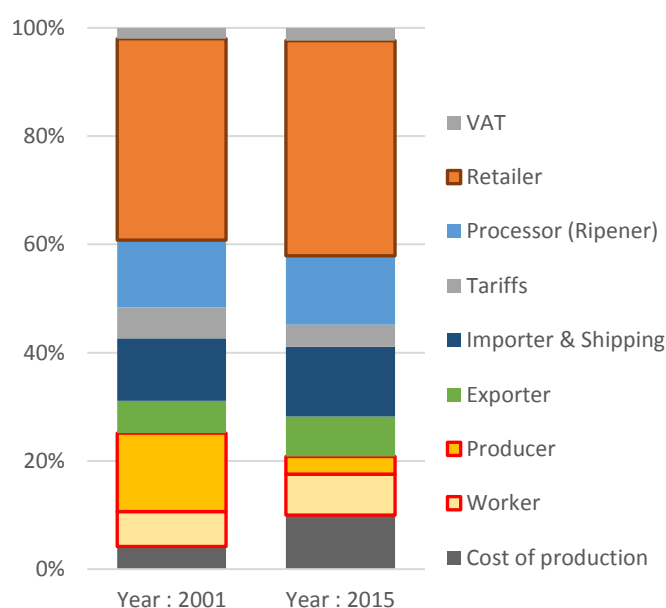


Source: BASIC, based on European Commission, Chiquita Brands International/ Fyffes merger procedure (2014).

## Banana value breakdown in Ecuador

Our estimation of value breakdown of the banana sourced from Ecuador and sold in Europe and North America is expressed in nominal currency to avoid distortions linked to correction for inflation in the different countries. The estimates have been calculated based on a weighted average of the value breakdown in the consumer countries included in this study (Germany, Netherlands, UK and USA – see section 4). The results are as follows:

**Fig. 66 Value breakdown of banana produced in Ecuador (average 2000-2002 and 2015)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

Given the strong inflation and devaluation that Ecuador suffered throughout the 1990s, we have first estimated the value breakdown during the 3 years following the dollarization of the country (2000-2002). As illustrated above, the main winner of the evolution since 2001 appear to be retailers whose share has grown from little more than 37% to almost 40% over the last 15 years. In comparison, the share of value of fruit companies (from shipping p to ripening) has globally stagnated at approx. 30%. Upstream, the value which remains in Ecuador has decreased from 31% to 28%, generating economic pressure on both farmers and workers.

To analyse further this situation, we have modelled and estimated the value that is left for Ecuadorian banana producers based on the CIF import price in consumer countries (recorded in the UN Comtrade database), deducting a conservative estimation of the shipping costs (including insurance and Panama Canal fees when relevant) and the margins published by the major importers (Chiquita, Fyffes, Dole and Del Monte). The results for the main destinations of Ecuadorian bananas are provided in the diagram on next page.

### Banana production in Ecuador

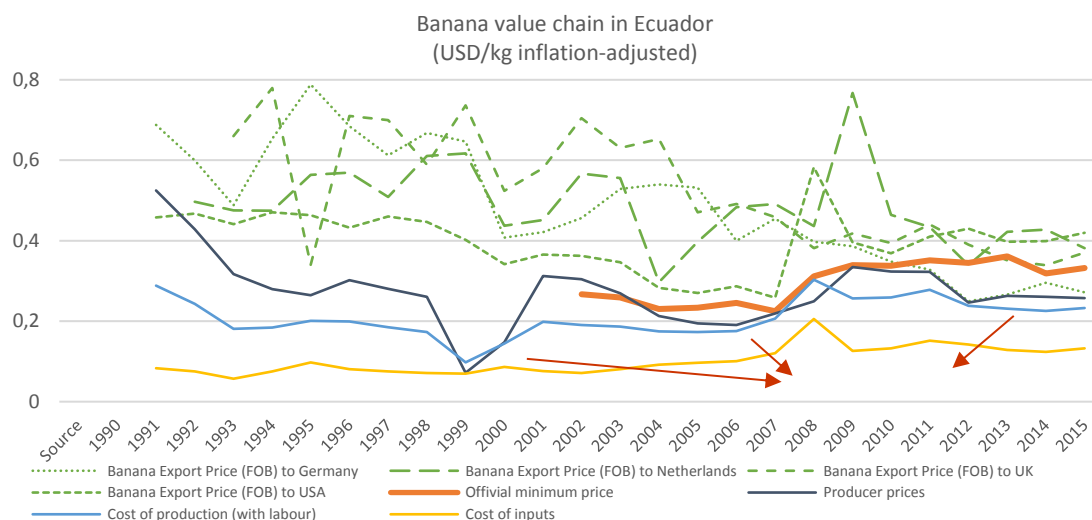
Ecuador is by far the world's largest exporter of bananas, accounting for three times more volumes than the second exporter, Colombia. The share of bananas originating from Ecuador has expanded from 18 % in the 1970s to 30 % in the 1990s and 35 % in 2015. The main destination of bananas is Europe which has bought on average 40 % to 45 % of its volumes over the past decade. Banana exports represent 60 % of the agricultural GDP of the country.

The companies that export bananas from Ecuador are either owned by national or international interests. There are more than 170 active exporters in the country, the 10 biggest accounting for 45% of the country's total banana exports. An additional network of intermediaries trades a significant share of bananas from producers to exporters (even though only farmers' associations have commercial rights since January 2011).<sup>259</sup>

Production is relatively small scale compared to other Latin American countries. The latest census carried out by the Agriculture Ministry of Ecuador showed that 60 % of banana producers own less than 10 hectares and 30% have less than 5 hectares<sup>260</sup>. Most producers, albeit the smallest ones employ workers all year round for harvest, sorting and packing. The production is mainly carried out by nationals, multinational companies controlling less than 1% of production. It is estimated that banana production and trade in Ecuador gives direct employment to an estimated 190 000 people.

Source: BASIC

Fig. 67 Evolution of banana's value breakdown in Ecuador



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

As shown in the diagram above, the share of the banana value accruing to farmers has been divided by two since 1992, with a lowest-ever level in 1999, at the heart of the economic crisis in

the country when Ecuador was plagued by a high double-digit inflation which public authorities couldn't hold back. The situation began to recover in 2000, when the government decided to adopt the dollar as its currency, which eventually curbed inflation from 2001 onwards.

The situation of banana producers mainly improved thanks to the government's decision to set an official minimum support price<sup>261</sup> which guarantees them a safety net since 2002. However, the long-term decline of farmers' prices didn't stop, as the government has difficulties to enforce it (as much as 30% of bananas are sold for cheaper prices on the spot market); as shown in the diagram, the average producer price estimated by several studies<sup>262</sup> often remains lower, especially since 2012, largely because producers are trapped in a captive situation vis-à-vis the exporters and traders who buy their product

Even though the official price is what is shown on invoices, several investigations conducted by journalists<sup>263</sup> have documented the illegal practices on the ground that enable companies to circumvent the official minimum price system: absence of signed contracts, creation of fictitious/shell companies, proliferation of intermediaries... In addition, an Oxfam investigation conducted in Ecuador in 2014 found that producers are often required to return a part of the payment to the importer in return for receiving a quota for the following week's shipment<sup>264</sup>. In this context, the Ecuadorian government has decided to strengthen its controls on the ground and to tighten the legal penalties.

As illustrated in our diagram, Ecuadorian banana farmers are in a situation where they cannot cover their costs of production since 2004 due to the combination of factors that squeeze them:

- On the one hand, the estimated export prices have decreased for all the destination countries analysed. In the case of Germany, it has even dropped to such a point that it is now equal to the average producer price and below the official minimum price, illustrating the strong pressure exerted by German supermarkets on the rest of the chain,
- On the other hand, the costs of inputs have strongly increased since 2000: by 195 % for fertilizers and agrochemicals and by 150% for packaging materials, according to the Montpellier-based CIRAD<sup>265</sup>. This does not include the rising costs of certification and compliance with quality and environmental standards, in particular GlobalGAP<sup>266</sup>.

As a result, the income earned by small banana growers in Ecuador appears to be below the living wage which was estimated by the government at 655 dollars per household and per month in 2015<sup>267</sup>. To achieve this level of income, the small farmers (who own less than 10 Ha and account for 60% of all banana producers), need to secure a share of value of 0,055 USD on each kg of banana sold (given their average yield and annual production volumes<sup>268</sup>) whereas they earned more than twice times less in 2015, i.e. only 0,04 USD/kg.

Regarding the workers' situation, Ecuador presents a mixed picture: it is the country where the unionisation rate is among the lowest of all banana exporting countries (less than 1%<sup>269</sup>) because of the near-collapse of the industry in the late 1970s, the history of bad industrial relations and corruption<sup>270</sup>. It is also the country where the official minimum wage has increased the most over the past decade, reaching living wage levels as of 2015. In the long run, our calculations show a global decrease of the value share left for workers' wages which is 30% lower in 2012-2015 than it was in 1991-1992.

Similarly to farmers, they suffered a deeper deterioration of their wages during the economic crisis (1998-2000). Their situation appears to have improved somehow since 2008, mainly thanks to the policy of the Ecuadorian government to increase and align the minimum wage based on calculations of a decent living wage (and its higher capacity to control it compared to the minimum price of bananas). However, recent studies conducted by the INCAE Business School in Ecuador concluded that only a minority of workers' households actually achieved a living wage in the banana sector, due to the significant level of informal employment and minimal opportunity to have multiple jobs and earn additional incomes for parents.<sup>271</sup>

In terms of health and pollution issues, a study conducted in 2009 demonstrated through the use of fluorescent tracer that living areas were also significantly sprayed. As a result, large areas were found to be impregnated with agrochemicals: water, farmlands and roads, even the inside of the houses.<sup>272</sup>

### **Ability of small farmers and workers to earn a living income/wage and levers for change**

On average, small banana farmers in Ecuador earn a base net income of 505 USD per month (based on an average size of 6.8 hectares, an average yield of 1150 boxes/ha/year, and after deduction of the costs of inputs, seasonal labour, sorting and packing)<sup>273</sup>. According to the calculations made by the Ecuadorian government in 2015, the living income per household can be estimated at 655 USD per month (based on the costs of food, housing, health, education, transport and a minimum saving capacity<sup>274</sup>).

Taking into account that small growers currently earn approx. 0,04 per kg of bananas, the export price of bananas from Ecuador should be at least increased by 0,013 USD/kg, to cover the costs of production and ensure that small farmers can earn a living wage. This appears to be a very limited mark-up of 1% compared to the end consumer price of bananas in most countries (from 1,27 USD/kg to 1.64 USD/kg depending on the country). This does not require the consumer price to increase at the same level (more details on consumer countries, see the sections for: Germany, Netherlands, UK & USA).

Analysing the situation of workers, the study conducted by INCAE in Ecuador in 2012 shows that banana workers earn an average salary of 87 USD/month (field and packing employees) and that there are 1.42 wage earners on average per household in banana regions (to be compared with the ratio of 1.6 wage earners used by the Ecuadorian government to calculate living wages)<sup>275</sup>. As a result, the average income of banana workers' households can be estimated at 535 USD per month. As in the case of small farmers, this is below the living income of 655 USD/month calculated by the government, and the export price of bananas should be at least increased by 0,010 USD/kg, to ensure that workers can earn a living wage (i.e. a limited mark-up of less than 1% of the end consumer price of bananas).

According to recent studies<sup>276</sup>, setting minimum support prices for farmers, and minimum wages for workers appear to be effective tools to secure a living income for both, provided that their level is sufficient, and enough resources are allocated for controls on the ground. Moreover, developing an agroecological model for banana production (in particular by alternating banana, cocoa and coffee plots) that favours small and middle banana farmers and workers seems to be one of the main ways to address the social and environmental challenges at stake. At the end of the day, it is critical that other banana producing countries take this route – not just Ecuador – so as to build a levelled playing field and avoid unfair competition on the market.

# TABLE GRAPE

## Table grape value chain structuring and evolution

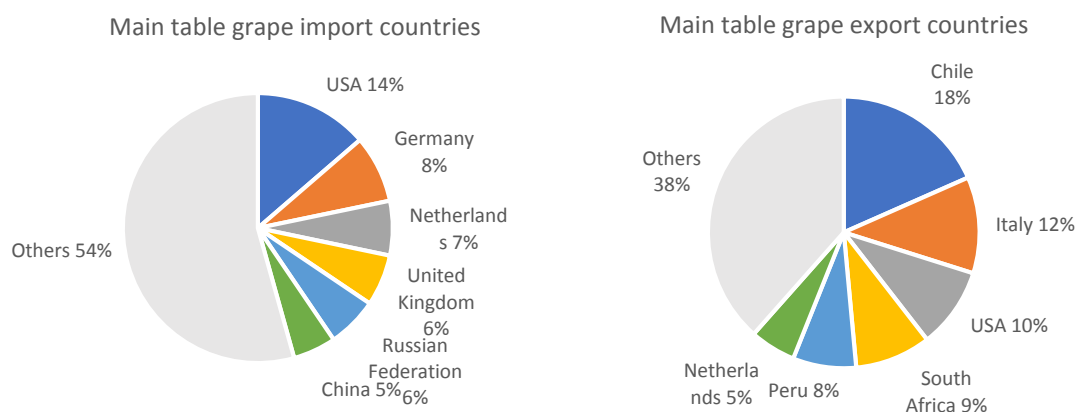
### Table grape consumption, production and trade

Grapes are one of the top 20 agricultural commodities produced worldwide, for wine-making (more than 53% of world production, mainly in Italy, France, Spain and the USA), but also consumed as dried raisins, and increasingly as fresh table grapes.<sup>277</sup>

At global level, demand for fresh table grapes has significantly increased since 2000, going from just over 15 million tons to more than 21 million tons in 2016/17 (i.e. nearly 34% growth). The vast majority of fresh table grapes are produced and consumed domestically as exports amount to less than 13% of global production. China is the world's biggest fresh table grape grower and consumer, accounting for about 46% of both world's production and consumption. Other large producer-consumer countries and regions are India, Turkey, Brazil, the EU and the USA. Chile is the top table grape exporter, with a 27% share of the global market, followed by the USA, Peru and South Africa. At the other side of the chain, the European Union is the world's biggest importer, followed by the USA and Russia.<sup>278</sup>

Supply chains of table grapes appear to be quite regional with China being the main supplier of neighbouring countries in Asia (especially Thailand, Viet Nam and Malaysia) while Chile is the top provider of table grapes imported in the USA and South Africa is the number one foreign origin of table grapes consumed in the European Union.

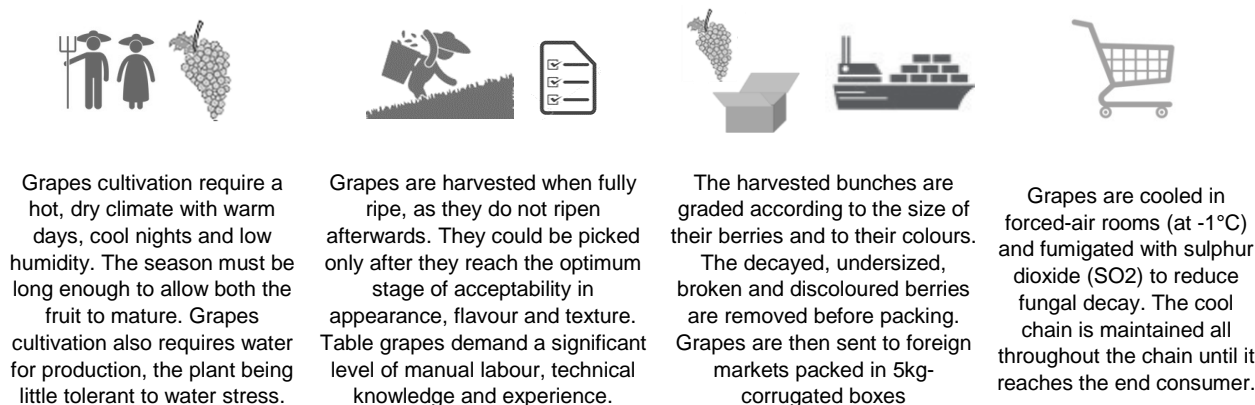
**Fig. 68 Main world table grape import and export countries**



Source: BASIC, based on Un Comtrade data (2016)

## Structure of the table grape chain

Fig. 69 Technical description of the table grape chain



Source: BASIC

Fresh table grapes are mainly bought and consumed through retail chains (which channel roughly 80% of the volumes). This product has been progressively considered as a “bulk commodity” in order to make it available to consumers all year round in supermarkets : it is more and more treated like an “undifferentiated product” (like wheat, coffee or cocoa) and characterized by price-sensitivity, anonymity and standardisation; leading supermarket chains can buy them quickly and at low cost using arms-length supply chains, and can substitute or mix them thanks to the universal grading system widely used in the sector. The result is an annual table grape supply cycle, which is as follows for example in Europe: the first winter supplier is Peru and South Africa, followed by arrivals from Brazil, Chile and Argentina. In early spring, grapes’ shipments start to arrive from India, Israel, Egypt and Morocco. Finally, the first European grapes arrive in June from Spain, followed by Italy and Greece.<sup>279</sup>

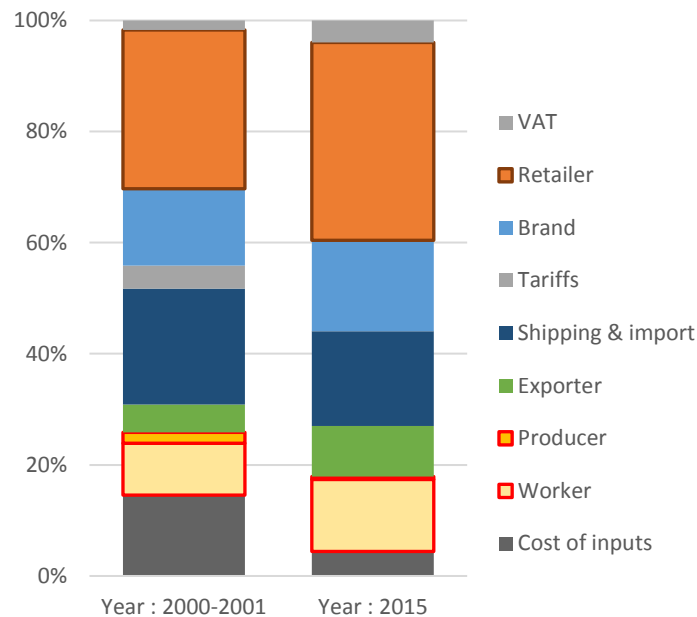
Table grape is also one of the most closely monitored food products regarding sanitary and safety issues (in particular, the EU regulations set strict Maximum Residue Limits for pesticide residuals). To address these food safety issues and maintain constant quality, retailer groups, who are the biggest distribution channel for table grapes, impose strict safety and quality requirements to all wholesalers and importers who, in turn, impose it on table grape producers (in particular the GlobalGAP and BRC certifications).<sup>280</sup>

Table grapes importers can be either multinational companies that mutualize import and export operations on a worldwide basis to achieve economies of scale (e.g. Dole, Chiquita...) or domestic companies which buy table grapes from export organisations, (or, more rarely, directly from large grape producers). Export organisations centralize and market the grapes of individual producers. They organise the washing, sorting and packaging of the produce as well as collective agreements with freight forwarders.<sup>281</sup>

## Table grape value breakdown in South Africa

Below is our estimation of value breakdown of the fresh table grapes exported in containers from South Africa and sold in bulk in consumer countries. It also includes the value breakdown of table grapes sold domestically in South African’s retail stores. It is expressed in nominal currency to avoid distortions linked to correction for inflation in the different countries. The estimates have been calculated based on a weighted average of the value breakdown in the consumer countries included in this study (Germany, Netherlands, UK, South Africa and Indonesia – see section 4). The results are as follows:

**Fig. 70 Value breakdown of fresh table grapes produced in South Africa (average 2000-2001 & in 2015)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

The lack of data availability in some consumer countries didn't enable to make a robust estimate prior to 2000. The average consumer price of fresh table grape has more than doubled between 2000 and 2015 (from 2.08 USD/kg to 5.31 USD/kg in the countries analysed in this study - see section 4 for more details), and the main winners of this evolution appear to be the retailers which share of value has increased from 29% to 36% over the past 15 years, while the share of value remaining in South Africa has declined from 31% to 27%, mirroring the analysis of the value chain structure described previously. In the producing country, the plantation owners have managed to increase substantially their share from 7% to 10% of the total value.

To investigate further this situation, we have analysed the value evolution of the table grape producer prices, export FOB prices and costs of production since the early 1990s. The results for the main destinations of South African table grape are provided in the diagram on next page.

#### **Table grape production in South Africa**

The first table grape variety (Muscat d'Alexander) was planted in the Hex River Valley and was first exported to the UK in 1886. In 1937, the Deciduous Fruit Board was established to modernise farming with powers to fix prices and control marketing<sup>282</sup>. As South Africa's political status created growing public concerns overseas, consumer boycotts and divestments campaigns were initiated and intensified. The Deciduous Fruit Board abolished its control over fresh fruit in the late 1970s and delegated its export marketing powers to the Universal Fruit Trade Co-operative (Unifruco) in 1986<sup>283</sup>.

Following the end of the sanctions against apartheid, a deregulation process was initiated by the ANC to support the opening of the economy and the rapid liberalisation of export chains. By 2006, the number of table grape exporters has tripled to reach 161 and the market share of Unifruco's subsidiary Capespan (previously the monopolistic exporter) was down to 17% of industry's export volumes<sup>284</sup>. Grape production rapidly developed in many regions and the table grape market started booming (the production for export almost tripled since the end of the 1990s). This created a new cycle of commodity speculation and agricultural "pioneer fronts" in table grapes<sup>285</sup>.

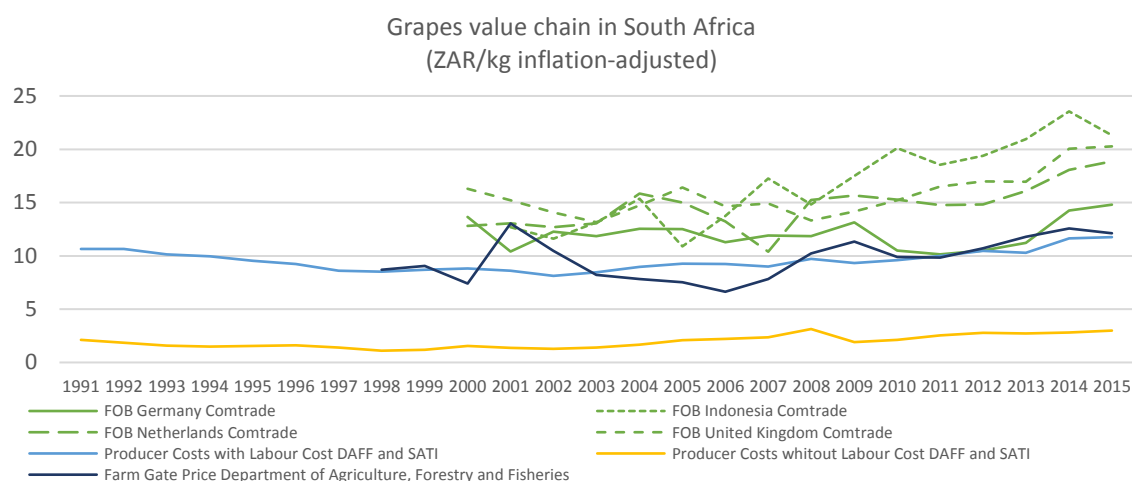


Today, more than 80% of table grape production in South Africa occurs in the Western Cape region (in Hex, Orange and Berg river valleys which together account for more than 13,800 hectares). Other production areas include the Northern Cape, Eastern Cape, and Limpopo. Grape production for table grape and wine are from different plots.<sup>286</sup>

The boom of table grapes is often presented as a symbol of successful integration into "globalization" and a maximisation of the return on investment for the scarce water resources of the country. However, table grape is a very risky market as the prices drop rapidly each year after short peak times, and the investments required to engage in production are proportionate to the expected benefits<sup>287</sup>. Only farmers who have sufficient land and financial capacity can embark on this production. As early ripening has become the decisive factor in grape, there is an increasing competition for access to land and irrigation water permits, notably in the Northern "Veld" rocky region. This is transforming rural landscapes as vine monoculture is spilling out at the expense of other crops<sup>288</sup>.

Source: BASIC

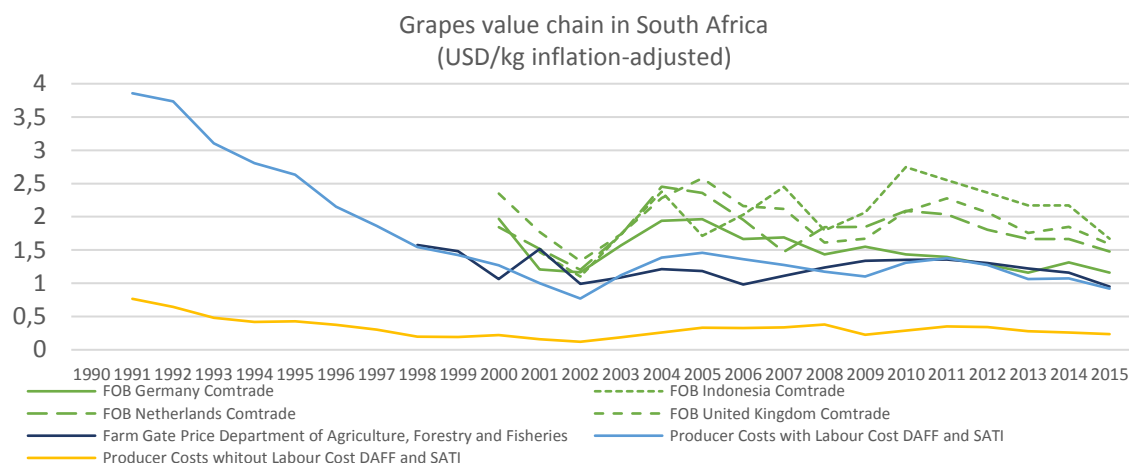
**Fig. 71 Evolution of table grape's value breakdown in South Africa**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

As illustrated above, when expressed in local currency and corrected for inflation, export prices of fresh grapes from South Africa have significantly increased since 2000. However, there are differences between destination countries, Germany showing low prices, barely enough to cover the costs of production in 2010-2013 (in particular compared to Netherlands and UK). When expressing the same data in USD instead of rands, the picture looks pretty different (see below)

**Fig. 72 Evolution of table grape's value breakdown in South Africa**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

The stark differences between the two graphs can be explained by the decline of the rand against the dollar and the euro over the past decade (going from 2.6 rands for one dollar in 1990 up to 12.8 rands for one dollar in 2015).

Concurrently, there has been a strong expansion of larger scale farms in South Africa which managed to achieve large economies of scale and take more advantage of production factors (land, water, workers...). On the side of costs, producers have been facing a sharp increase in farm inputs since the end of the 1990s. According to the South African Table Grape Industry, since 2002, the costs of fertiliser have risen by 191%, fuel by 178%, packaging material by 152% and maintenance and repairs by 152%<sup>289</sup>. These rising costs have strongly impacted farm profitability despite of the relative devaluation of the rand against the dollar and the euro. As a result, many smaller growers have gone out of business, their farms being taken over by larger growers. The result is a greater concentration in the number of grape grower: from 543 in 2008 to 326 in 2013, a decline of 40%<sup>290</sup>.

Many growers also complain about the rising costs of implementing European supermarket requirements. With a few exceptions, suppliers have to meet the costs of changes in supermarket sourcing requirements, which include: rising quality standards (in particular GlobalGAP and BRC), social auditing, new packaging formats (such as the move to punnets or zipped bags) which created additional pressure on producers<sup>291</sup>. Labour costs have also substantially rose in recent years according to the Table Grape Industry: the proportion of production costs accounted for by labour increased from 35 % in 2000 to 47 % in 2009 and to 57 % in 2013 alone (which is reflected in the above diagram expressed in rands)<sup>292</sup>. This is linked to the introduction and gradual increase of the minimum wage for farmworkers determined within the agricultural sector since 2003. This has enabled a significant increase of rural workers' incomes (which used to be very low until the early 2000s), but also led to numerous job losses in table grapes production and strong casualization of labour (on average, only 20% of workers have a permanent contract)<sup>293</sup>. Seasonal and contract labourers are commonly employed on piece-work rates to do unskilled and physically demanding work. Many of them are recruited from traditional homeland areas or townships on the outskirts of towns through labour brokers or gang masters. Since the economic implosion of Zimbabwe, a stream of migrant workers has been brought into the labour market who, along with migrants from Malawi and Mozambique, are in some cases displacing further South African workers<sup>294</sup>.

Finally, climate events also regularly affect South African production. For example, in November 2008, the "worst flood in memory" caused an estimated damage of 200 million rands to grape farms in the 'De Doorns' area, and in January 2012, flash flooding again caused damage on about 20 farms and crop losses of up to 30% in the same region.<sup>295</sup>

### **Ability of workers to earn a living wage and levers for change**

In 2013, the Western Cape's Department of Agriculture commissioned a study to assess farm workers' welfare in the Western Cape: among the 925 employed workers interviewed, 69% of participants had an income between 1,500 Rands (105 Euros) and 3,000 Rands (210 Euros) per month, corresponding to 3.5 to 7 Euros per day. In all cases, the majority of permanent workers only earned the minimum wage (2,420 Rands per month in 2014, following a 52% increase in March 2013).<sup>296</sup>

The same year, Fair trade International, ISEAL Alliance and a range of certification organisations commissioned a study on living wage benchmarks for wine grape farms in South Africa. Their living wage estimate for wine grape growing in the region of Western Cape was 3,122 ZAR per month (323 USD).<sup>297</sup>

Hence, to ensure that workers can achieve a sustainable livelihood, the share of value available to cover labour costs should be at least increased by 29% (from 0.69 USD/kg currently to 0.89 USD/kg), which would correspond to a mark-up of approx. 0,20 USD/Kg which appear to be very limited compared to the average consumer price of table grape which is 5.30 USD in the countries analysed (from 4.53 USD/kg to 6.26 USD/kg depending on the market). This does not require the consumer price to increase at the same level (more details on consumer countries, see the sections for: Germany, Netherlands, UK and South Africa).

According to recent studies, the table grape industry has witnessed a proliferation of voluntary codes and standards aimed at driving transformation. More recently, important convergences are taking place between social and environmental concerns. Northern consumers require sustainability to encompass both social and environmental sustainability. Ethical, fair trade, organic and environmentally-sustainable initiatives are beginning to overlap. It remains to be seen which of these schemes can maintain sufficient distance and impetus to create meaningful transformation in workers' lives and truly sustainable agricultural production.<sup>298</sup>

# GREEN BEAN

## Green beans value chain structuring and evolution

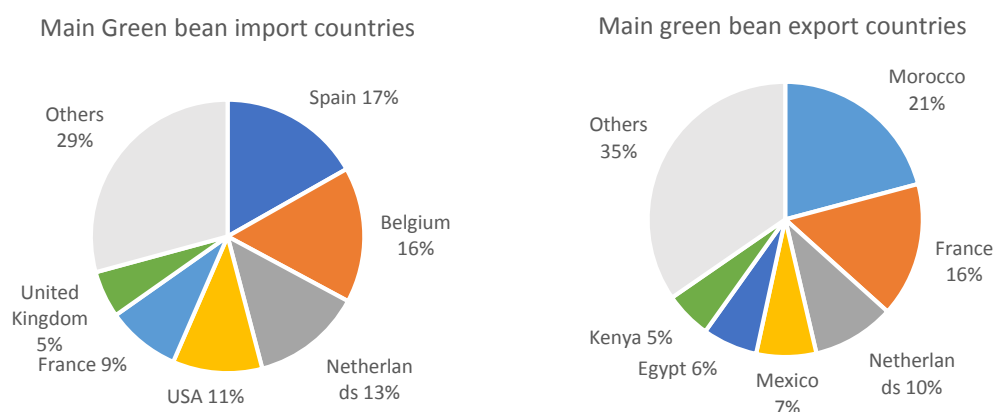
### Green bean consumption, production and trade

The green bean or French bean (*Phaseolus vulgaris*) is a warm season crop harvested for its immature seed pods traditionally consumed in Western Europe, Asia and North America. In the 1970s, the international trade of green beans started to expand significantly as supermarkets were increasingly looking for year-round varieties in fresh produce to offer to consumers.<sup>299</sup>

Nowadays, the main importers of green beans are Spain (almost 20% of total volumes), USA (14.5%), Belgium (13%), France (9%), the Netherlands (8.5%) and the UK (7%) together accounting for more than 70% of the world's green bean imports (Belgium and the Netherlands acting as entry points for green beans coming into Europe)<sup>300</sup>. The 3 most common qualities of green beans imported by these countries are "extra fine", "fine" and bobby beans.

The top 5 producers of green beans in the world are China, Indonesia, Turkey, India and Spain, together accounting for almost 70% of the world production of green beans<sup>301</sup>. To supply the increasing world demand (especially off-season demand), the cultivation of green beans expanded not only in these traditional producing regions, but also in developing countries, especially in Africa, as countries were looking for high-value "non-traditional" commodities to compensate for the declining prices of cash crops such as coffee and cotton, a strategy which was strongly supported by the World Bank and bilateral donors<sup>302</sup>. As a result, Morocco, Egypt, South Africa and Kenya have become major green bean exporters. Morocco is the African leader because of its lower freight costs to the EU, its main market (Morocco's green beans can be conveyed by boat as opposed to airfreight for other producing countries).<sup>303</sup>

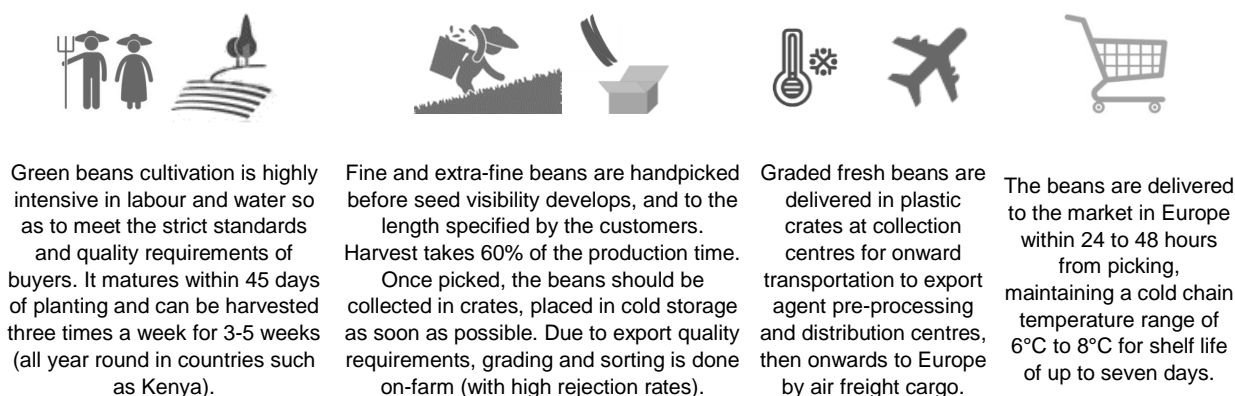
Fig. 73 Main world green bean import and export countries



Source: BASIC, based on UN Comtrade data (2016)

## Structure of the fresh green bean chain

Fig. 74 Production structure of the green beans chain



Source: BASIC

The French bean value chain is driven largely by major supermarket chains who determine prices and quality standards. A key consideration is compliance with market standards and government regulations in importing countries. During the 1990s, consumer pressure, protection of brand image, stricter food regulation, and the need for access to due diligence processes have led retailers to develop their own commercial standards beyond public regulation, especially in Europe. This push culminated with the systematization of GlobalGAP (Retailers' standard for Good Agricultural Practice) and British Retail Consortium (BRC) protocols by retailers since 2000<sup>304</sup>. In recent years, the industry is consolidating, and the traditional model is changing: some UK supermarkets have started to organize direct procurement, removing unnecessary margin-takers (especially importers) and buying directly from exporters and sometimes large packhouses or producers.<sup>305</sup>

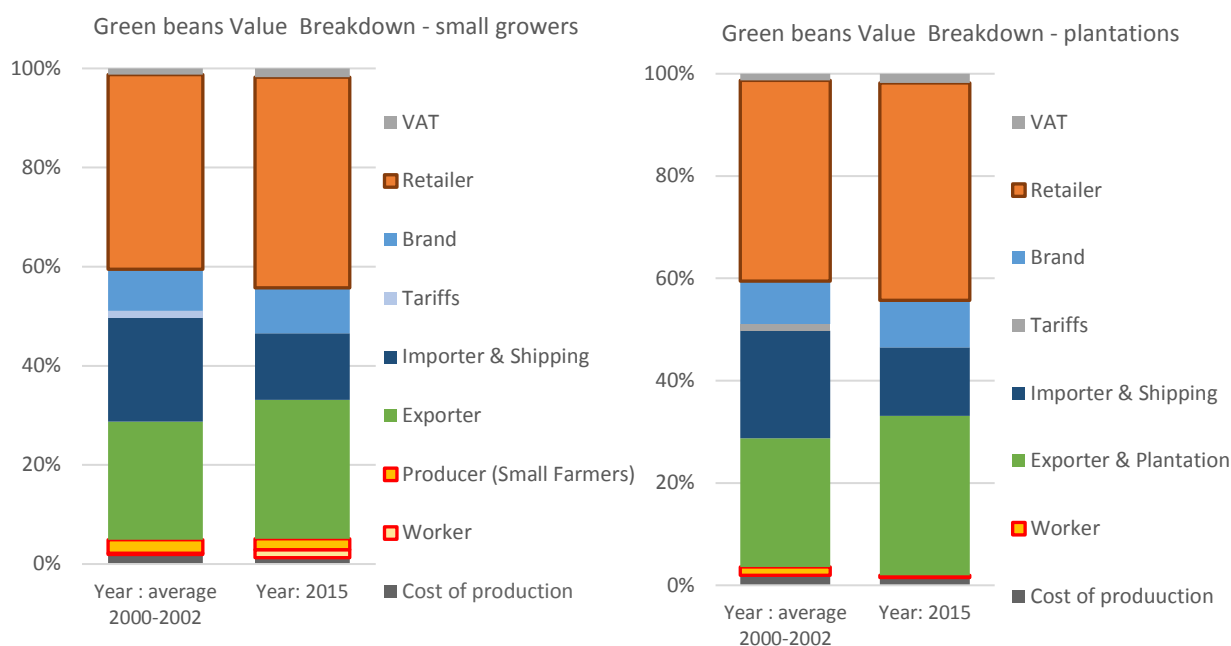
Upstream, a relatively small number of actors organize the supply for retailers and brands (with whom they have very close market links) and play the various roles throughout the chain: from input supply, production to export. In African countries, the large-scale exporters often integrate their operations both forwards and backwards. They often have their own farms (to secure part of their supply and its quality) and engage with small growers on a contractual basis – directly or through marketing agents, outgrower schemes or large farms – offering them pre-negotiated price terms and providing them with inputs and the necessary logistics to get the product on the market. Most small-scale farmers do not possess the financial or technical capabilities to comply with on-farm and packing-facility standards demanded by EU retailers.<sup>306</sup>

At the beginning of the chain, green bean is attractive to farmers due to its short cycle and as it can provide a continuous income year-round. However, the development of stringent and expensive quality standards imposed by retailers are increasingly driving small farmers out of the sector.<sup>307</sup>

## Green beans value breakdown in Kenya

Below is our estimation of value breakdown of fresh green beans, produced by small growers and plantations, exported by airfreight cargo from Kenya and sold to retailers in consumer countries. It is expressed in nominal currency to avoid distortions linked to correction for inflation in the different countries. The estimates have been calculated based on a weighted average of the value breakdown in the consumer countries included in this study (Germany, Netherlands and UK – see section 4). The results are as follows:

**Fig. 75 Value breakdown of green beans produced in Kenya (average 2000-02 & in 2015)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

The lack of data availability in some consumer countries didn't enable to make a robust estimate prior to 2000. As the average consumer price of green beans has more than tripled between 2000 and 2015 (from 3.16 USD/kg to 10.12 USD/kg in the countries analysed in this study - see section 4 for more details), the retailers appear to be the winners over the last 15 years, their share increasing from 39% to 42.5%. In Kenya the share of value captured by plantations and exporters has also increased from 25% up to almost 30%. In contrast, the share of value remaining for Kenyan small farmers has declined from 2.7% down to 2.2%, and the share for workers' wages has declined sharply from 1.6% down to 0.5%. These evolutions mirror the analysis of the value chain structure described earlier.

To investigate further this situation, we have analysed the value evolution of the green bean producer prices, export FOB prices and costs of production since the early 1990s. The results for the main destinations of Kenyan green beans are provided in the diagram on next page.

### **Green bean production in Kenya**

French bean is by far the largest vegetable export crop from Kenya: it accounts, depending on the year, 20% to 30% of the value (and 25% to 40% of the volume) of total vegetable exports. Kenya is the second largest exporter of all fresh/chilled bean categories to the EU, but is market leader for fine beans. The UK absorbed more than 70% of Kenyan-grown green beans, while France and the Netherlands absorbed 15% and 12% respectively.<sup>308</sup>

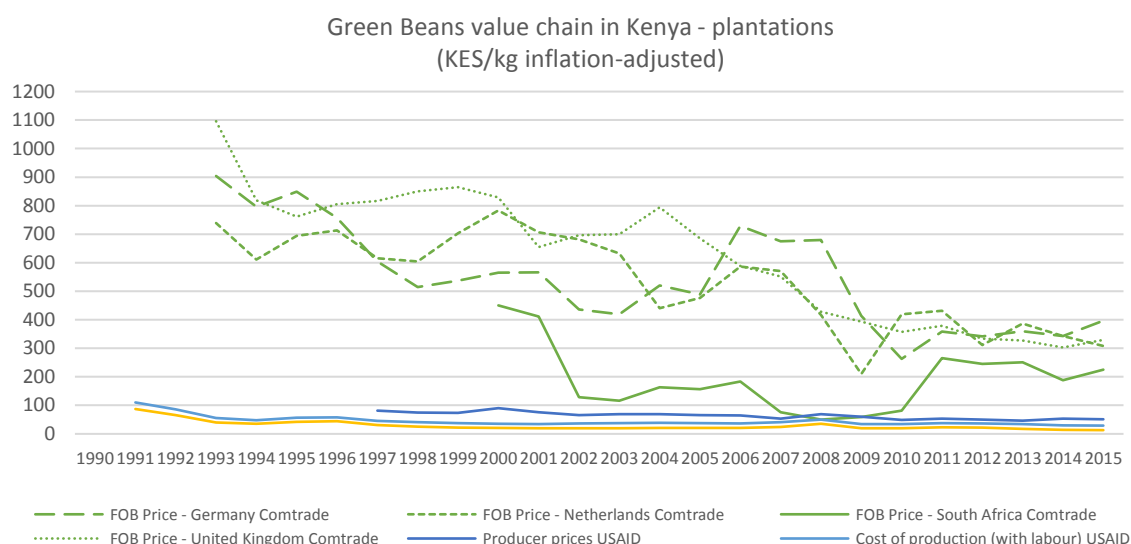
Kenya's success in French bean exports is based on the country's climatic and geographic competitive advantage, compliance with trade certification schemes, and value addition through sophisticated packaging. The supply chain is estimated to engage 50,000 small-scale farmers (with an average size of less than 1 hectare) who account for 77% of the production and additionally employ between 45,000 and 60,000 workers depending on the season.<sup>309</sup>

However, the future of local French bean smallholder farmers remains uncertain (the Fresh Produce Exporters Association of Kenya estimates that the number of small growers of export horticulture products declined by 5,000 in 2013- 2014 alone). Although exports of green beans were initially started by small growers in the 1980s, it is more and more

difficult for them to meet the strengthening standards of international buyers that only large farms can comply with. In reaction, exporting firms have initiated a process of consolidation and vertical integration whereby small farmers' green bean production is increasingly organized and channelled through large farms which are responsible for volumes and quality assurance.<sup>310</sup>

Source: BASIC

**Fig. 76 Evolution of green bean's value breakdown in Kenya**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

As illustrated in the above graph, the small producer price for green beans in Kenya has dropped by 1/3 over the last 20 years once corrected for local inflation: from 75-80 KES (1.25-1.30 USD) per kg in 1997 down to 50 KES (0.50 USD) per kg in 2015. This evolution appears to be closely related with the fall of export prices which were halved over the same period: from 680 KES (11.5 USD) per kg on average in 1997, down to 345 KES (3.5 USD) in 2015. As a result, the share of value accruing to small farmers only accounts for 15% of the export value of green beans, and it is the processor/exporter down the chain who captures most of the margin.

This evolution illustrates the price pressure which is exerted by the leading actors in the chain, retailers and processors/exporters, which mainly affects the small-scale producers and workers in Kenya as they have the weakest bargaining position. This was further demonstrated by a study conducted by Oxfam in the Kenyan green bean sector in 2013.

Small-scale producers reported a lack of transparency regarding quality-based rejections of their produce, an absence of visibility on prices (they most often reported ignoring the prices of their produce at any time until the point of payment), and a lack of power in producer-exporter relationships as well as in the cost of inputs. The study also found that downward pricing pressure kept farmers' profit margins very low, so employing permanent workers through quiet periods is a cost that most couldn't afford.<sup>311</sup>

In plantations, a large proportion of Kenyan farm workers are hired as casual labourers or on short-term contracts during the busiest periods, to cope with the seasonality of the business and the variations of the demand from supermarkets through the year. The Oxfam study found that less than 1/3 of the workers interviewed were on permanent contracts and around 40% were on

casual contracts (whereas in packhouses, workers were more likely to have permanent contracts because the job requires a degree of skill to despatch orders). In order to adapt to fluctuations, the sector seemed to rely heavily on 'permanent casual' workers, i.e. labourers who are employed year after year without any contract during the high season and laid off again during periods of low production; they receive none of the employment benefits accruing to contracted staff and are simply informally assured by farm management to be re-employed when work picks up.<sup>312</sup>

### **Ability of small farmers and workers to earn a living income/wage and levers for change**

Regarding green beans farmers, based on the latest research on the sector, the average net income they earn reaches approx. 126,500 KES per year (1,288 USD), after deducting costs of farm inputs, labour costs, etc. These estimates are based on statistical studies showing that a typical Kenyan small-scale producer of green beans owns 2.2 acres, with a productivity of 2,600 kg per acre (at 75% recovery rate) and 4 persons on average making their living on the farm.<sup>313</sup>

These numbers can then be compared with the estimations of living wages made by Oxfam in 2013 (based on a daily caloric intake and a reference food diversity index as well as education, health, housing and minimum savings). According to these studies, the cost of the basket of essential goods can be estimated at 266,000 KES (2,700 USD) per year for a family of 4 members<sup>314</sup>. This means that the green beans farmers earn half of what can be considered a sustainable living income for their family.

Hence, to ensure that small farmers can earn a living income from green bean farming, the share of value for farmers would require to be almost doubled when compared to its level in 2015 (from an estimated 0.23 USD/kg to 0.48 USD/kg). This would represent a very limited mark-up of 0.25 USD/kg (or 2%) on the end consumer price which is 10.10 USD/kg on average in the countries analysed (from 9.40 USD/kg to 10.20 USD/kg in the major consumer countries).

Regarding workers in plantations, the Oxfam's study found that average wages amount to 6,000 KES (60 USD) per month for a supervisor or a packer, 5,460 KES (54 USD) per month for a harvester and 4,650 KES (46 USD) per month for a sprayer. In addition to this cash wage, the study indicates that there is apparently no complementary in-kind benefit in vegetable farms due to the absence of a CBA in the sector.<sup>315</sup>

Regarding living wages for workers in green beans production areas, the Oxfam study made a first calculation based on the Asia Floor Wage methodology in 2013, which gave a rough estimate of 12,000 KES (120 USD) per month and per worker<sup>316</sup>. A more detailed study was commissioned by Fairtrade International in 2016 and conducted by R. & M. Anker. Their estimate is 12,969 KES per month and per worker in 2015, more than twice the average wage reported in the green bean sector.<sup>317</sup>

Therefore, to ensure that workers can achieve a sustainable livelihood, the share of value available to cover labour costs should be multiplied by slightly more than 2 (from 0.05 USD/kg currently to 0.11 USD/kg). This would correspond to a very limited mark-up of approx. 0.06 USD/Kg to be compared to the average consumer price which is 10.25 USD/kg on average in the countries analysed. In both cases, these levels of mark-up do not require the consumer price to increase at the same level (more details on consumer countries, see the sections for: Germany, Netherlands, UK and South Africa).

To make progress in the green bean industry, a living wage could be defined and agreed by all key stakeholders including government, civil society organisations including trade unions and companies. Regarding small-scale producers, a minimum price is needed to ensure that the costs of growing, packing, and transporting are covered, and that the farmers and their families can achieve a living income. In addition, stronger policies are needed across the sector to empower women and avoid their discrimination (both workers and small-scale producers), reduce sexual harassment and improve child-care provisions.<sup>318</sup>



# AVOCADO

## Avocado value chain structuring and evolution

### Avocado consumption, production and trade

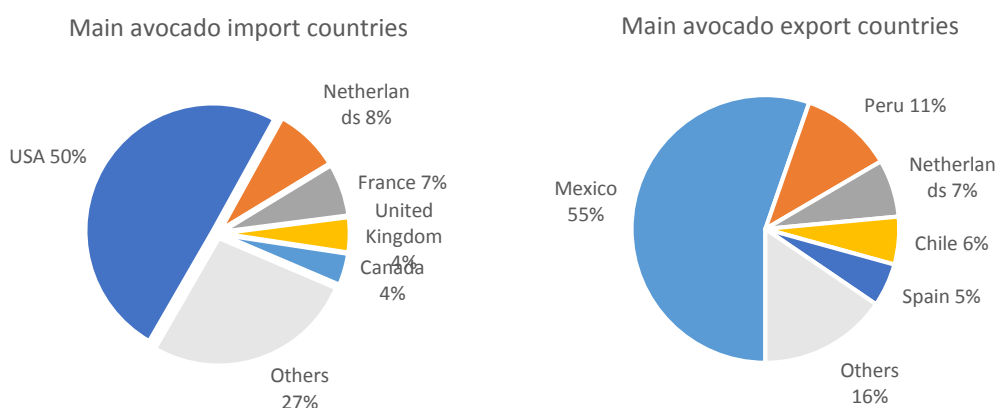
Avocado (*Persea americana*) is a tree native to Central America which is now cultivated in tropical and Mediterranean climates throughout the world. At global level, consumption of avocados has been multiplied by 4 since the 1970s, amounting to an estimated 5,000 tonnes per year. More recently, the growth has accelerated (more than 40% growth since 2010) because of increasing public awareness on healthy eating habits as well as increasing disposable income in emerging economies<sup>319</sup>. Avocado is predominantly consumed domestically: in the major producing countries, exports account for less than 1/4 of volumes<sup>320</sup>. Mexico is both the largest world's consumer country, representing 35% of global consumed volumes (7 kg/person/year on average), and the largest producer country accounting for 30% of global volumes, well ahead of Dominican Republic (8%), Colombia (6%) and Peru (6%)<sup>321</sup>.

Among other leading countries, the USA and the European Union are major consumers of avocados, major importers and domestic producers: the USA is the 2<sup>nd</sup> largest consumption market (15% of world's volumes) and the 1<sup>st</sup> importer (50% of global avocado trade)<sup>322</sup> while the EU is the 3<sup>rd</sup> largest consumer market (11%) and the 2<sup>nd</sup> biggest importer (30%)<sup>323</sup>. Within Europe, the main consumer markets are France, Germany, the UK and Scandinavian countries, and Netherlands is the main entry point and trade hub for avocados.<sup>324</sup>

In terms of export countries, Mexico is once again the world leader (50% of volumes), benefiting from high economies of scale, followed by Peru (12.5%) which managed to outpace its other rivals over the last decade (in particular Chile and Spain).<sup>325</sup>

Among the 500 avocado varieties, Hass (originally from Guatemala) has become the most commonly consumed, produced and traded over the world (95% of volumes), thanks to its advantages in terms of yield, higher oil content, longer shelf life and resilience to logistic. It is for this reason that Hass variety became the fruit of choice for export.<sup>326</sup>

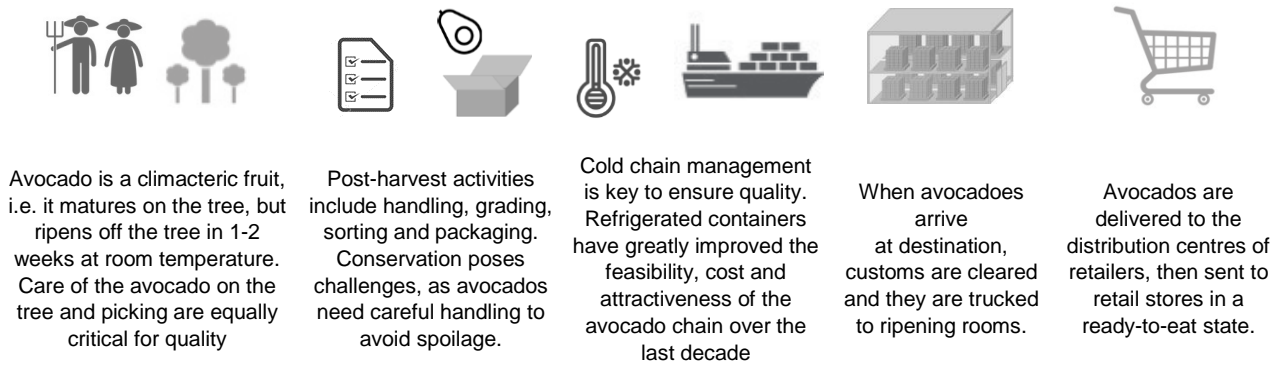
**Fig. 77 Main world avocado import and export countries**



Source: BASIC, based on Un Comtrade data (2016)

## Structure of the avocado chain

Fig. 78 Technical description of the avocado chain



Source: BASIC

In the USA and especially the EU, major supermarket chains are the leading actors of the avocado chain, channelling 60% to 90% of volumes purchased by consumers. They determine prices and quality standards, having a strong bargaining power over the many suppliers providing standardized undifferentiated products.<sup>327</sup>

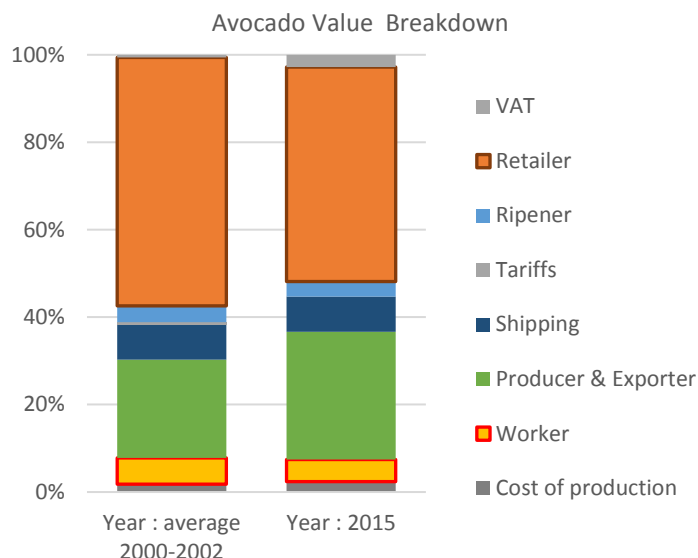
In Europe, increasing consumer conscience about health and safety issues have prompted a number of requirements imposed on top of public regulation by the main retailers, such as Global-GAP on good agricultural practices, the international management system of Hazards Analysis and Critical Control Points (HACCP), and the ISO 9000 management standards.<sup>328</sup>

Upstream, most retailers deal with large and recognized importers/wholesalers or service providers who strictly organise the chain in accordance with their demands to ensure product quality, timely delivery, flexibility of supply and respect of logistical requirements. These intermediaries can be either multinational fruit companies (e.g. Dole, Chiquita...) or domestic enterprises which buy avocados from export organisations, (or, more rarely, directly from large avocado producers). At the beginning of the chain, the majority of traded avocados is produced in large farms able to comply with the stringent requirements imposed by retailers through importers.

## Avocado value breakdown in Peru

Below is our estimation of value breakdown of fresh avocados, produced by plantations, exported by airfreight cargo from Peru and sold to retailers in consumer countries. It is expressed in nominal currency to avoid distortions linked to correction for inflation in the different countries. The estimates have been calculated based on a weighted average of the value breakdown in the consumer countries included in this study (Germany, Netherlands, UK and USA – see section 4). The results are as follows:

**Fig. 79 Value breakdown of avocados produced in Peru (average 2000-02 & in 2015)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

The lack of data availability in some consumer countries didn't enable to make a robust estimate prior to 2000. The average consumer price of avocados appears to have globally stagnated between 2000 and 2015. The retailers' share of value has apparently fallen from 57% to 49%, but this is only the case in Germany, whereas the share accruing to supermarkets has increased in all the other consumer countries analysed (Netherlands, UK and USA- see section 4 for more details). Upward in the chain, the overall share of value captured by the Peruvian plantations exporting avocados has grown significantly, while the share attributed to workers' wages has fallen from 6% down to 5%. To investigate further this situation, we have analysed the value evolution of the avocado producer prices, export FOB prices and costs of production since the early 1990s. The results for the main destinations of Peruvian avocados are provided in the diagram on next page.

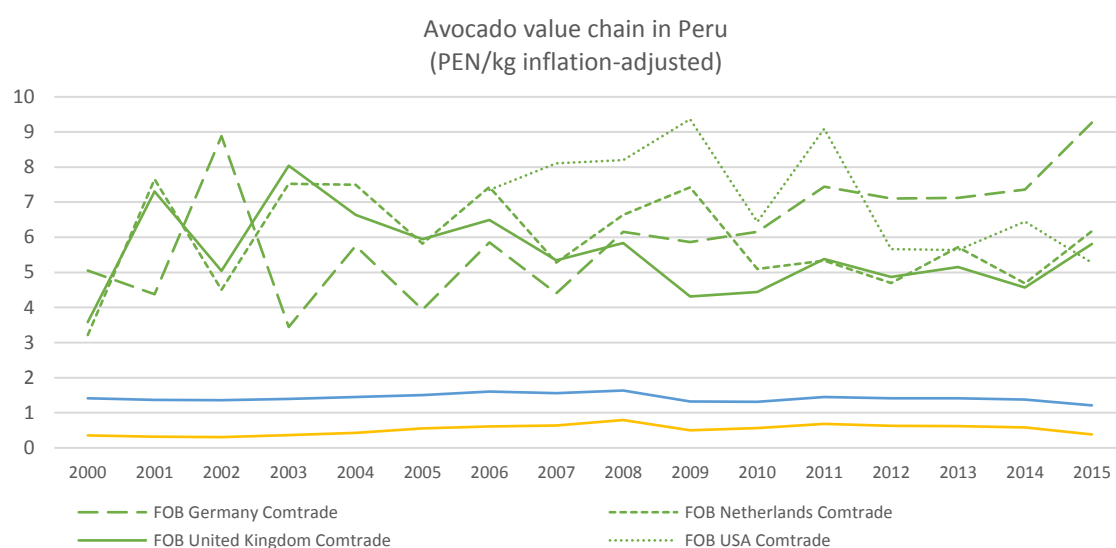
### ***Avocado production in Peru***

Avocados have been grown for thousands of years in Peru by civilizations including the Moche, Chimú and Incas. However, the crop has experienced phenomenal growth in the last 15 years. Domestic and foreign investors have established very large new plantings of the Hass variety which are directed at export in the narrow coastal strip sandwiched between the Pacific Ocean and the Andes mountain range. In particular, they have taken advantage of large irrigation projects launched in Northern Peru in the 2000s, and of a legal framework favouring investment in the agrarian sector<sup>329</sup>. Their successful development has led to exports of fresh avocados growing from 2,200 tonnes and 2.5 million USD in 2000 up to 134,000 tonnes and 220 million USD in 2015. The main destination markets are the European Union (58% of total exports) and the USA (30%), followed by Canada and China (for the first time in 2015).<sup>330</sup>

The standard of practices both in the field and packing shed are very high in order to meet the quality standards imposed by retailers. Production is mainly conducted by vertically integrated companies that control the whole process from production to export, the leaders being Camposol SA with 4,000 hectares of avocado (a large firm also involved in the production and export of asparagus, pepper, mangoes and shrimps), and the Arato group with 3,255 hectares. Together, they account for more than 30% of exports of the Viru valley, one of the main producing regions in the country.<sup>331</sup>

Source: BASIC

**Fig. 80 Evolution of avocado's value breakdown in Peru**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

Avocado, especially the Hass variety has been converted in less than a decade from an “exotic” and luxury product into a standard fruit regularly consumed in Europe and North America. The export prices, expressed in local currency and once corrected for inflation, have been quite volatile until 2012. They are mainly determined by the competition with the regions that produce the majority of their volumes between March and September when Peruvian avocado exports reach their height, namely California for the US market and South Africa for the European market (whereas Mexico and Chile are complementary and reach their peak between October and May).<sup>332</sup>

In recent years, the export price seems to have stabilised, and converged for Netherlands, the UK and the USA around 5.0-5.5 PEN (1.8 USD) per kg, while for Germany, it appears to maintain itself 30%-50% higher than the other destination countries analysed. Regarding the labour conditions in avocado plantations, agrarian workers are poorly unionized (and companies are often reported discouraging them to do so, as in the case of the Secretary General of SITECASA who was dismissed along with 14 workers by Camposol in 2014).

### Ability of workers to earn a living wage and levers for change

According to recent studies, the basic wage for avocado orchard worker is approx. 10,500 PEN (3,600 USD) per year<sup>333</sup>. In comparison, the Peruvian national institute of statistics (INEI) provide figures for the absolute poverty line amounting to 4,320 soles per person and per year in the coastal regions, which is an estimate the level of income required to meet his/her basic needs in terms of food (based on a daily caloric intake and a reference food diversity index) as well as education, health, housing and minimum savings. Considering a family of 4 people and 1.5 wage earners per household on average, the living wage can be estimated at 11,520 PEN (4,060 USD) per year.

Therefore, to ensure that workers can achieve a sustainable livelihood, the share of value available to cover labour costs should be at least increased by 10% (from 0.26 USD/kg currently to 0.28 USD/kg). This would correspond to a very limited mark-up of approx. 0,03 USD/Kg, which would represent less than 1% of the average consumer price which is 5.10 USD/kg on average in the countries analysed. In addition, this level of mark-up does not require the consumer price to increase at the same level (more details on consumer countries, see the sections for: Germany, Netherlands, UK and USA).

# TOMATO

## Tomato value chain structuring and evolution

### Tomato consumption, production and trade

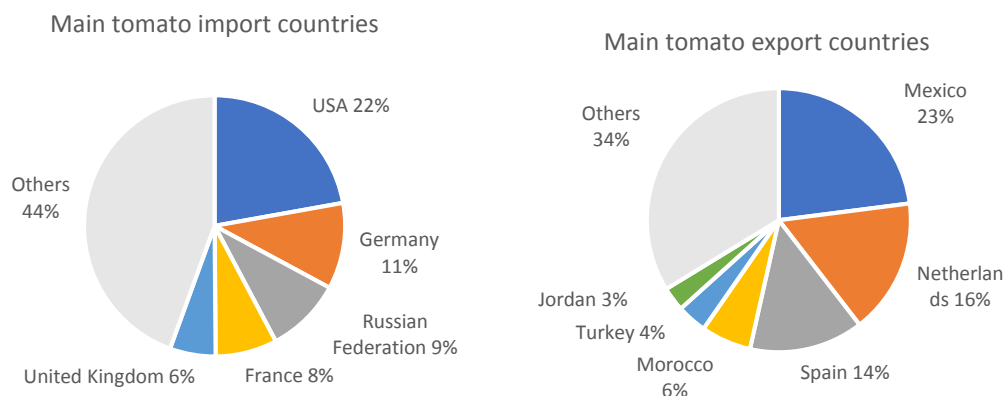
Native to South America, the tomato was spread around the world following the Spanish colonization of the Americas. Today, tomato has become the world's largest vegetable category (16% of global volumes) and is growing fast (production has increased by more than 50% since 2000). Global tomato production is currently around 130 million tons, of which 88 million are destined for the fresh market and 42 million are processed.<sup>334</sup>

According to FAO estimates, tomatoes are mainly consumed domestically and only 15% of the world's production is traded internationally, amounting to more than 8 billion USD per year. The top 5 largest tomato producers and consumers are: China, EU, USA, India and Turkey, together accounting for 70% of global production.<sup>335</sup>

China produces more than 40 million tonnes of tomatoes, accounting for 30% of global production, almost entirely for domestic use. In the European Union, the second largest market, tomato holds the number one position among vegetables, with a 19% share. The consumption per capita is highest in Germany with 25 kg/person/year. European countries produce more than 16 million tonnes (12% of global production), the majority coming from Italy and Spain. Of these volumes, 7 million tons go to the fresh market and 10 million for processing. The USA, the 3<sup>rd</sup> largest market, only produces 40% of its consumption, and is the world's largest tomato importer (mostly from Mexico). Per capita consumption of fresh tomatoes is around 9 kg per year, accounting for only 25% of total consumption, most being consumed as sauces, juice and tomato paste.<sup>336</sup>

Trading routes of tomato are mainly regional. Mexico is the world's largest tomato exporter with over 1.5 million tonnes per year mainly destined to the USA (80% of exported volumes). Mexico is followed by leading European exporters which mainly trade tomatoes within the EU (Netherlands and Spain). North Africa is becoming the other major tomatoes' exporting region, mainly directed towards the EU. Morocco is the leader, having doubled its tomato export volume over the last 10 years, which made it the 4th largest tomato exporter in the world. At the end of the top 10 list of world's tomatoes exporting countries, Turkey and Jordan mainly send their production to the Middle East region and Russia.<sup>337</sup>

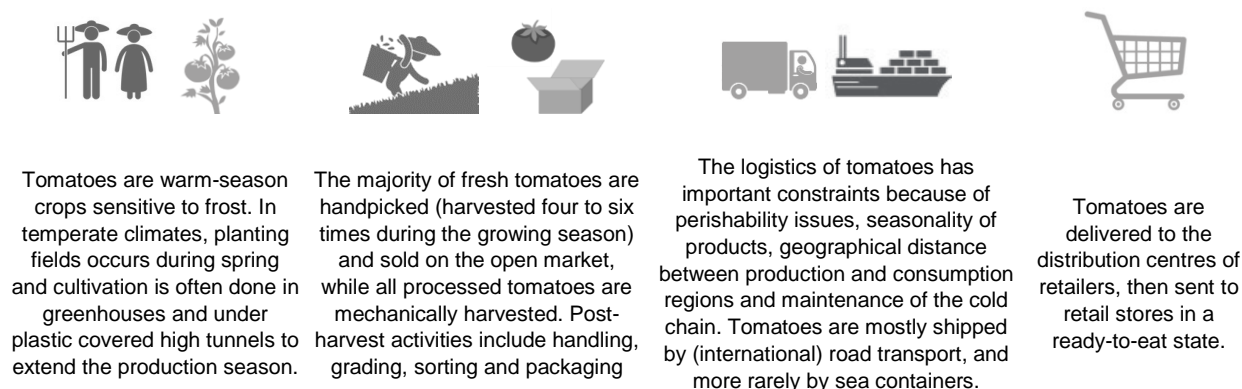
**Fig. 81 Main world tomato import and export countries**



Source: BASIC, based on Un Comtrade data (2016)

## Structure of the tomato chain

Fig. 82 Technical description of the fresh tomato chain



Source: BASIC

As for the majority of other fresh fruits and vegetables, major retailers are leading actors in the fresh tomato chain, channelling a large part of the volumes purchased by consumers in developed economies (especially in Northern Europe), whereas wholesale markets still play an important role in emerging economies. Their strong bargaining position in EU and the US enables them to impose a logistic model characterized by globalization of supplies, just-in-time flows, high frequency of deliveries, uniform quality and stringent standards<sup>338</sup>.

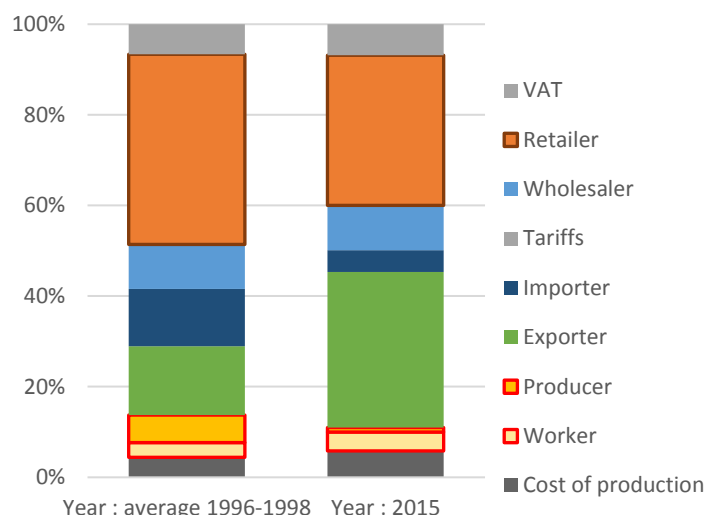
All these constraints require a specific organization of the chain that only large wholesalers who have sufficient resources and critical mass are able to address. In emerging markets, wholesalers are the dominant players in the chain whilst supermarkets are still in the initiation stage.<sup>339</sup>

At a global level, most fresh tomatoes are purchased through the open market, where price fluctuations are the largest, or partly through direct contracts with local retail shops (as opposed to processed tomatoes which are almost only sold under contract with processors). At the beginning of the chain, a majority of the farms producing tomatoes are family-owned, with average sizes ranging for example from 0.2 ha in China up to 6 ha in Netherlands, and often organized in cooperatives or through intermediaries in order to cushion the price fluctuations.<sup>340</sup>

## Tomato value breakdown in Morocco

Below is our estimation of value breakdown of fresh tomatoes, produced by small farms in Morocco, exported by truck and sold to retailers in consumer countries. It is expressed in nominal currency to avoid distortions linked to correction for inflation in the different countries. The estimates have been calculated based on a weighted average of the value breakdown in the consumer countries included in this study (Germany, Netherlands, and UK – see section 4). The results are as follows:

**Fig. 83 Value breakdown of tomatoes produced in Morocco (average 2000-02 & in 2015)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

The lack of data availability in some consumer countries didn't enable to make a robust estimate prior to 1996. The average consumer price of tomatoes appears to have very slightly increased between 1996 and 2015, with an average growth rate of 13% in nominal terms in 20 years. In this context, the share of the value accruing to retailers seem to have fallen significantly from 42% to 33%, a drop which is more pronounced in Germany than in Netherlands and the UK (see section 4 for more details). The main winners of this evolution seem to be the integrated producers/exporters in Morocco which share of value has more than doubled from 16% to 34%, while the value left for workers has apparently increased from 7% up to 10%. To investigate further this situation, we have analysed the value evolution of the tomato producer prices, export FOB prices and costs of production since the early 1990s. The results for the main destinations of Moroccan tomatoes are provided in the diagram on next page.

### **Tomato production in Morocco**

In Morocco, the tomato sector plays an important socio-economic role as it is one of the main fresh agri-food products destined for export, totally more than 3.3 billion dirhams. On the social side, the tomato crop for export generates almost 9 million days of work per year for its farm cultivation, packaging and processing. Morocco is the leading supplier of the French off-season tomato market, with strongly increasing volumes over the past decade (more than 80% of Moroccan exports are destined for the French market).<sup>341</sup>

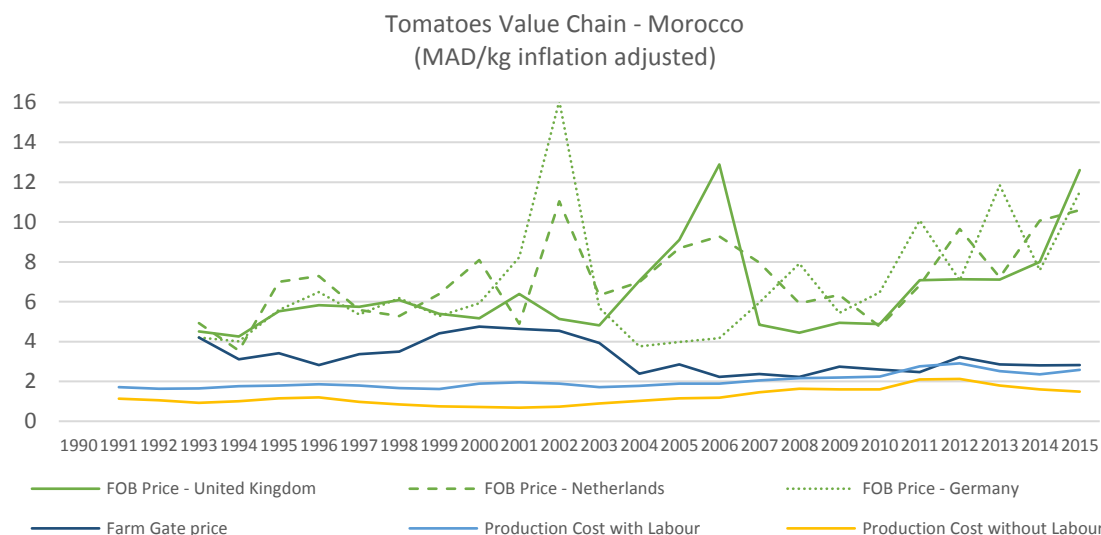
The two key nodes in the Moroccan tomato chain are exporters and packing stations. Exporting groups organize transportation, centralized purchase of production inputs and negotiation process with buyers and banks. Packing stations are the most important source of information for producers and play an important intermediate role in the marketing chain between producers and other players in the export process.<sup>342</sup>

The Moroccan export sector is highly consolidated. Almost 50% of the production (and most of the export) is done by vertically integrated structures such as Azura Group, Agri-Souss, Delassus and Idyl. The integrated exporters take the shape of two different organizational forms. The first type is dominated by tomato farmers of various sizes who join cooperatives or exporting groups that own one or more packing stations and provide them with packing and wrapping services. The second type are enterprises which integrate all levels from their own tomato greenhouses up to export.<sup>343</sup>

Source: BASIC



**Fig. 84 Evolution of tomato value breakdown in Morocco**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

One of the main constraints that limits Moroccan tomato exports is the system of quotas and entry prices imposed on them by the EU for their access to the European market during October-May. In addition, between June and August, Moroccan exports are also significantly held back through the application of prohibitive EU tariff protection making Moroccan tomatoes aiming at protecting European producer countries (namely from Spain, Italy and France).<sup>344</sup>

As illustrated in the diagram above, tomato export prices in Morocco (expressed in local currency and corrected for inflation) have been relatively stable until 2002 and much more volatile since then (with important peaks in 2002 and 2006 followed by immediate drops). Export prices also seem to follow an upward trend since 2010 for the 3 countries analysed: Germany, Netherlands and the UK (It should be noted that while 80% of Moroccan tomato exports are destined to France, the majority doesn't remain there but are conveyed further to other EU markets).

The sector seems to have faced a difficult period in 2008 when oil prices have strongly increased (hence impacting fertilizers and transport costs). In response, the government has initiated a strong support policy (loans to facilitate access to farm inputs, building of new greenhouse areas, irrigation projects...) which has enabled producers to increase their productivity<sup>345</sup>. This has translated into lowering costs of production since 2008, as illustrated in the above diagram.

In 2014, a study conducted by Fairfood International in the Moroccan tomato sector found that tomato pickers in Morocco who supply fresh produce to European supermarket chains during the winter are paid low wages. The study also showed that the burden of these low wages falls disproportionately on women who account for 70% of the agricultural workers in the Souss Massa Drâa region, where most of Morocco's tomatoes are grown. Many of these workers were found to be young, single, migrant workers who are looking to avoid social stigmatization and marginalization.<sup>346</sup>

### Ability of workers to earn a living wage and levers for change

The Fairfood study conducted in 2014 found that 1/3 of the workers that they surveyed were paid below the minimum wage for agricultural workers<sup>347</sup> which is 69.73 MAD (7.14 USD) per day in 2015, i.e. approximately 1813 MAD (186 USD) a month based on 26 working days per month<sup>348</sup>. In responses, Tesco and Sainsbury's declared that their own investigations didn't correlate and found that workers are paid at the minimum wage and sometimes above<sup>349</sup>.



Even if considering that workers manage to earn the minimum wage in Morocco, it does not seem to be sufficient for them to achieve a sustainable livelihood. Indeed, according to the estimates conducted by WageIndicator during the same year, the living wage required to meet the workers' families' basic needs in terms of food, education, health, housing and minimum savings can be estimated at a minimum of 300 EUR (333 USD) per month.<sup>350</sup>

Therefore, to ensure that workers can achieve a sustainable livelihood, the share of value available to cover labour costs should be at least increased by 80% (from 0.12 USD/kg currently to 0.22 USD/kg). The associated mark-up would be of approx. 0,10 USD/Kg, which would represent less than 3.5% of the average consumer price which is 2.92 USD/kg on average in the countries analysed. This level of mark-up does not require the consumer price to increase at the same level (more details on consumer countries, see the sections for: Germany, Netherlands, and UK).

# 5 DISTRIBUTION OF VALUE BY CONSUMER COUNTRY

## GERMANY

### Overview of the food retail sector in the country

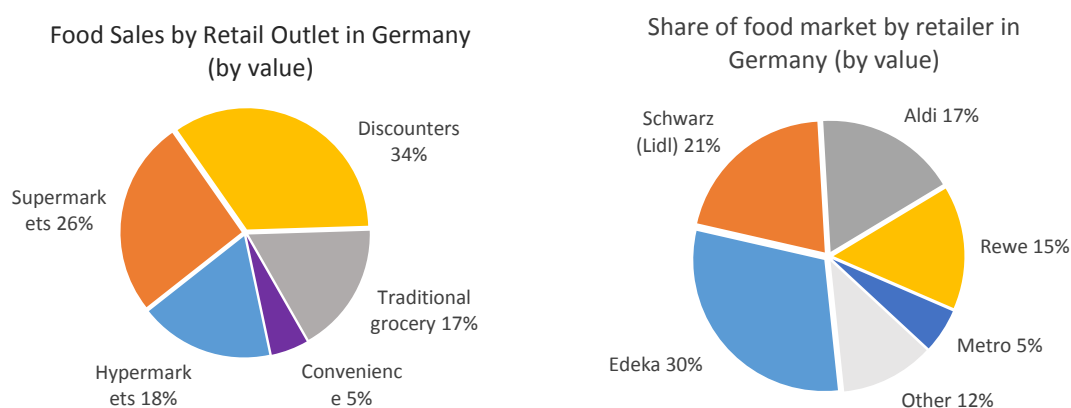
Germany is the biggest market for food and beverages in the European Union. According to Euromonitor International, grocery retailing reached sales of 240 billion Euros in 2015<sup>351</sup>. Over the past ten years, Germany is one of the very few European countries where households have continuously increased their household expenditure spent on food, a tendency which accelerated since the economic crisis in 2008<sup>352</sup>.

In comparison with other major European retail food markets, Germans are very price-sensitive consumers who also expect high quality products. As a result, the key characteristics of the German market are: consolidation, market saturation, strong competition and low prices<sup>353</sup>.

In this context, discounters have been a prominent feature of the German retail market for the past 30 years: their market share has grown from 12% in the 1980s to 33% and above since the early 2000s, one of the highest proportion in world's food retailing. There is on average one discounter for every 5,231 people in the country, within a 10-15 minutes-drive of every German home<sup>354</sup>. Their success was strongly driven by the development of private label food products focused on (low) price. Because of the competition with discounters, traditional retail chains have strongly developed their private labels, creating whole ranges of products from low-priced to high quality premium products (in 2011, the market share of private label products was above 40%)<sup>355</sup>. After years of growth, the discounter's share is somehow stagnating, in particular because of their limited ability to open new stores<sup>356</sup>.

The overall breakdown of food sales by retail outlet in Germany was estimated in 2015 as follows: 34% in discounters, 29% in supermarkets, 17% in hypermarkets, 15% in traditional grocery stores and 5% in convenience stores<sup>357</sup>.

**Fig. 85 Main retail outlets and retailers' market shares in Germany**



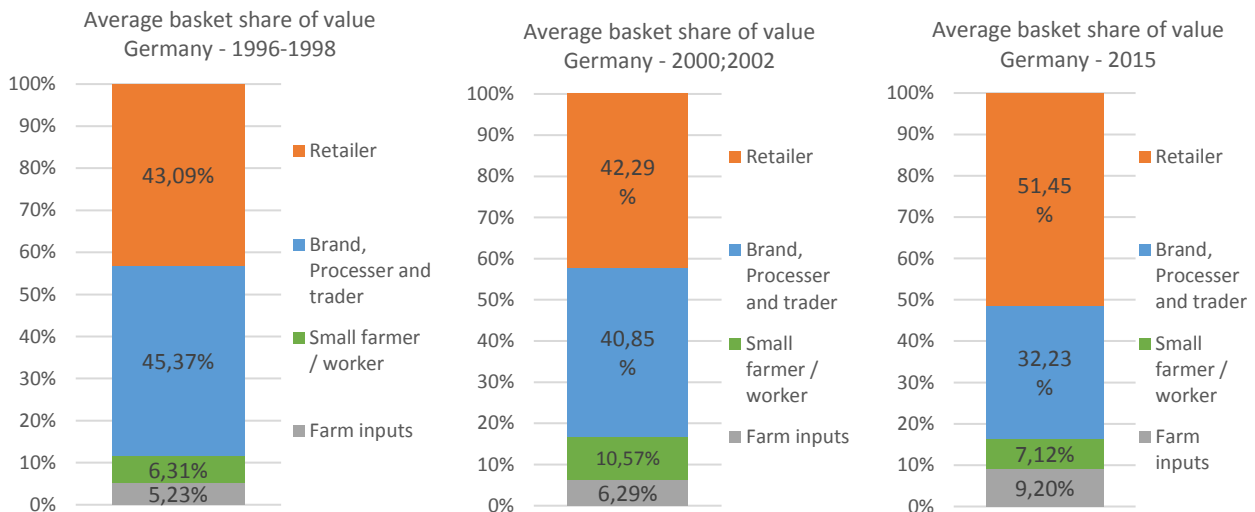
Source: BASIC, based on Euromonitor, Planet Retail and USDA data (2015)

As a result, the German retail market is dominated by 5 major retailers: Edeka, Rewe, Lidl, Aldi and Metro. Most of them are positioned on the 3 distribution formats: supermarkets, hypermarkets and discounter stores (Aldi being a specific case focused on discounter outlet only). The concentration of the market is more pronounced than on average in Europe; to illustrate, in 2012, the sales of the top 5 German retailers amounted to 61% of the consumer spending on food and drink (compared to 45% on average in the EU)<sup>358</sup>. The main retailers' market shares were estimated as follows in 2014: 30% for Edeka, 21% for the Schwarz group (Lidl), 17% for Aldi, 15% for Rewe and 5% for Metro<sup>359</sup>.

## Overview of the food basket value breakdown

The evolution of the value breakdown of the basket of goods for Germany is detailed below for 1996-1998, 2000-2002 and 2015:

**Fig. 86 Value breakdown of the German basket of goods**



Source: BASIC

As illustrated above, the share of value retained by retailers appears to have substantially increased since 1996, mainly at the expense of intermediate actors. The detailed analysis of each product in the basket is provided in the following sub-sections.

## Coffee

### Overview of the sector in Germany

With 81 million inhabitants, Germany is the largest coffee-consuming country in the European Union, accounting for around 22% of total EU consumption in 2014 (approx. 522,000 tonnes). It is estimated that the average German consumer drinks 6.3kg of coffee each year, a higher per capita consumption than in other countries in which coffee is a popular hot beverage, including Italy (5.8 kg/year) and France (5.2kg/year).<sup>360</sup>

Germany is the largest importer of green coffee beans in Europe. In 2014, German imports of green coffee beans amounted to a total volume of 1.03 million tonnes (2.7 billion euros). Since

2010, imports of green coffee have increased at an average annual rate of 0.7 % in volume and 3.0% in value. Germany's major role is due to the port of Hamburg, the largest transition point for coffee in the world. Germany is the largest re-exporter of green coffee beans in Europe, accounting for around 58% of total European re-exports in 2014 amounting to a total volume of 323,000 tonnes (854 million EUR), reflecting the importance of its processing and roasting industry, in addition to its local market.<sup>361</sup>

The 6 leading roasters account for approx. 85% of the German market. The largest coffee roaster is Tchibo (brand Eduscho) in Hamburg, followed by Jacobs located in Bremen (brands HAG and Onko). Together, Tchibo and Jacobs account for more than 40% of the coffee market in Germany. Four additional roasters account for another 40% of the market. Dallmayr, the Darboven Group, Melitta and the discount supermarket Aldi (Markus Gold and Amaroy).<sup>362</sup>

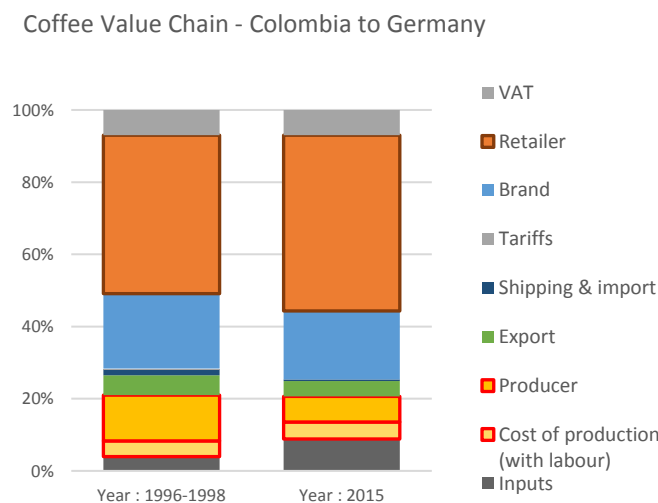
Germany's most important suppliers of conventional green coffee are Brazil (35%), Viet Nam (16%), Honduras (10%) and Colombia (6%).

For an overview of the sector, the structure of the chain and its evolution, see section 3 on the coffee global value chain.

### Comparison of the value breakdown in the 1990's and in 2015

Our estimations of value breakdown (expressed in nominal currency so as to avoid potential distortions linked to correction for inflation) are as follows:

**Fig. 87 Value breakdown of coffee produced in Colombia (average 1996-1998 and 2015)**



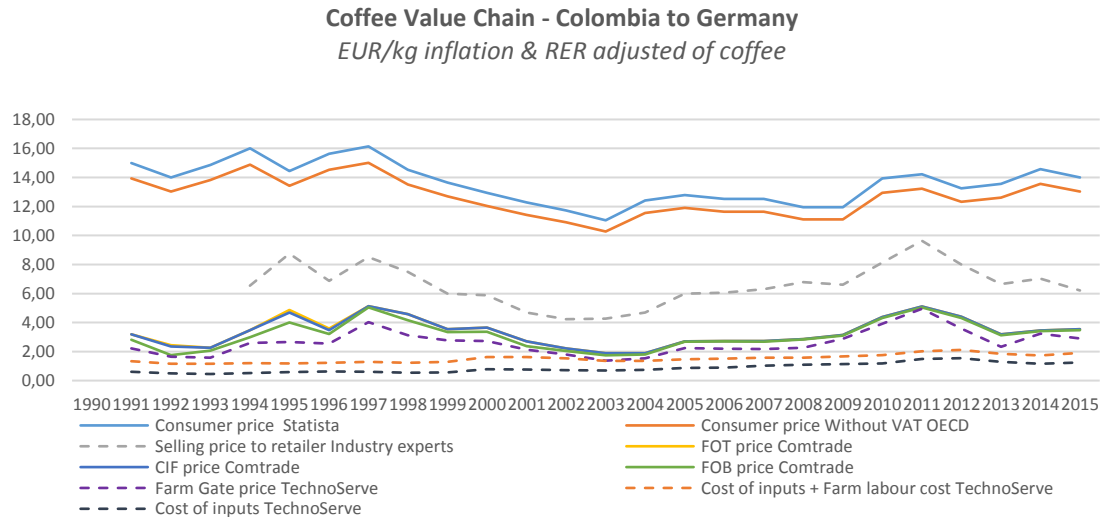
Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

As illustrated above, the value breakdown mirrors the evolution of the coffee chain where supermarket chains have a growing influence (through the development of private label) as well as coffee brands and roasters. The share of value retained by retailers is the largest and has tended to increase since 1996 (from 44% in 1996-98 to 49% in 2015). In comparison, the share of value of brands/roasters is the 2<sup>nd</sup> largest but has somehow declined from 21% to 19% and the value remaining in Colombia has stagnated at approx. 25%. This is not taking into account the costs of inputs (fertilizers and pesticides) which has more than doubled in proportion, generating strong economic pressure on both coffee growers and workers.

To investigate further this situation, we have analysed the value evolution of the coffee producer prices, export FOB prices and costs of production since the early 1990s. The results for the main destinations of Colombian coffee are provided below.

### Analysis of the value breakdown

**Fig. 88 Value breakdown of coffee produced in Colombia (1991-2015)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports

On the consumer side, taking into account the evolution of costs of living in Germany, the diagram illustrates that the consumer prices have globally followed the trends of the coffee CIF import prices since 1991, but have also relatively declined by 5%-10% since 1991. Most importantly the retailers appear to have “cushioned” the evolution of the coffee price on world markets with lower increases but also prices that remain relatively stable when international coffee prices fall. This is especially the case since 2012, which explains why the share of value captured by retailers is on the rise.

In the middle of the chain, the selling price (of roasters) to retailers seem to be much more aligned with the evolution of the coffee CIF import price, and even slightly amplifies peaks such as in 2010-2011 during the rust epidemics.

In Colombia, the value left for small coffee growers as well as workers has undergone two spikes in 1994-98 because of the end of the international coffee agreement and in 2010-12 because of the ravages of rust combined with El Nino/La Nina effects. In 2015, producers only sell their coffee to the same unit price than in 1991 – one corrected for inflation – but production costs have sharply risen, thereby squeezing what is left for them to live on (see the section on coffee global value chain for more details).

As pointed out by Daviron and Ponte (2005) a “coffee paradox” emerges, characterized by decreasing and unstable prices to farmers on the one side and increasing consumer prices on the other side: the value of coffee for consumers over the last 3 years is not so much linked to the green coffee price, but to the ways of combining different coffees in blends, roasting and marketing, and selling them in bars and coffee shops.<sup>363</sup>

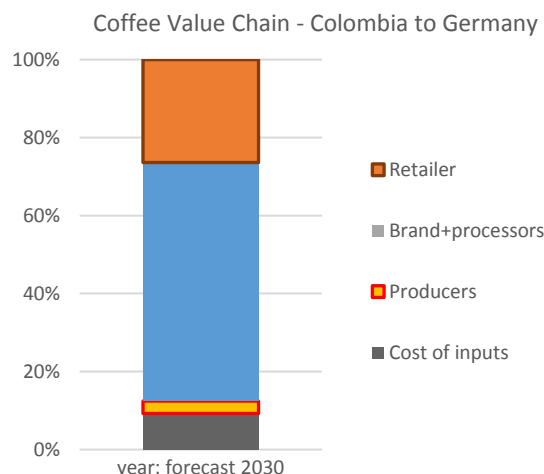
### Projections in 2030 of the value breakdown in a “Business as Usual” scenario

Based on the previous estimates, we performed a projection of the coffee value breakdown in the year 2030 in a “Business as Usual” scenario:

- producer prices, wage levels and costs of inputs in Colombia are based on the latest projections of the World Bank in 2030 (for coffee FOB prices, fuel and fertilisers' prices)
- price trends at the supermarkets' and roasters' levels have been extrapolated based on the last 15 years and using a linear regression (price trends seem to be closely related to market concentration which has been continuously growing for the past 20 years with no sign of trend reversal).

The results are as follows:

**Fig. 89 Value breakdown of coffee (forecast 2030)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports

According to these estimates, the share of value captured by German retailers could be reduced to 26% because of the increasing share of value accruing to brands, roasters and traders. At the beginning of the chain, producers could be left with 3% of the total value instead of 7% today. In a 'business as usual scenario', this pressure on prices is likely to accelerate further the difficulties of small coffee growers and the disappearance of the smallest ones.

### Ability of small farmers to earn a living income and levers for change

In order to cover the costs of production and ensure that both workers and small farmers can earn a living wage, the share of value for farmers in Colombia should be increased from 0.9 USD/kg currently to 1.27 USD/kg (see the section on coffee global value chain for more details). This corresponds to a mark-up of less than 0.37 USD/kg, which only represents 2.5% of the end consumer price of coffee which is 14.00 EUR/kg (15.53 USD/kg).

This increase does not need to be passed on to consumers: according to our estimates, the German retailers have increased their share of value from 5.00 USD per kg in 2011 to 7.50 USD per kg in 2015. This increase which happened over the last 5 years is more than enough to cover the payment of a living wage to coffee farmers and workers in Colombia.

Retailers appear to have the means to address the unsustainability of the Colombian coffee chain, and have started to do so through selling Fair trade and organic coffee. However, they would need to generalize their commitments and take on their responsibility to ensure that the coffee they sell is not produced at the cost of the living conditions of producers and workers, as well as the environment. In the case of Colombia, they could promote the establishment of a minimum support price for farmers and the increase of the minimum wage for workers – which are effective tools to secure living income in the sector – by leaving a sufficient share of the value in the producing country so that the costs of sustainable production can be covered. <sup>364</sup>

# Tea

## Overview of the sector in Germany

Total German tea consumption amounted to 19,000 tonnes in 2014, accounting for almost 18.7 billion cups of tea. The German market only represents 0.4% of total global tea consumption (5 million tonnes in 2014), increasing at an annual average rate of 1.1% in volume. Black tea remains the most popular type of tea in Germany, accounting for 71% of consumption in 2014. Most black tea is sold in the north of Germany as Ostfriesentee (East Frisian tea). In comparison, the share of green tea increased from 24.5% in 2013 to 29% in 2014.<sup>365</sup>

More German consumers are replacing their cup of coffee with a cup of tea, as a healthy addition to their lifestyle, especially green, herbal, rooibos and fruit teas. The growing demand for high quality leads to an increasing popularity of speciality tea among German consumers. Quality standards for tea are extremely high, resulting in a premiumisation of the tea market. The Ostfriesische Tee Gesellschaft (OTC) and Teekanne are the leading tea companies in Germany. Together, they represent a market share of 41%. These companies sell most types of tea and their products are sold by all larger retailers. Other important German players are Bünting Teehandelshaus and Thiele & Freese.<sup>366</sup>

Germany is the largest re-exporter (approx. 26,000 tonnes in 2015) and second largest importer of tea in Europe (approx. 57,000 tonnes in 2015, growing at an annual rate of 1.1%), which illustrates the importance of the country as a trade hub. Germany has two large seaports that are important for tea trade: Hamburg (unofficially known as the "tea capital" of Europe and home to major tea trading companies) and Bremen.<sup>367</sup>

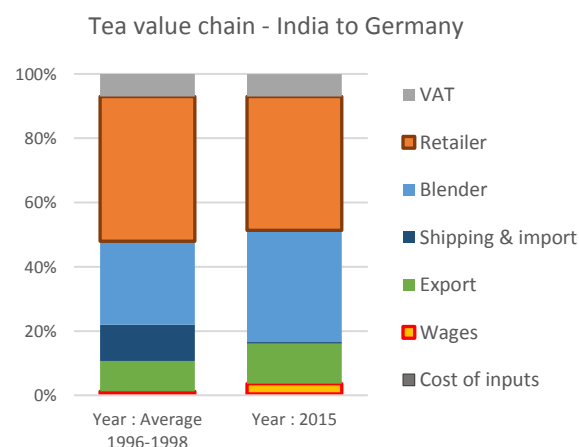
Germany's most important suppliers of conventional tea are China (26%), India (23%), and Sri Lanka (15%).

For an overview of the sector, the structure of the chain and its evolution, see section 3 on the tea global value chain.

## Comparison of the value breakdown in the 1990's and in 2015

Our estimations of value breakdown (expressed in nominal currency so as to avoid potential distortions linked to correction for inflation) are as follows:

**Fig. 90 Value breakdown of tea produced in India (average 1996-1998 and 2015)**



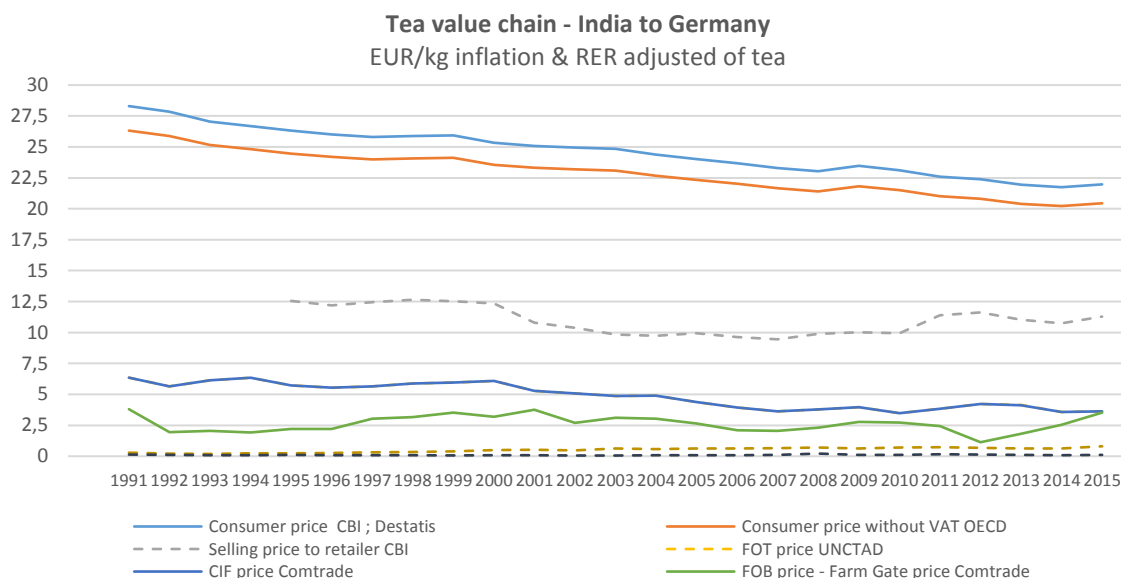
Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

As illustrated above, the share of value retained by retailers is the largest and has tended to decline since 1996 from 45% down to 42%. In comparison, the share of value of brands/blenders is the 2<sup>nd</sup> largest and has significantly increased from 26% up to 35%, showing their growing influence over the chain. The value remaining in India has also increased significantly from 10.7% to 16%.

To investigate further this situation, we have analysed the value evolution of the tea producer prices and wages, export FOB prices and costs of production since the early 1990s. The results for the main destinations of Indian tea are provided below.

### Analysis of the value breakdown

**Fig. 91 Value breakdown of tea produced in India (1991-2015)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

On the consumer side, taking into account the evolution of costs of living in Germany, the diagram illustrates that the consumer prices have steadily and strongly decreased by more than 20% since 1991. Retailers appear to have “cushioned” the evolution of the selling price of tea by brands and blenders.

In the middle of the chain, the tea blenders appear to have followed the trend of CIF import prices until 2010 and increased their share of value significantly since then.

In India, the export prices have dropped significantly in the beginning of the 1990s, generating pressure on plantations with low productivity and on the workers’ wages. Prices recovered slowly until the early 2000s, then declined again until an all-time low in 2012 which has once again exerted a dramatic pressure on tea plantations and workers. The short recovery over the last 3 years might be a positive sign for them. However, the strong disconnection between export FOB prices and CIF import prices reflect the power concentration in the hands of brokers and traders who capture most of the value in India (see the section on tea global value chain for more details).

### Projections in 2030 of the value breakdown in a “Business as Usual” scenario

Based on the previous estimates, we performed a projection of the tea value breakdown in the year 2030 in a “Business as Usual” scenario:

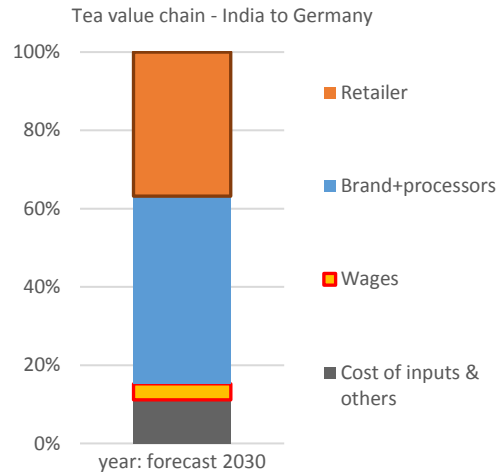
- producer prices, wage levels and costs of inputs in India are based on the latest projections of the World Bank in 2030 (for tea FOB prices, fuel and fertilisers’ prices)



- price trends at the supermarkets' and blenders' levels have been extrapolated based on the last 15 years and using a linear regression (price trends seem to be closely related to market concentration which has been continuously growing for the past 20 years with no sign of trend reversal).

The results are as follows:

**Fig. 92 Value breakdown of tea (forecast 2030)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

According to these estimates, the share of value captured by retailers could be reduced to 37% because of the increasing share of value accruing to brands, blenders and traders which could become the largest at 48%. At the beginning of the chain, workers could be left with 4% of the total value. In a 'business as usual scenario', this pressure on prices is likely to continue affecting the wages and labour conditions of the tea workers, as well as the disappearance of the lowest productive plantations.

### Ability of workers to earn a living wage and levers for change

In order to cover the costs of production and ensure that workers can earn a living wage, the share of value for workers in India should be increased from 0.78 USD/kg currently to 2.29 USD/kg (see the section on tea global value chain for more details). This corresponds to a mark-up of 1.51 USD/kg, which only represents 6% of the end consumer price of tea which is 21.98 EUR/kg (24.38 USD/kg).

This increase does not need to be passed on to consumers: according to our estimates, the blenders have increased their share of value from 6.40 USD per kg in 2004 to 8.50 USD per kg in 2015. This increase which happened over the last 10 years is more than enough to cover the payment of a living wage for tea workers in India.

Retailers appear to have the means to address the unsustainability of the Indian tea chain, and have started to do so through selling Fair trade and organic tea. However, they would need to generalize their commitments and take on their responsibility to ensure that the tea they sell is not produced at the cost of the living conditions of workers, as well as the environment. In the case of India, they could promote the rise of the minimum wage for workers to ensure it covers the costs basic needs of their families – which is an effective tool to secure living income in the sector – by leaving a sufficient share of the value in the producing country so that the costs of sustainable production can be covered.<sup>368</sup>

# Cocoa

## Overview of the sector in Germany

Germans spend about 81 EUR per capita on chocolate. By comparison, consumers in Switzerland spend the most on chocolate in Europe, with 211 EUR per capita. Bars and tablets are the most commonly consumed chocolate products in the country. Demand for premium, higher-quality dark chocolates is growing due to the attributed health benefits of chocolates with higher cocoa content.<sup>369</sup>

Supermarkets and convenience stores are the most important sales channels for chocolate in Germany, representing 45% and 31% of all sales respectively. Ferrero is the leading chocolate brand in Germany, with a market share of around 21%. Together with Mars and Mondelēz they represent around 45% of the market. Other important chocolate brands in Germany are Nestlé, Lindt, Stollwerck and Ritter Sport. Vivani, Rapunzel and Schell.<sup>370</sup>

Germany is the leading chocolate-producing country in Europe, ahead of the United Kingdom (according to the German Trade & Investment Agency, the production value of chocolate products was valued at around 5.5 billion EUR in 2013). There are about 233 chocolate producers in Germany, alongside hundreds of imported brands. Germany is the largest chocolate exporter in the world with exports reaching 823,000 tonnes in 2015. These export volumes are largely due to the presence of large chocolate manufacturers such as Ferrero, Mars and Mondelēz within the country.<sup>371</sup>

Germany is also the world's 4th-largest grinder, behind Côte d'Ivoire, the Netherlands and the USA. The large grinding industry in Germany can be attributed to the presence of major multinational grinders in the country (for example, Cargill, ADM and Barry Callebaut), most of which are located near Hamburg (Germany's largest port). Nevertheless, Germany's grinding activities are currently slightly decreasing due to the competition with the countries of origin, such as Côte d'Ivoire.<sup>372</sup>

With a market share of 26%, Germany is the second-largest importer of cocoa beans in Europe after the Netherlands (37%). Cocoa bean imports amounted to more than 397,000 tonnes in 2015, with a value exceeding 1.1 billion EUR. Hamburg is by far the most important port for cocoa beans in Germany and ranks third in Europe.<sup>373</sup>

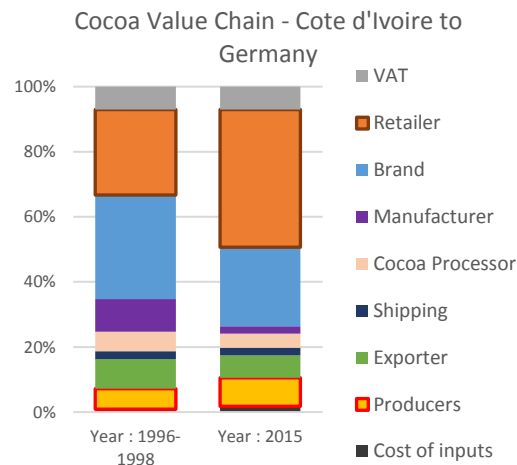
Germany's most important suppliers of conventional cocoa beans are Cote d'Ivoire (54%), Ecuador (21%), and Ghana (14%).

For an overview of the sector, the structure of the chain and its evolution, see section 3 on the cocoa global value chain.

## Comparison of the value breakdown in the 1990's and in 2015

Our estimations of value breakdown (expressed in nominal currency so as to avoid potential distortions linked to correction for inflation) are as follows:

**Fig. 93 Value breakdown of a 70% dark chocolate bar made from cocoa produced in Cote d'Ivoire (average 1996-1998 & 2015)**



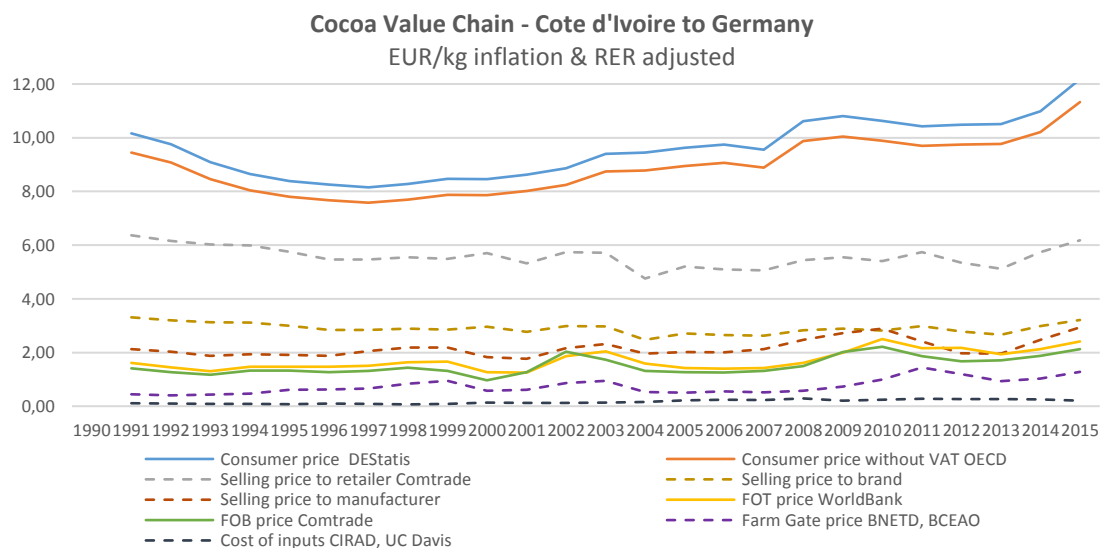
Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

As illustrated above, the share of value retained by retailers is the largest and has increased very significantly from 26% up to 42%, showing their growing influence over the chain. In contrast, the share of the chocolate brands, the 2<sup>nd</sup> largest, has declined from 32% down to 24%. The value remaining in Cote d'Ivoire has globally stagnated at 16%-17%.

To investigate further this situation, we have analysed the value evolution of the cocoa producer prices and wages, export FOB prices and costs of production since the early 1990s. The results for the main destinations of Ivorian cocoa are provided below.

**Analysis of the value breakdown**

**Fig. 94 Value breakdown of a 70% dark chocolate bar made from cocoa produced in Cote d'Ivoire (1991-2015)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

On the consumer side, taking into account the evolution of costs of living in Germany, the diagram illustrates that the consumer prices have steadily and strongly increased by more than 40% since 1993. Retailers appear to have substantially increased their share of the total value, especially since 2003.

In the middle of the chain, the chocolate brands (selling price to retailer) appear to have followed the trend of CIF import prices until recently and increased their share of value over the last 2 years. Upstream, the selling price to brands and manufacturers demonstrates that margins remain slim for chocolate makers and cocoa grinders, obliging them to boost volumes of cocoa in order to keep their profitability (see section 3 on the cocoa global value chain for more details).

In Cote d'Ivoire, the producer prices have dropped significantly in the beginning of the 1990s, and during the period 2003-2009, strongly affecting the small cocoa growers which couldn't make ends meet. Prices recovered slowly until 2016 thanks to the re-establishment of a minimum support price for cocoa and its significant increase year after year. However, this price was cut by more than 30% early 2017 because of the sharp fall of cocoa price on world's markets, plunging farmers again far below the poverty line (see the section on cocoa global value chain for more details).

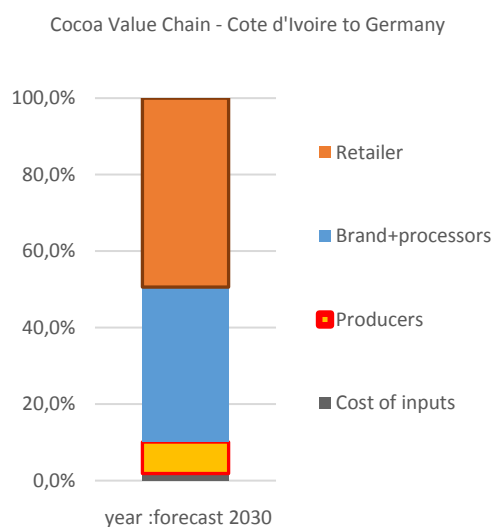
### Projections in 2030 of the value breakdown in a “Business as Usual” scenario

Based on the previous estimates, we performed a projection of the cocoa value breakdown in the year 2030 in a “Business as Usual” scenario:

- producer prices, wage levels and costs of inputs in Cote d'Ivoire are based on the latest projections of the World Bank in 2030 (for cocoa FOB prices, fuel and fertilisers' prices)
- price trends at the supermarkets' and brands' levels have been extrapolated based on the last 15 years and using a linear regression (price trends seem to be closely related to market concentration which has been continuously growing for the past 20 years with no sign of trend reversal).

The results are as follows:

**Fig. 95 Value breakdown of cocoa (forecast 2030)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

According to these estimates, the share of value captured by retailers could be further increased up to 49% because of their increasing influence on the chain due to their position of major selling channel and the development of private labels. As a result, the value accruing to brands, processors and traders could be reduced at 40.5%. At the beginning of the chain, small cocoa growers could be left with less than 8% of the total value. In a 'business as usual scenario', this pressure on prices is likely to continue affecting the difficult living conditions of cocoa smallholders and encourage deforestation, one of the main ways for producers to maintain productivity and profitability.

### **Ability of small farmers to earn a living income and levers for change**

In order to cover the costs of production and ensure that cocoa farmers can earn a living income, the share of value for farmers in Cote d'Ivoire should be increased from 1.18 USD/kg to 1.60 USD/kg (see the section on cocoa global value chain for more details). This corresponds to very limited mark-up of 0.42 USD/kg, which only represents 3% of the end consumer price of chocolate which is 12.18 EUR/kg (13.51 USD/kg).

This increase does not need to be passed on to consumers: according to our estimates, the retailers have increased their share of value from 3.70 USD per kg in 2003 to 5.70 USD per kg in 2015. This increase which happened over the last 10 years is more than enough to cover the payment of a living wage for cocoa farmers in Cote d'Ivoire.

Retailers appear to have the means to address the unsustainability of the Ivorian cocoa chain, and have started to do so through selling Fair trade, sustainable and organic cocoa. However, they would need to generalize their commitments and take on their responsibility to ensure that the chocolate they sell is not produced at the cost of the living conditions of cocoa farmers, as well as the environment. In particular, this would require a stronger commitment of chocolate brands to offer less confectionery products where cocoa is just a commoditized ingredient, and more chocolate products that value the origin and quality of cocoa, hence the work of farmers paid at a fair price, enabling them to cover their costs of production and the living needs of their families.<sup>374</sup>

## **Rice**

### **Overview of the sector in Germany**

Europe is one of the biggest rice consumption markets, with an increasing demand in specialty rice. Most rice, including basmati and jasmine rice, is sold through supermarkets. and arrives in North-Western Europe in bulk through importers that are specialised in sourcing, milling, trading and/or managing local brands. Large rice brand companies that dominate in European retail are: Ebro Foods, Westmill, Tilda and Marbour.<sup>375</sup>

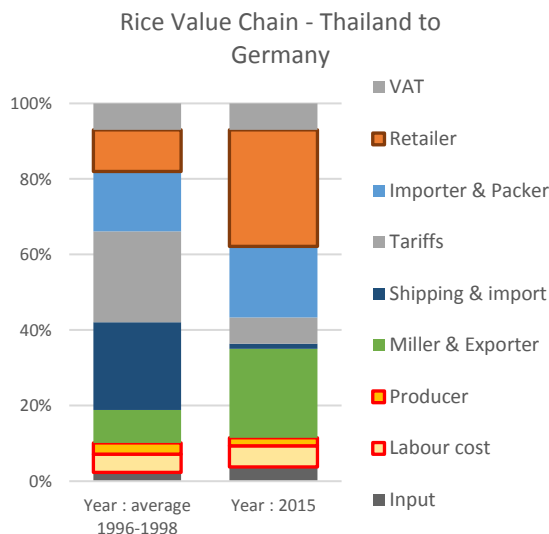
Germany's most important suppliers of conventional rice are Italy (30%), Cambodia (11%), India (11%) and Thailand (9%).

For an overview of the sector, the structure of the chain and its evolution, see section 3 on the rice global value chain.

### **Comparison of the value breakdown in the 1990's and in 2015**

Our estimations of value breakdown (expressed in nominal currency so as to avoid potential distortions linked to correction for inflation) are as follows:

**Fig. 96 Value breakdown of rice produced in Thailand (average 1996-1998 & 2015)**



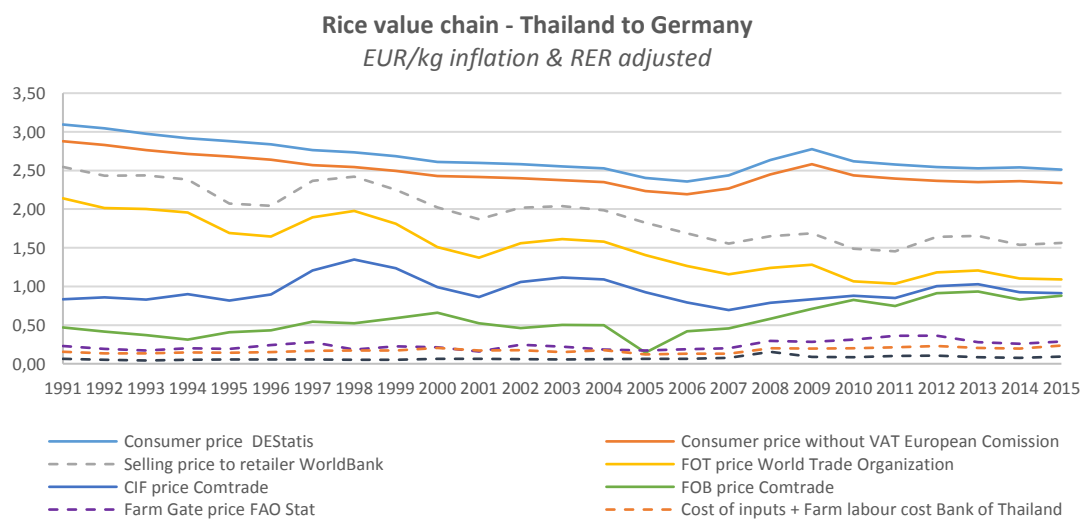
Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

As illustrated above, the share of value retained by retailers is the largest and has increased very significantly from 11% up to 31%, showing their growing influence over the chain, in particular through the growing success of their private label. The share of the packers and brands has also grown, albeit less significantly, from 16% up to 19%. The value remaining in Thailand has reached 35%, mainly captured by millers and exporters which share of value has increased from 9% to 23.5%, the 2<sup>nd</sup> largest in the chain.

To investigate further this situation, we have analysed the value evolution of the rice producer prices and wages, export FOB prices and costs of production since the early 1990s. The results for the main destinations of Thai rice are provided below.

**Analysis of the value breakdown**

**Fig. 97 Value breakdown of rice produced in Thailand (1991-2015)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

On the consumer side, taking into account the evolution of costs of living in Germany, the diagram illustrates that the consumer prices have steadily decreased by more than 18% since 1991. Retailers appear to have “cushioned” the evolution of rice prices further up in the chain (i.e. limiting increases in case of peaks, but also remaining stable in case of drops), and started to increase substantially their share of the total value since 2006.

In the middle of the chain, the packers and brands (selling price to retailer) seem to have followed the trend of CIF import prices over the same period, and progressively increased their share of value.

In Thailand, the share of value of millers and exporters has grown very significantly since 2008, demonstrating their growing influence on the chain at the detriment of small rice growers. The situation is all the more difficult for producers than the costs of farm inputs have doubled since the early 1990s and the support price system managed by the government has been suspended in 2014, triggering a decline in producer prices since then (see section 3 on the rice global value chain for more details).

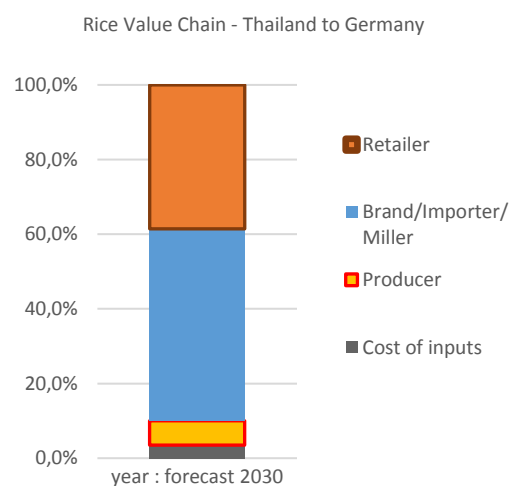
### Projections in 2030 of the value breakdown in a “Business as Usual” scenario

Based on the previous estimates, we performed a projection of the rice value breakdown in the year 2030 in a “Business as Usual” scenario:

- producer prices, wage levels and costs of inputs in Thailand are based on the latest projections of the World Bank in 2030 (for rice FOB prices, fuel and fertilisers’ prices)
- price trends at the supermarkets’ and brands’ levels have been extrapolated based on the last 15 years and using a linear regression (price trends seem to be closely related to market concentration which has been continuously growing for the past 20 years with no sign of trend reversal).

The results are as follows:

**Fig. 98 Value breakdown of rice (forecast 2030)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

According to these estimates, the share of value captured by retailers could reach 39% because of their increasing influence on the chain due to their position of major selling channel and the development of private labels. As a result, the value accruing to brands, processors and traders

could be reduced at 51.5%. At the beginning of the chain, small rice growers could be left with less than 6% of the total value. In a 'business as usual scenario', this pressure on prices is likely to continue affecting the difficult living conditions of rice smallholders and accelerate the disappearance of the smallest ones.

### **Ability of small farmers to earn a living income and levers for change**

In order to cover the costs of production and ensure that workers can earn a living wage, the share of value for farmers in Thailand should be increased from 0.22 USD/kg to 0.31 USD/kg (see the section on rice global value chain for more details). This corresponds to very limited mark-up of 0.09 USD/kg, which only represents 4% of the end consumer price of rice which is 2.51 EUR/kg (2.79 USD/kg).

This increase does not need to be passed on to consumers: according to our estimates, the retailers have substantially increased their share of value from 0.54 USD per kg in 2005 to 0.86 USD per kg in 2015. This increase which happened over the last 10 years is more than enough to cover the payment of a living wage for rice farmers in Thailand.

Retailers appear to have the means to address the unsustainability of the Thai rice chain, and have started to do so through selling Fair trade and organic rice. However, they would need to generalize their commitments and take on their responsibility to ensure that the rice they sell is not produced at the cost of the living conditions of rice farmers and workers. In Thailand, they could promote the re-establishment of a minimum support price for farmers and the increase of the minimum wage for workers – which are effective tools to secure living income in the sector – by leaving a sufficient share of the value in the producing country so that the costs of sustainable production can be covered.

## **Shrimp**

### **Overview of the sector in Germany**

In Europe, more and more consumers are buying shrimps at the supermarket for preparation at home, instead of eating them at restaurants, which benefits the White-leg shrimp which share on the retail market is on the rise as a result of price-oriented consumers. The general trend in Europe is to shorten the supply chain and retailers and food service companies are increasingly buying finished goods directly from the source country. Freight. Frozen mainly enter in Europe by ship through Rotterdam (the Netherlands), Antwerp (Belgium), Hamburg or Bremen (Germany), and Marseille (France). The top 7 importers, i.e. Spain, France, Italy, the UK, Belgium, Germany and the Netherlands, together account for nearly 90% of the total value of frozen shrimp and prawn import value in Europe (3.3 billion EUR per year).<sup>376</sup>

Germany's most important suppliers of shrimps are Viet Nam (26%), Thailand (13%) and Denmark (7%).

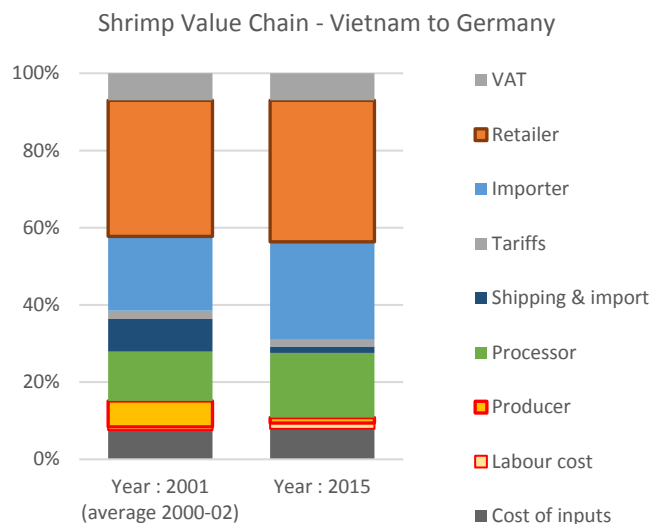
For an overview of the sector, the structure of the chain and its evolution, see section 3 on the shrimp global value chain.

### **Comparison of the value breakdown in the 1990's and in 2015**

Our estimations of value breakdown (expressed in nominal currency so as to avoid potential distortions linked to correction for inflation) are as follows:



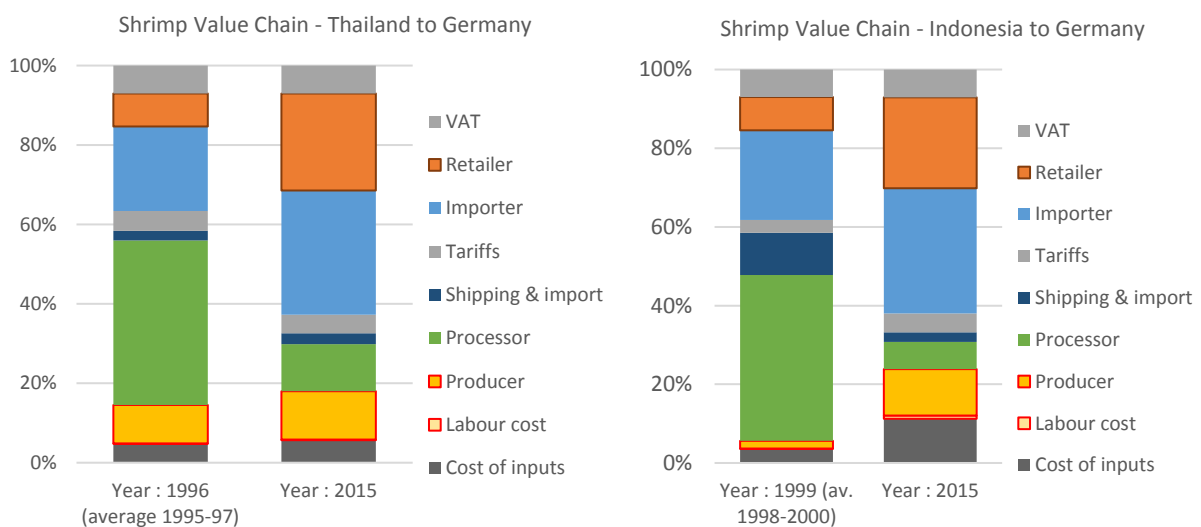
**Fig. 99 Value breakdown of shrimp produced in Viet Nam (average 2000-2002 & 2015)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports

As illustrated above, the share of value retained by retailers is the largest and has increased from 27% up to 36.5%, showing their influence over the chain. In contrast, the share of the shrimp importers/wholesalers has slightly declined from 27% down to 25% while the share of processors in Viet Nam has increased from 13% to 16%. Most importantly, the share of shrimp farmers has shrunk from 6.5% to 1.5%, as they have had to face the rise of input costs without being able to pass on this increase onto processors, because of their weak bargaining position.

**Fig. 100 Value breakdown of shrimp produced in Thailand and Indonesia**



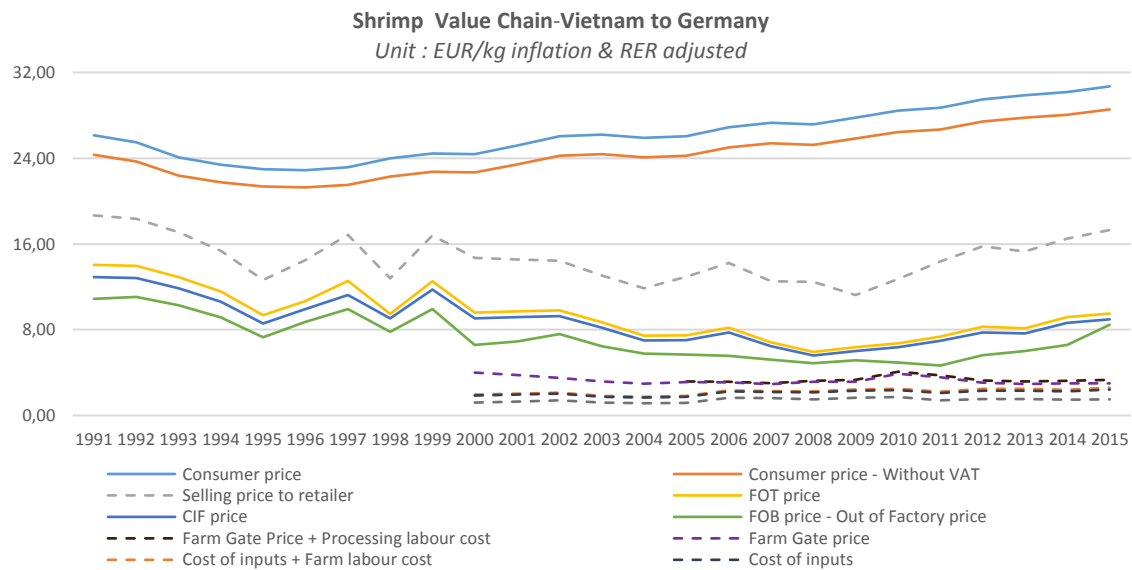
Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports

Our estimates for shrimps from Thailand and Indonesia are similar and partly distinct from the previous value breakdown: retailers appear to be the main winners of the evolution of value breakdown over the last 20 years, having increased their share to 22-23%, thereby approaching the share of value achieved on shrimps from Viet Nam. Importers have also increased their share to more than 30% in the case of shrimps from Thailand as well as Indonesia, and the processors have been apparently under pressure, reducing their share markedly from more than 40% to 12% and 7% respectively. Eventually, producers have apparently increased their share, but this is linked to the recent development of corporate intensive aquaculture at the expense of small farmers (especially in the case of Indonesia). To investigate further this

situation, we have analysed the value evolution of the shrimp production prices and wages, export FOB prices and costs of production since the early 1990s. The results for the Vietnamese, Thai and Indonesian shrimp value chains are provided below.

### Analysis of the value breakdown

**Fig. 101 Value breakdown of shrimp produced in Viet Nam (1991-2015)**



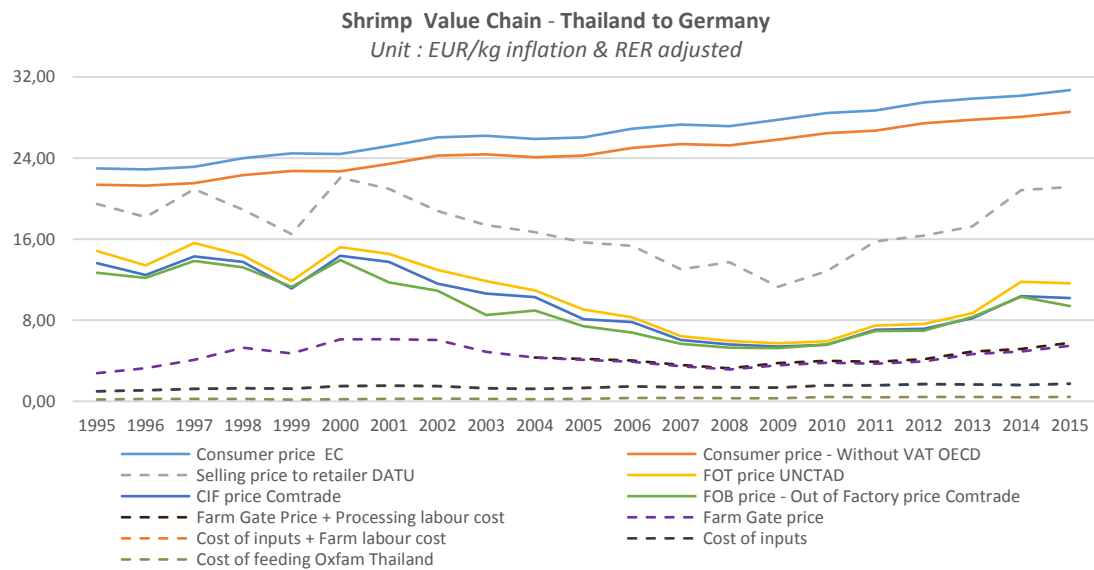
Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

On the consumer side, taking into account the evolution of costs of living in Germany, the diagram illustrates that the consumer prices have decreased by approx. 10% between 1991 and 1996, before steadily increasing by 32% until 2015. Retailers appear to have firmly increased their control over the total value since 1999.

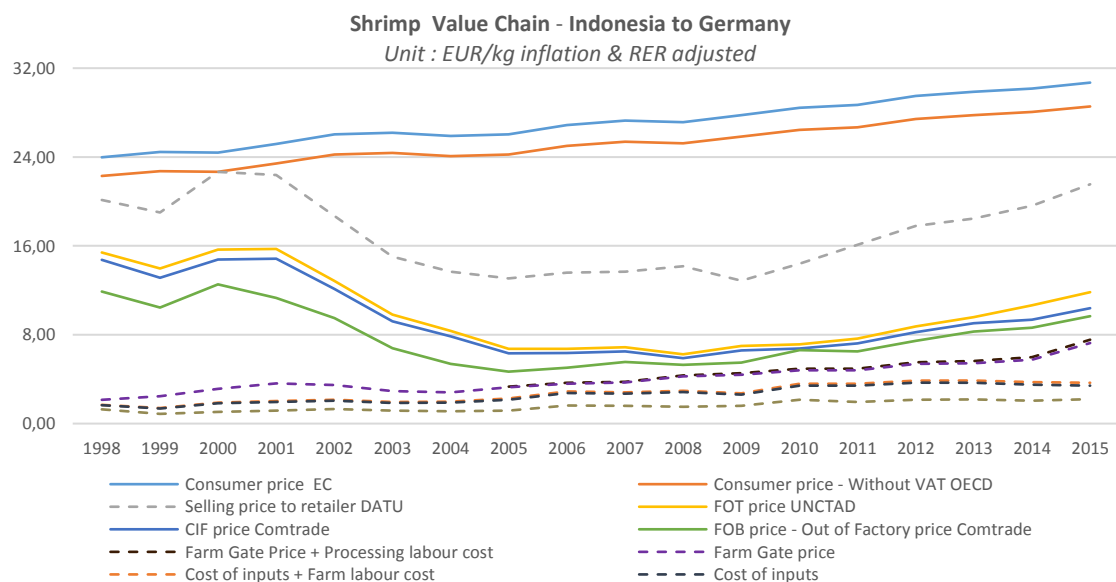
In the middle of the chain, the brands/wholesalers (selling price to retailers) have amplified the trends in CIF import prices and competed with retailers to maintain their margin.

In Viet Nam, the processors (out of factory price) appear to have faced increasing costs (hence decreasing margins) up until 2011, then were apparently able to increase their share of value thanks to their vertically integrated systems. However, their slim margins most probably oblige them to boost production volumes in order to keep their profitability. Upstream, the small shrimp farmers are facing the largest pressure with a strong decrease of their share of value since 2000 because they got squeezed between the increase of input prices and the pressure from processors/manufacturers (see the section on shrimp global value chain for more details).

**Fig. 102 Value breakdown of shrimp produced in Thailand (1995-2015)**



**Fig. 103 Value breakdown of shrimp produced in Indonesia (1991-2015)**



As illustrated in the two diagrams above, the evolution of value breakdown for shrimps sourced from Thailand and Indonesia follow a similar pattern as for Vietnam with an important share for retailers and importers, and an increasing pressure on workers in processing factories.

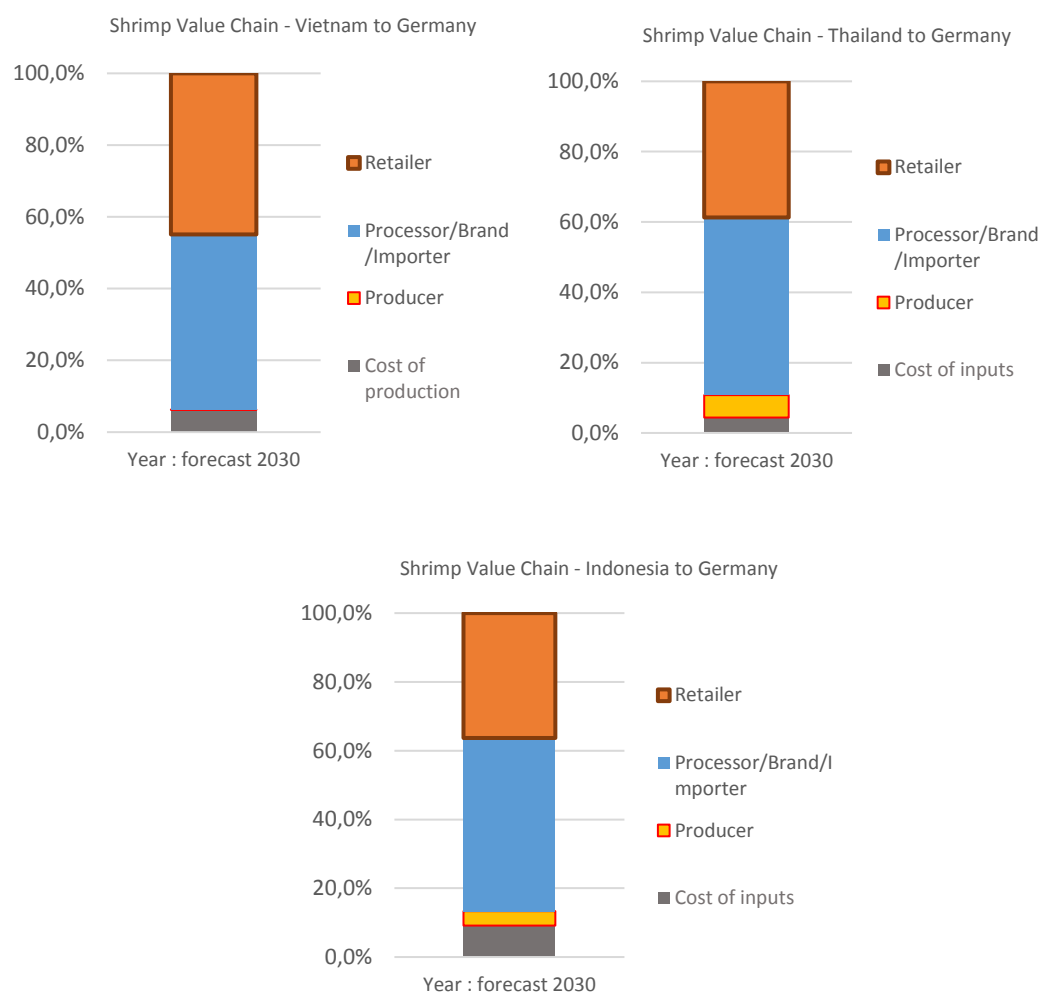
**Projections in 2030 of the value breakdown in a “Business as Usual” scenario**

Based on the previous estimates, we performed a projection of the shrimp value breakdown in the year 2030 in a “Business as Usual” scenario:

- producer prices, wage levels and costs of inputs are based on the latest projections of the World Bank in 2030 (for shrimp FOB price, fuel and fertilisers’ prices)
- price trends at the supermarkets’, brands’ and processors’ levels have been extrapolated based on the last 15 years and using a linear regression (price trends seem to be closely related to market concentration which has been continuously growing for the past 20 years with no sign of trend reversal).

The results are as follows:

**Fig. 104 Value breakdown of shrimp (forecast 2030)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

According to these estimates, the share of value captured by retailers could further increase to 36-45% because of their increasing influence on the chain due to their position of major selling channel and the development of private labels. As a result, the value accruing to brands, processors and traders could be reduced at 49-50%. At the beginning of the chain, small farmers could be left with less than 1-5% of the total value. In a 'business as usual scenario', this pressure on prices is likely to continue affecting the difficult living conditions of shrimp small farmers in Viet Nam, Thailand and Indonesia and most of all workers in the processing shrimp industry.

#### **Ability of small farmers and workers to earn a living income/wage and levers for change**

In order to cover the costs of sustainable production, the share of value for farmers in Viet Nam, Thailand and Indonesia should be increased at least by 0.28 USD/kg (see the section on shrimp global value chain for more details), which only represents 1% of the end consumer price of shrimp which is 30.70 EUR /kg (34.06 USD/kg).

This increase does not need to be passed on to consumers: according to our estimates, the retailers have substantially increased their share of value from 8.20 USD per kg in 2002 to 12.50 USD per kg in 2015. This increase which happened over the last 15 years is more than enough to cover the living income of farmers and the payment of a living wage for workers.

Retailers and brands appear to have the means to address the unsustainability of the Vietnamese shrimp chain, and have started to make some voluntary commitments in this direction. However, they would need to generalize their engagement and take on their responsibility to ensure that the shrimp they sell is not produced at the cost of the living conditions of small farmers and workers in the chain. In particular, this would require increasing the minimum wage for workers (on vessels, as well as in farming and processing) to the living wage level, and allocating enough resources for controls on the ground as it is one of the main ways to ensure that they can achieve a sustainable livelihood. In addition, they could support the establishment of a guaranteed price for the small shrimp farmers together with environmental and social conditions to ensure the sustainability of production.<sup>377</sup>

## Canned tuna

### Overview of the sector in Germany

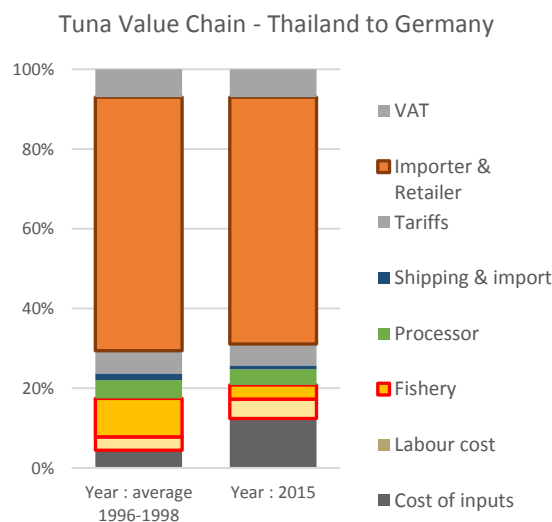
Yellowfin tuna is the most important tuna in terms of European consumption. In France and Spain, there is also a high preference for albacore tuna. Looking at consumption per capita in Europe, tuna only plays a small role, due to its relatively high price. From the overall per-capita fish and seafood consumption in Europe (22.6 kg), it is estimated that about 2.7 kg is tuna in various forms. Canned tuna represents the lion's share of that amount (2.2 kg), followed by fresh tuna (0.5 kg) and frozen tuna (0.10 kg). Most canned tuna is sold through retailers that control a large part of the market thanks to their private labels (up to 40% market share and more). Canned tuna enters Europe by ship through the ports of Rotterdam (the Netherlands), Antwerp (Belgium), Hamburg or Bremen (Germany), Vigo (Spain) and Marseille (France).<sup>378</sup>

For an overview of the sector, the structure of the chain and its evolution, see section 3 on the canned tuna global value chain.

### Comparison of the value breakdown in the 1990's and in 2015

Our estimations of value breakdown (expressed in nominal currency so as to avoid potential distortions linked to correction for inflation) are as follows:

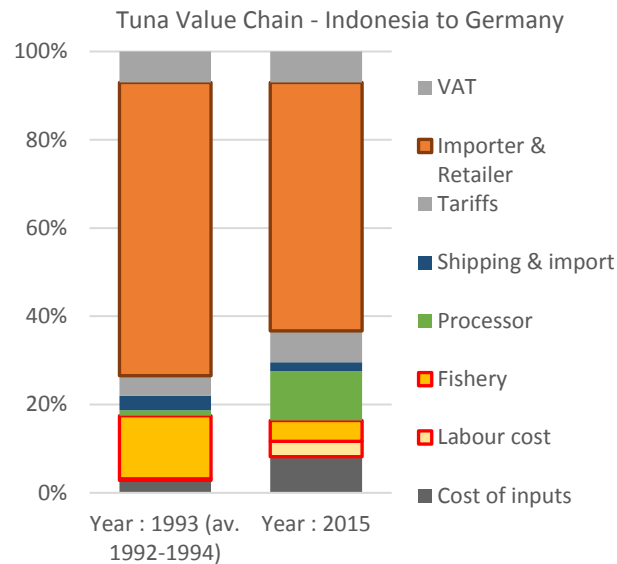
**Fig. 105 Value breakdown of canned tuna produced in Thailand (average 1996-1998 & 2015)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

As illustrated above, the share of value retained by retailers is by far the largest and has very slightly declined from 63% down to 62%, showing their large influence over the chain, especially through the dominance of their private labels. In contrast, the share of the manufacturers of canned tuna, has slightly declined from 4.5% down to 4%. Most importantly, the share of fisheries has shrunk from 10.5% to 1.5%, as they have had to face the sheer rise of fuel and operation costs without being able to pass on this increase onto processors, because of their weak bargaining position. This leaves only 1.5% on average for labour costs on vessels.

**Fig. 106 Value breakdown of canned tuna produced Indonesia**

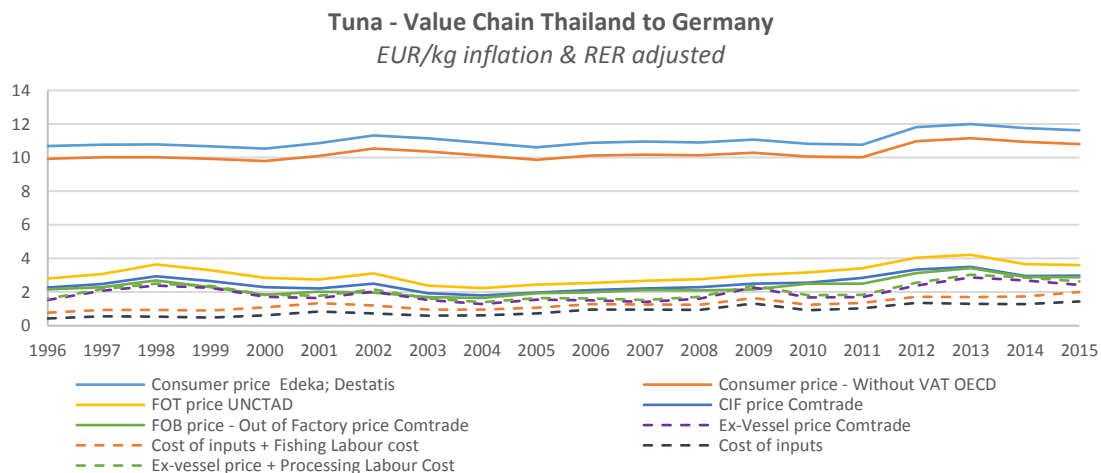


Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

Our estimates for canned tuna from Indonesia is quite similar from the previous value breakdown: retailers appear to retain their large influence over the chain, their share declining from 65% to 56% of the total value. Importers have increased their share from 4.5% to 7%, and the processors have apparently managed to increase theirs too from 3% to 11%. Eventually, fisheries appear to be under strong pressure, their share declining sharply from 14% to less than 5% because of the combined pressure of buyers' price pressure and increasing internal costs. To investigate further this situation, we have analysed the value evolution of the canned tuna production prices and wages, export FOB prices and costs of production since the early 1990s. The results for the main destinations of Thai and Indonesian canned tuna are provided below.

**Analysis of the value breakdown**

**Fig. 107 Value breakdown of canned tuna produced in Thailand (1996-2015)**

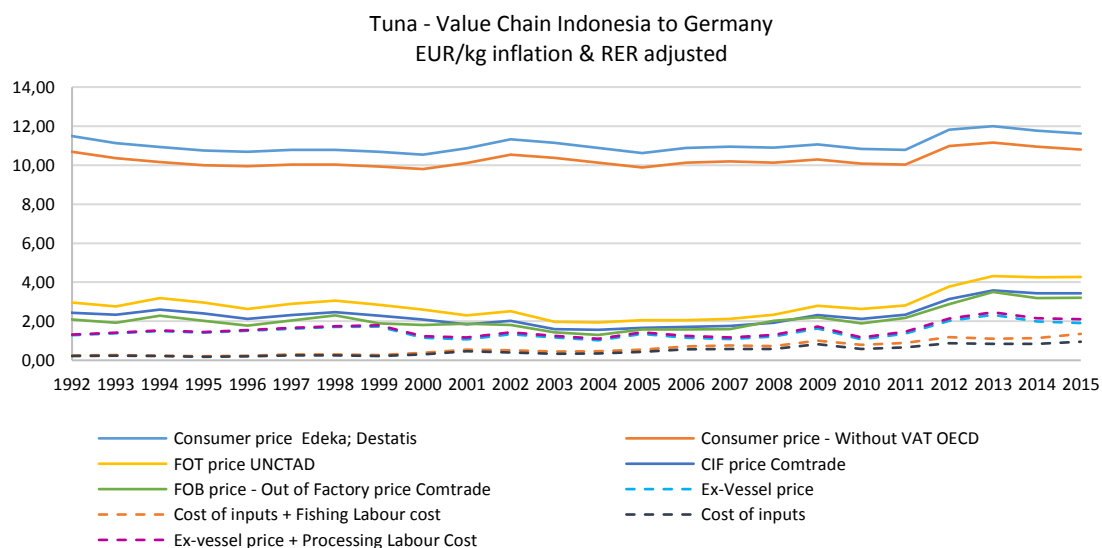


Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

On the consumer side, taking into account the evolution of costs of living in Germany, the diagram illustrates that the consumer prices have remained almost stable from 1996 to 2015, albeit for a small increase of 8% in 2011-2013. Retailers appear to have kept their strong control over the total value for the past 2 decades.

In Thailand, the manufacturers (out of factory price) appear to have followed the trend of CIF import prices and were able to maintain their share thanks to their vertically integrated systems. However, their slim margins most probably oblige them to boost production volumes in order to keep their profitability. Upstream, the fisheries are facing the largest pressure with a strong decrease of their share of value since 1998, albeit for a small and short recovery in 2013-2014 because they got squeezed between the strong increase of fuel prices and the pressure on price from processors/manufacturers. The pressure is passed onto the workers, the majority being migrant, and on the level of their wages (see the section on canned tuna global value chain for more details).

**Fig. 108 Value breakdown of canned tuna produced in Indonesia (1991-2015)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports

As illustrated in the diagram above, the evolution of value breakdown for canned tuna sourced from Indonesia follows a similar pattern as for Thailand with a dominant share for retailers, and an increasing pressure on fisheries, with significant potential impacts on the working conditions and wages of workers on tuna vessels.

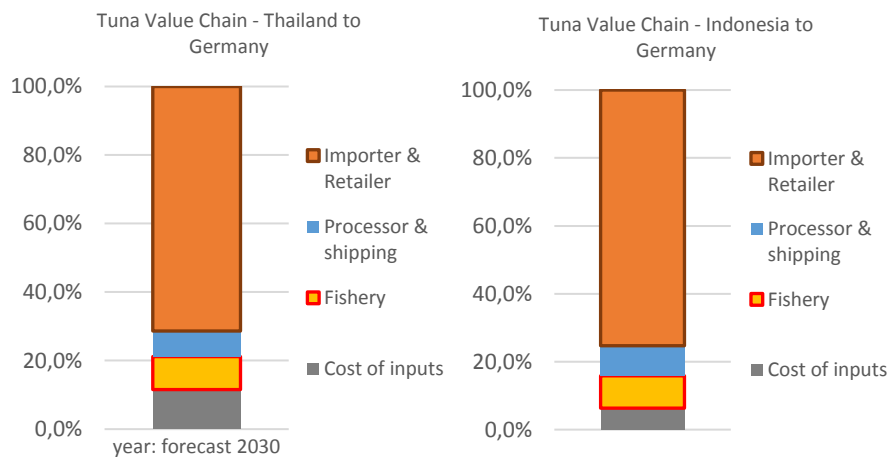
### Projections in 2030 of the value breakdown in a “Business as Usual” scenario

Based on the previous estimates, we performed a projection of the canned tuna value breakdown in the year 2030 in a “Business as Usual” scenario:

- producer prices, wage levels and costs of inputs are based on the latest projections of the World Bank in 2030 (for grain, fuel and fertilisers’ prices)
- price trends at the supermarkets’, brands’ and fisheries’ levels have been extrapolated based on the last 15 years and using a linear regression (price trends seem to be closely related to market concentration which has been continuously growing for the past 20 years with no sign of trend reversal).

The results are as follows:

**Fig. 109 Value breakdown of canned tuna (forecast 2030)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

According to these estimates, the share of value captured by retailers could be further increased up to 71% and more (for canned tuna produced in Thailand as well as Indonesia) because of their increasing influence on the chain due to their position of major selling channel and the development of private labels. As a result, the value accruing to brands, processors and traders could be reduced at 7.5%. At the beginning of the chain, fisheries could be left with less than 8% of the total value. In a ‘business as usual scenario’, this pressure on prices is likely to continue affecting the difficult living conditions of workers on Thai vessels as well as on the Indonesian fleet.

### Ability of workers to earn a living wage and levers for change

In order to cover the costs of canned tuna from Thailand and Indonesia, the share of value allocated for workers should be increased at least by 0.08 USD/kg (see the section on canned tuna global value chain for more details), which only represents 1% of the end consumer price of canned tuna which is 11.62 EUR/kg (12.89 USD/kg).

This increase does not need to be passed on to consumers: according to our estimates, the retailers have increased their share of value from 7.09 USD per kg in 2000 to 9.70 USD per kg in 2015. This increase which happened over the last 15 years is more than enough to cover the payment of a living wage for workers in Thai fisheries.



Retailers and brands appear to have the means to address the unsustainability of the Thai canned tuna chain, and have started to make some voluntary commitments in this direction. However, they would need to generalize their engagement and take on their responsibility to ensure that the canned tuna they sell is not produced at the cost of the living conditions of workers in the chain. In particular, this would require increasing the minimum wage for workers (on vessels, as well as in processing) to the living wage level, and allocating enough resources for controls on the ground as it is one of the main ways to ensure that both can achieve a sustainable livelihood.<sup>379</sup>

## Orange juice

### Overview of the sector in Germany

Germany is Europe’s leading fruit juice market and ranks second globally behind the USA. In per capita terms, Germany numbers third in Europe and fourth in the world. Germany’s fruit juice market is large and mature but has been in consistent decline since 2003, due to changes in consumer behaviour such as skipping breakfast, as well as raw material price hikes. The rate of decline has, however, decelerated strongly, staunchly by the very positive development of “Not From Concentrate” (NFC) and chilled juices on the back of the health and wellness trend. Value-added, Fair Trade, vegan and organic variants are also increasing penetration.<sup>380</sup>

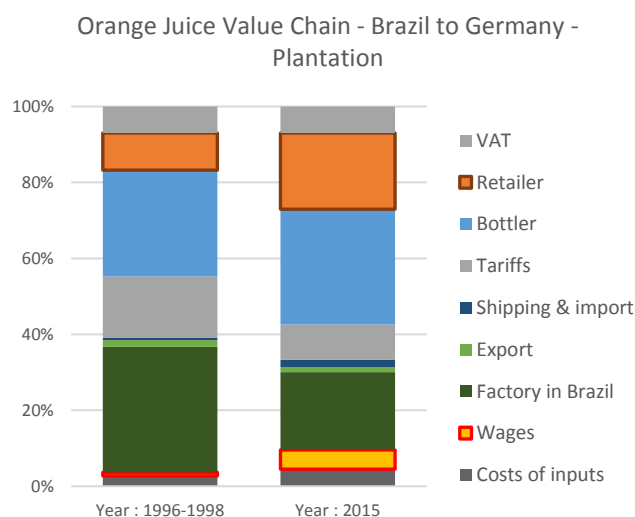
Germany’s most important suppliers of Frozen Concentrate Orange Juice (FCOJ) are Brazil (82%), Italy (3%) and Mexico (2%).

For an overview of the sector, the structure of the chain and its evolution, see section 3 on the orange juice global value chain.

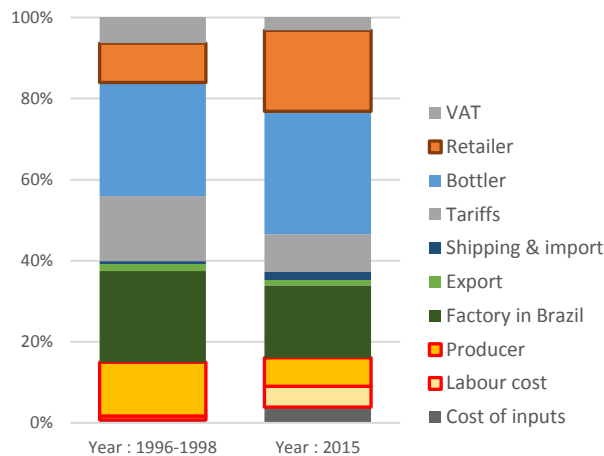
### Comparison of the value breakdown in the 1990’s and in 2015

Our estimations of value breakdown (expressed in nominal currency so as to avoid potential distortions linked to correction for inflation) are as follows:

**Fig. 110 Value breakdown of orange juice made from FCOJ produced in Brazil, supplied by plantations, and by small orange farmers (average 1996-1998 & 2015)**



Orange Juice Value Chain - Brazil to Germany  
- Small Farms



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

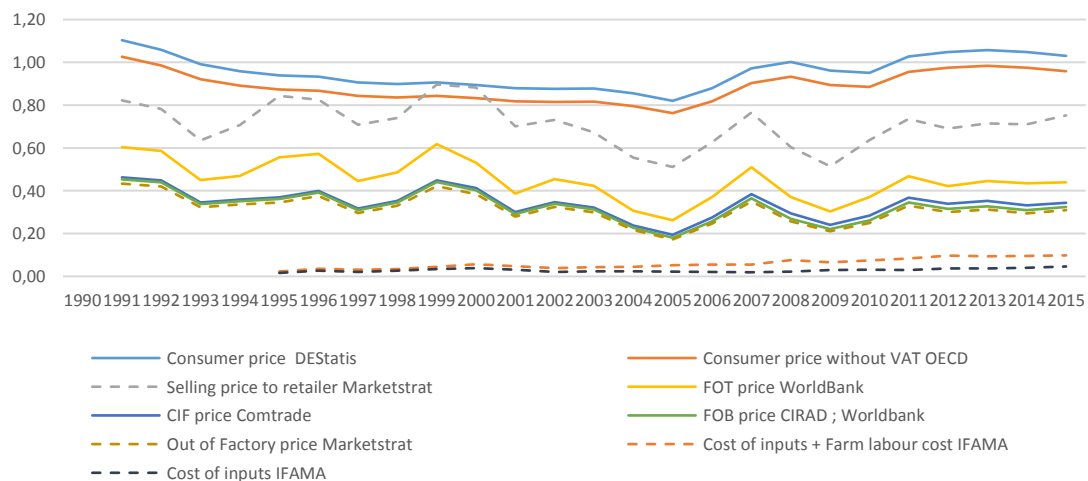
As illustrated above, the share of value retained by retailers is only the 2<sup>nd</sup> largest and has substantially increased from 9.5% up to 20%, showing their growing influence over the chain. The share of the bottlers has slightly increased too from 28% up to 30% whereas the share of factories in Brazil have dropped from 33% down to 20.5% when they source orange from their own plantations (and from 22.5% down to 18% when oranges are purchased to small farmers). Most importantly, the share of small farmers has shrunk from 13% to 7%, as they have had to face the rise of input and labour costs without being able to pass on this increase onto processors, because of their weak bargaining position.

To investigate further this situation, we have analysed the value evolution of the orange producer prices and wages, export FOB prices and costs of production since the early 1990s. The results for the main destinations of Brazilian FCOJ are provided below.

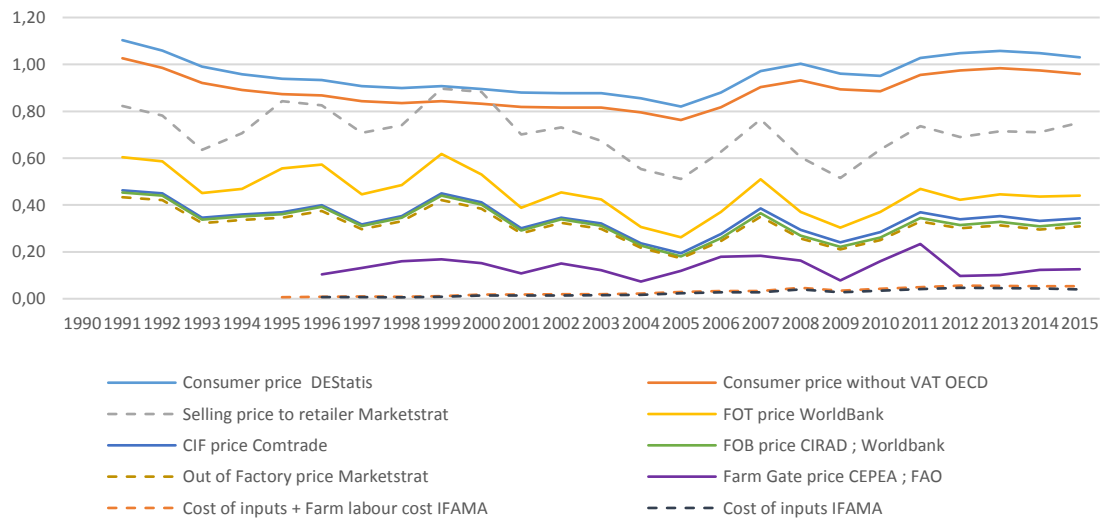
**Analysis of the value breakdown**

**Fig. 111 Value breakdown of orange juice made from FCOJ produced in Brazil, supplied by plantations, and by small orange farmers (1991-2015)**

Orange Juice Value Chain - Brazil to Germany - Plantation  
EUR/ I inflation & RER adjusted of juice



### Orange Juice Value Chain - Brazil to Germany - small growers EUR/I inflation & RER adjusted of juice



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

On the consumer side, taking into account the evolution of costs of living in Germany, the diagram illustrates that the consumer prices have steadily declined by approx. 18% between 1991 and 2005, before increasing by 20% until 2015. Most importantly, retailers appear to have “cushioned” the evolution of FCOJ prices further up in the chain (i.e. limiting increases in case of peaks, but also remaining stable in case of drops).

In the middle of the chain, the brands/bottlers (selling price to retailers) have amplified the trends in CIF import prices and competed with retailers to maintain their share of value.

In Brazil, the processors (out of factory price) appear to have faced increasing costs (hence decreasing margins) over the whole period and were unable to increase their share of value despite their vertically integrated systems, albeit when sourcing from small orange producers over the past 3 years thanks to falling producer prices. Their slim margins most probably oblige them to boost production volumes in order to keep their profitability and to put the largest pressure on small orange farmers who got squeezed between the increase of input prices and the pressure from processors (see the section on orange juice global value chain for more details).

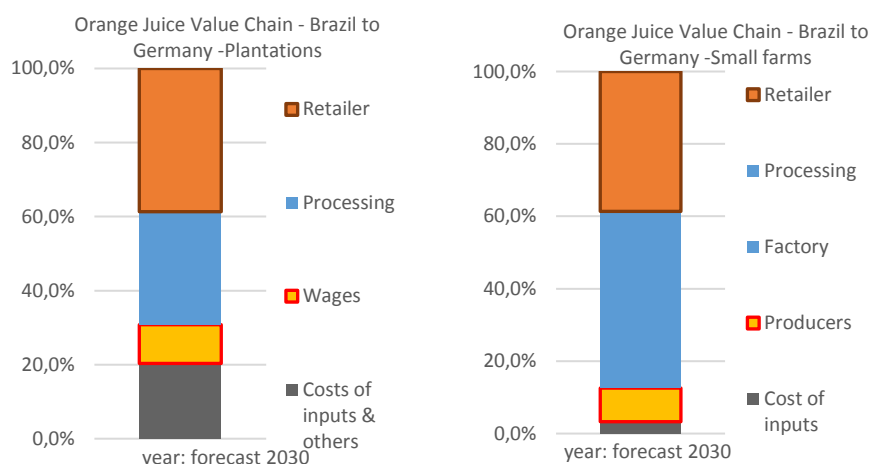
#### Projections in 2030 of the value breakdown in a “Business as Usual” scenario

Based on the previous estimates, we performed a projection of the orange juice value breakdown in the year 2030 in a “Business as Usual” scenario:

- producer prices, wage levels and costs of inputs in Brazil are based on the latest projections of the World Bank in 2030 (for fuel and fertilisers’ prices)
- price trends at the supermarkets’, brands’ and processors’ levels have been extrapolated based on the last 15 years and using a linear regression (price trends seem to be closely related to market concentration which has been continuously growing for the past 20 years with no sign of trend reversal).

The results are as follows:

**Fig. 112 Value breakdown of orange juice made from FCOJ produced in Brazil, supplied by plantations, and by small orange farmers (forecast 2030)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

According to these estimates, the share of value captured by retailers could further increase up to 38.5% because of their increasing influence on the chain due to their position of major selling channel and the development of private labels. In contrast, the share of value of brands/bottlers and importers could decrease down to 30.5% of the total value. At the beginning of the chain, small farmers and workers could be left with respectively less than 9% and 10% of the total value. In a 'business as usual scenario', this pressure on prices is likely to continue affecting the difficult living conditions of small orange growers and especially farm workers in Brazil.

**Ability of small farmers and workers to earn a living income/wage and levers for change**

In order to cover the costs of orange juice from Brazil, the share of value for small farmers or workers should be increased at least from an estimated 0.08 USD/kg up to 0.14 USD/kg (see the section on orange juice global value chain for more details). This corresponds to very limited mark-up of 0.06 USD/kg, which only represents 6% of the end consumer price of orange juice which is 1.03 EUR/L (1.14 USD/L).

This increase does not need to be passed on to consumers: according to our estimates, the brands/wholesalers have substantially increased their share of value from 0.19 USD per kg in 2007 to 0.35 USD per kg in 2014. This increase which happened over the last decade is enough to cover the living income of farmers and the payment of a living wage for workers.

Retailers and brands appear to have the means to address the unsustainability of the Brazilian orange juice chain. To do so, they would need to ensure that the orange juice they sell is not produced at the cost of the living conditions of small farmers and workers in the chain. In particular, this would require increasing the minimum wage for workers (in farming and processing) to the living wage level, and allocating enough resources for controls on the ground as it is one of the main ways to ensure that they can achieve a sustainable livelihood. In addition, they could support the establishment of a guaranteed price for the small orange growers enabling them to generate a living income, together with environmental and social conditions to ensure the sustainability of production. <sup>381</sup>

# Banana

## Overview of the sector in Germany

Germany consumes more fruit than any other country within the European Union, but the consumption per household is in a slight decline (like in several other European countries). The main fruit consumed in Germany (including imports and domestically grown) is apple (22%), followed by banana (13%) and orange (9%). Germany is the 6<sup>th</sup> largest European fruit producer and the biggest European importer of fresh fruits and vegetables with annual volumes reaching 5.5 million tons of fresh produce<sup>382</sup>.

The German market for bananas is one of the two biggest in Europe with the UK: its total size is estimated at more than 1 million tonnes (or 55 million large case equivalent) in 2013<sup>383</sup>.

German retailers place the greatest emphasis on the product's cosmetic appearance as the most important factors influencing consumption<sup>384</sup>. Their stringent safety requirements and certifications are imposed on all their suppliers, making them mandatory for the banana sector as a whole<sup>385</sup>. The banana weekly spot market is very limited (less than 5% of volumes) and German retailers purchase most of their bananas via annual tenders which are very competitive. They tend to multi-source and switch between suppliers, the main ones being the leading world banana traders Chiquita, Dole, Del Monte and Noboa as in most other consumer countries. There is very few direct sourcing of bananas by German retailers<sup>386</sup>.

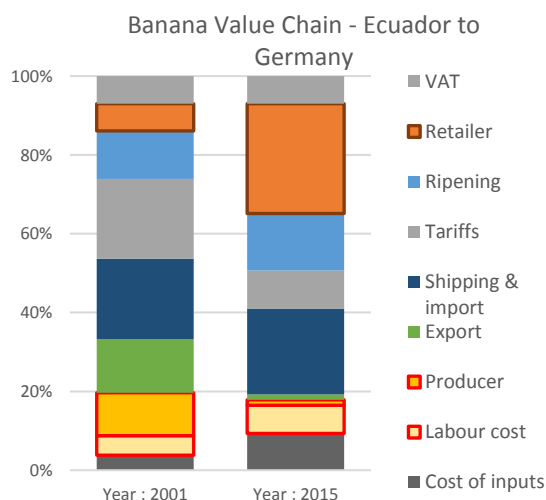
The main origin of bananas imported in the country is Colombia (34%), followed by Ecuador (27%) and Costa Rica (19%); these 3 origins jointly account for 80% of German imports.

For an overview of the sector, the structure of the chain and its evolution, see section 3 on the banana global value chain.

## Comparison of the value breakdown in the 1990's and in 2015

Our estimations of value breakdown (expressed in nominal currency so as to avoid potential distortions linked to correction for inflation) are as follows<sup>387</sup>:

**Fig. 113 Value breakdown of banana produced in Ecuador sold in Germany (average 2000-2002 and 2015)**

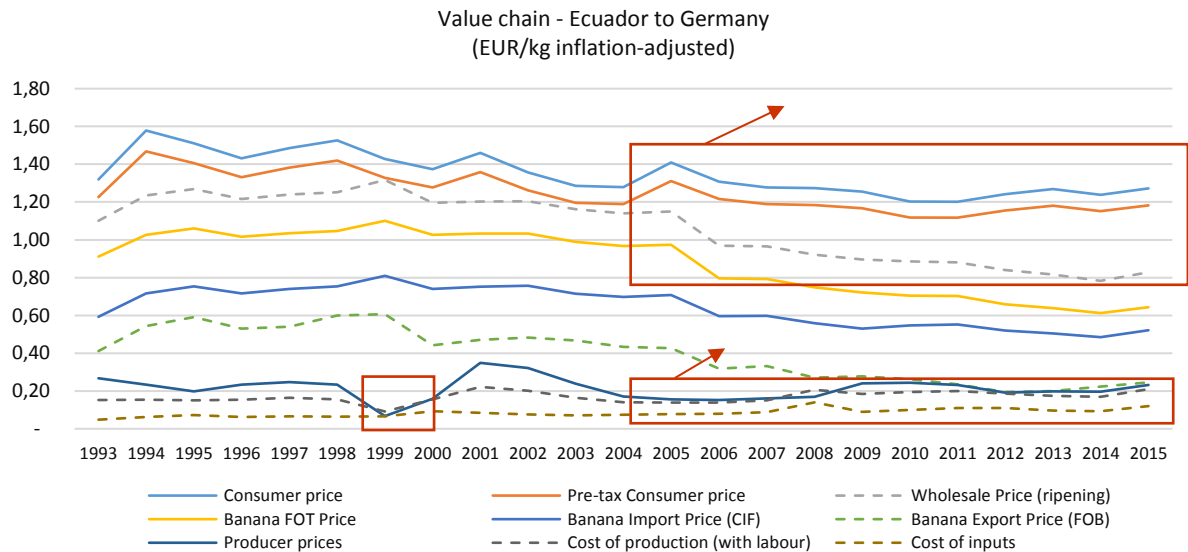


Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

These estimates show that the retail share has strongly increased from 7% up to 28% over the past 15 years whilst the share of traders (shipping to ripening) has decreased by more than 25%, from 66% down to 47% illustrating the fact that supermarkets have managed to take the lead over the value chain at the expense of historical banana companies. At the other side of the chain in Ecuador, the value left for banana producers by sales to German buyers has decreased so strongly (from 11% down to 1.5%) that small farmers can hardly cover their production costs. In the case of workers, although the share has apparently increased since 2001, the situation is not better as the costs of living have increased more rapidly than wages.

### Analysis of the value breakdown

**Fig. 114 Value breakdown of banana produced in Ecuador and sold in Germany (1993-2015)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

On the consumer side, taking into account the evolution of costs of living in Germany, the diagram illustrates the downward trend of the banana price since 1994 which have decreased by more than 20% in real terms.

In the middle of the chain, the CIF import price of bananas in Germany has followed a similar tendency, but the wholesale price has reduced much more significantly, due to the significant decrease of banana tariffs in Europe since the agreement in the WTO. As a result, the diagram illustrates that retailers have managed to almost double their share of value in real terms since 2004, using their increased bargaining power to pressure the rest of the banana chain.

In Ecuador, the value left for banana growers as well as workers has decreased significantly since the early 1990's and does not enable them to cover their costs of production and the livelihoods of their families (see the section on [banana's global value chain](#) for more details).

As illustrated in our diagram, the estimated export price of bananas to Germany appears to have decreased to such a point that it is almost equal to the average producer price in Ecuador, suggesting that German supermarkets exert a strong pressure on traders in order to secure their margins which has doubled in 10 years: from 0.20 euros in 2006 to 0.40 euros in 2015.

As a result, the income earned by small banana growers in Ecuador appears to be only half the living wage in 2015 according to the government estimates. Whilst the situation of workers seems more favourable thanks to the enforcement of the minimum wage law, recent studies have shown that a significant proportion of workers' households didn't achieve a living income<sup>388</sup>.

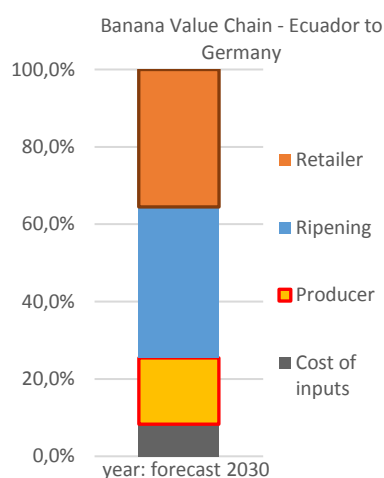
## Projections in 2030 of the value breakdown in a “Business as Usual” scenario

Based on the previous estimates, we performed a projection of the banana value breakdown in the year 2030 in a “Business as Usual” scenario:

- producer prices, wage levels and costs of inputs in Ecuador are based on the latest projections of the World Bank in 2030 (for banana FOB prices, fuel and fertilisers’ prices)
- price trends at the supermarkets’ and fruit companies’ levels have been extrapolated based on the last 15 years and using a projection model similar to the one used by the World Bank (price trends seem to be closely related to retailers’ market concentration which has been continuously growing for the past 20 years with no sign of trend reversal).

The results are as follows:

**Fig. 115 Value breakdown of banana produced in Ecuador sold in Germany (forecast 2030)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports

According to these estimates, the share of value captured by German retailers could reach 35% of the total value of fresh bananas, while the share of fruit companies would be reduced to 39% and producers and workers would be sharing 17% of the end value of bananas, which would be insufficient to enable them making a decent living.

In a ‘business as usual scenario’, this pressure on prices is likely to accelerate further the disappearance of small growers in the world banana trade, a continuous trend that has been taking place over the past decades; it is also likely to increase further the ‘flexibilisation’ of working conditions which is already affecting many workers, in order to address the retailers’ demand for cheap imported bananas in Germany.

The result may well be highly concentrated banana chains, from retailers down to producers, which will most probably lack resilience and increase further the social and environmental impacts in producing countries.

### Ability of small farmers and workers to earn a living income/wage and levers for change

In order to cover the costs of production and ensure that both workers and small farmers can earn a living wage, the export price of bananas from Ecuador to Germany should be increased by 0.03 USD/kg (see the section on [banana’s global value chain](#) for more details). This corresponds to limited mark-up compared to the end consumer price of bananas which is 1.27 EUR/kg.

This increase does not need to be passed on to consumers: according to our estimates, the German retailers have increased their share of value from 0.22 EUR/kg in 2007 to 0.39 EUR/kg in 2015. This increase which happened over the last 10 years is more than enough to cover the payment of a living wage to banana farmers and workers in Ecuador. In addition, direct sourcing could be a way for German retailers to keep low costs in the middle stages of the chain (although the important role of traders who take most of the logistics and financial risks should be kept in mind, as demonstrated by the experience of UK retailers).

Retailers appear to have the means to address the unsustainability of the Ecuadorian banana chain, and have started to do so through selling Fair trade and organic bananas. However, they would need to generalize their commitments and take on their responsibility to ensure that the banana they sell is not produced at the cost of the living conditions of producers and workers, as well as the environment. In the case of Ecuador, they could promote the minimum support price for farmers and the minimum wage for workers – which are effective tools to secure living income in the banana sector – by leaving a sufficient share of the banana value in the producing country so that the costs of sustainable production can be covered.

Given the concentration of market power in the hands of retailers who currently exert economic pressure down the chain while imposing strong conditions on suppliers (in terms of quality, health security, consistency...), this is likely to require stricter public regulations to be enforced, in consumer countries as well as producer countries.<sup>389</sup>

## Table grape

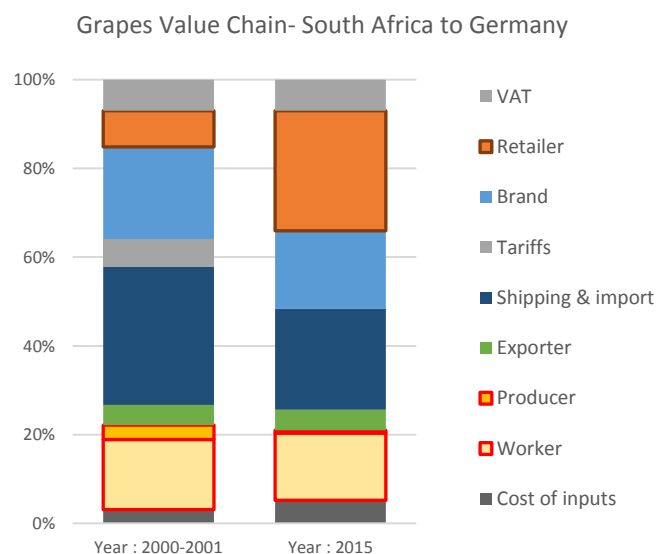
### Overview of the sector in Germany

For an overview of the sector, the structure of the chain and its evolution, see section 3 on the grape global value chain.

### Comparison of the value breakdown in the 1990's and in 2015

Our estimations of value breakdown (expressed in nominal currency so as to avoid potential distortions linked to correction for inflation) are as follows:

**Fig. 116 Value breakdown grape produced in South Africa (average 2000-2001 and 2015)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

As illustrated above, the share of value retained by retailers is the largest and has increased strongly since 2000 from 8% up to 27%. In contrast, the share of value of wholesalers has

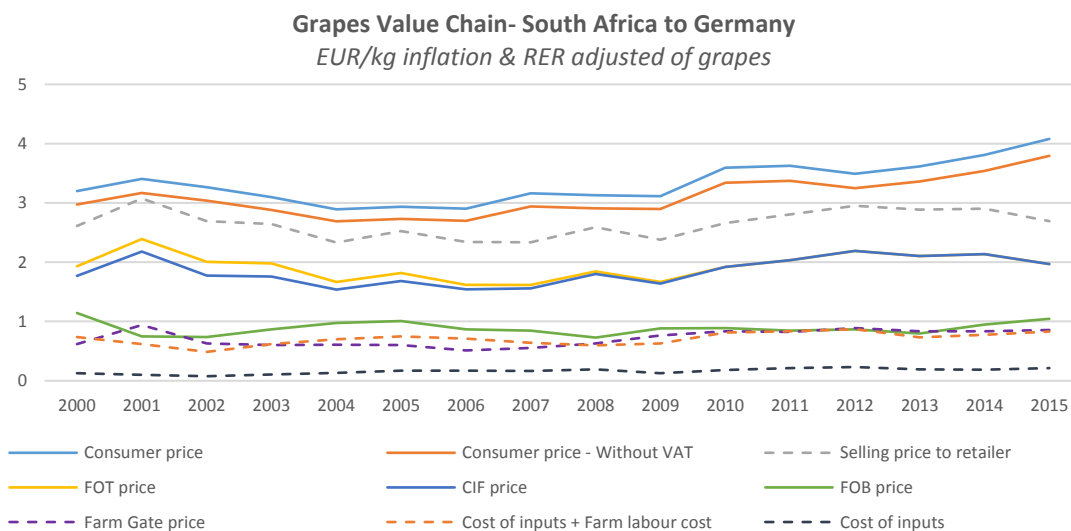


declined from 21% down to 18%. The value remaining in South Africa has remained globally stable at 27%.

To investigate further this situation, we have analysed the value evolution of the table grape producer prices and wages, export FOB prices and costs of production since the early 1990s. The results for the main destinations of South African grape are provided below.

### Analysis of the value breakdown

**Fig. 117 Value breakdown of grape produced in South Africa (2000-2015)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

On the consumer side, taking into account the evolution of costs of living in Germany, the diagram illustrates that the consumer prices have been globally stable until 2006, then have steadily increased by more than 40% since then. Retailers appear to have managed to increase their share of value, especially since 2012.

In the middle of the chain, the wholesalers (retail price to retailer) appear to have followed the trend of CIF import prices and strongly competed with supermarkets to maintain or increase their share of the total value.

In South Africa, the plantations have been facing a sharp increase in farm inputs since the end of the 1990s which has squeezed their share of value. In order to maintain their failing margin, a general trend of casualization of labour has been observed among South African plantations, and a move of the vineyard towards regions where grape can be produced and sold more profitably in early December (see the section on grape global value chain for more details).

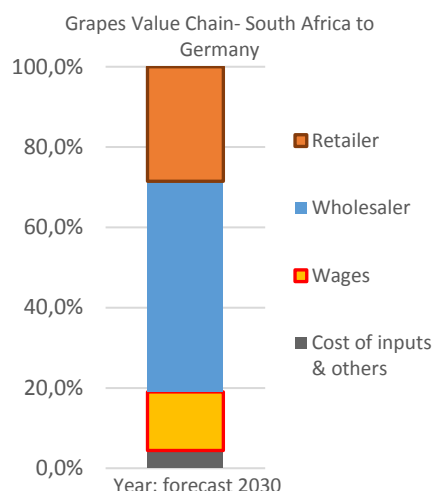
### Projections in 2030 of the value breakdown in a “Business as Usual” scenario

Based on the previous estimates, we performed a projection of the grape value breakdown in the year 2030 in a “Business as Usual” scenario:

- producer prices, wage levels and costs of inputs in South Africa are based on the latest projections of the World Bank in 2030 (for fuel and fertilisers’ prices)
- price trends at the supermarkets’, wholesalers’ and producers’ levels have been extrapolated based on the last 15 years and using a linear regression (price trends seem to be closely related to market concentration which has been continuously growing for the past 20 years with no sign of trend reversal).

The results are as follows:

**Fig. 118 Value breakdown of grape (forecast 2030)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

According to these estimates, the share of value captured by retailers could stabilize at 28% because of their position of major selling channel. In contrast, the share of value of wholesalers/exporters/plantations could decrease at 52% of the total value. At the beginning of the chain, workers could be left with 12% of the total value. In a 'business as usual scenario', this pressure on prices is likely to continue affecting the wages and labour conditions of the grape workers, as well as the disappearance of the lowest productive plantations.

#### **Ability of workers to earn a living wage and levers for change**

In order to cover the costs of production and ensure that workers can earn a living wage, the share of value for workers in South Africa should be increased from 0.69 USD/kg currently to 0.89 USD/kg (see the section on the grape global value chain for more details). This corresponds to a mark-up of 0.20 USD/kg, which represents less than 5% of the end consumer price of table grape which is 3.62 EUR/kg (4.53 USD/kg).

This increase does not need to be passed on to consumers: according to our estimates, the retailers have strongly increased their share of value from 0.38 USD per kg in 2012 to 1.23 USD per kg in 2015. This increase which happened in the last 3 years is more than enough to cover the payment of a living wage for table grape workers in South Africa.

Retailers appear to have the means to address the unsustainability of the South African grape chain and have started to do so through selling Fair trade, sustainable and organic grapes. However, they would need to generalize their commitments and take on their responsibility to ensure that the grape they sell is not produced at the cost of the living conditions of workers, as well as the environment. In the case of South Africa, they could promote the rise of the minimum wage for workers to ensure it covers the costs basic needs of their families – which is an effective tool to secure living income in the sector – by leaving a sufficient share of the value in the producing country so that the costs of sustainable production can be covered.<sup>390</sup>

# Green bean

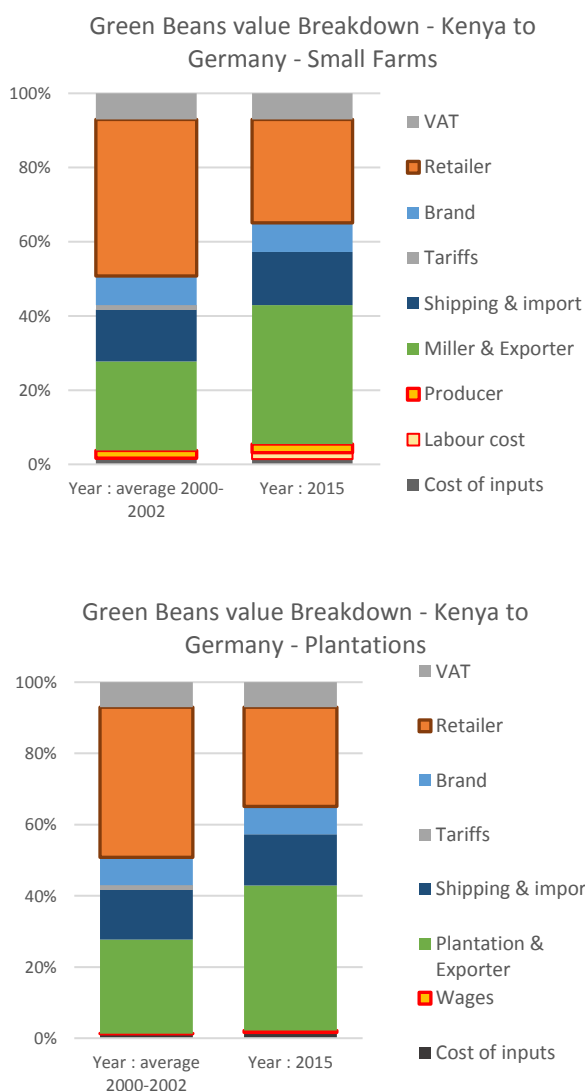
## Overview of the sector in Germany

For an overview of the sector, the structure of the chain and its evolution, see section 3 on the green bean global value chain.

## Comparison of the value breakdown in the 1990's and in 2015

Our estimations of value breakdown (expressed in nominal currency so as to avoid potential distortions linked to correction for inflation) are as follows:

**Fig. 119 Value breakdown of green bean produced in Kenya, supplied by plantations, and by small farmers (average 2000-2002 & 2015)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

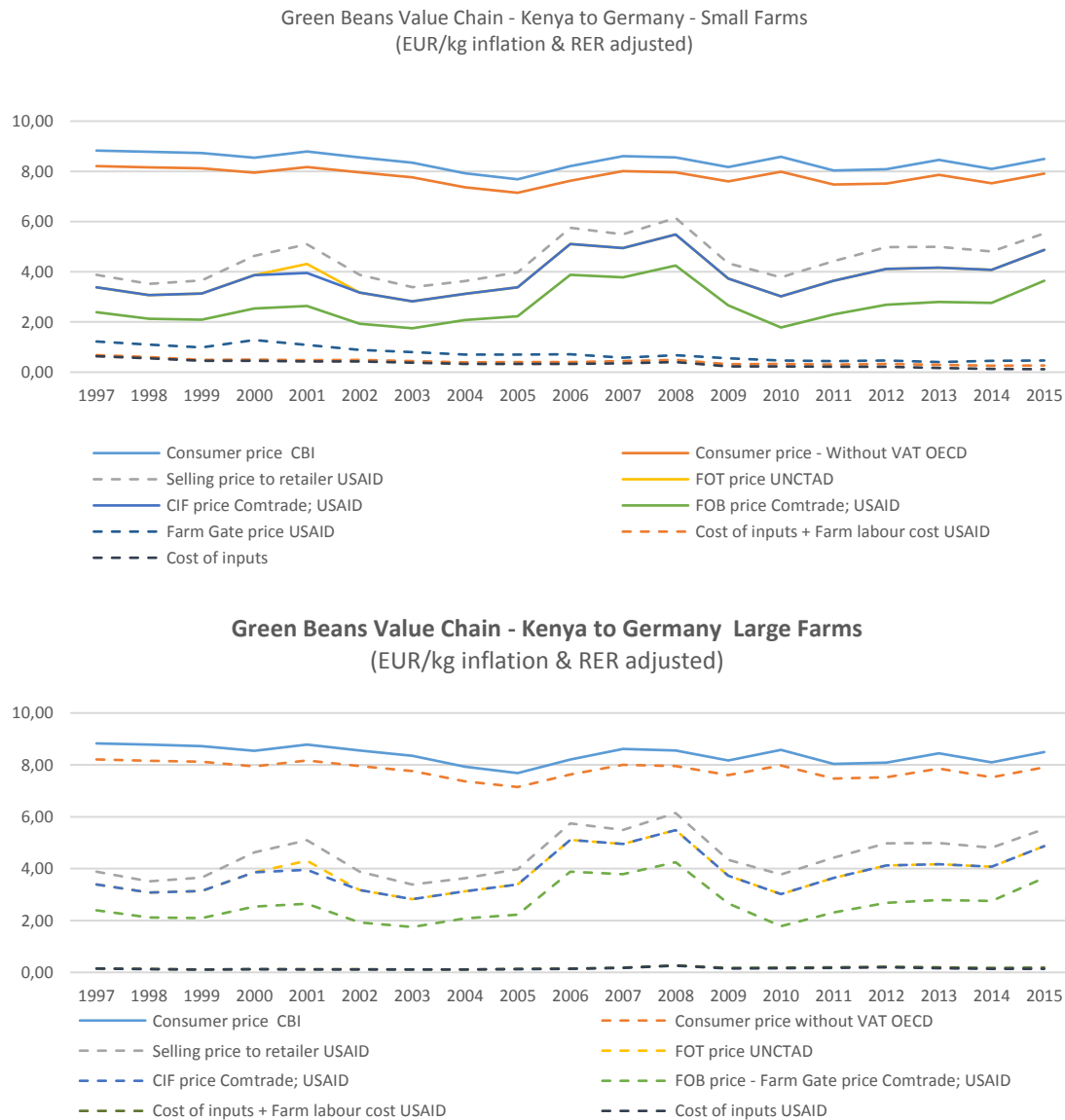
As illustrated above, the share of value retained by retailers is only the 2<sup>nd</sup> largest and has substantially decreased from 42% down to 28%, showing their failing influence over the chain. The share of the brands/wholesalers has remained stable at around 8%, whereas the share of the plantations/exporters in Kenya have strongly increased from 26.5% up to 42% when they source beans from their own farms (and from 24% up to 37.5% when beans are purchased to

small farmers). Finally, the share of small farmers and workers' wages amount to 2.5% and 0.5% respectively.

To investigate further this situation, we have analysed the value evolution of the green bean producer prices and wages, export FOB prices and costs of production since the early 1990s. The results for the main destinations of Kenyan beans are provided below.

### Analysis of the value breakdown

**Fig. 120 Value breakdown of green bean produced in Kenya, supplied by plantations, and by small farmers (1991-2015)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

On the consumer side, taking into account the evolution of costs of living in Germany, the diagram illustrates that the consumer prices have very slightly declined by approx. 4% between 1997 and 2015. Most importantly, retailers appear to have “cushioned” the evolution of green beans prices further up in the chain (i.e. limiting increases in case of peaks, but also remaining stable in case of drops).

In the middle of the chain, the brands/wholesalers (selling price to retailers) have followed the trends in CIF import prices.

In Kenya, the processors (out of factory price) appear to have managed to increase their share of value over the whole period thanks to their vertically integrated systems, especially when sourcing from small farmers who got squeezed by plantations which are in a strong bargaining position and able to impose decreasing producer prices, as well as casualisation of labour for workers (see the section on green bean global value chain for more details).

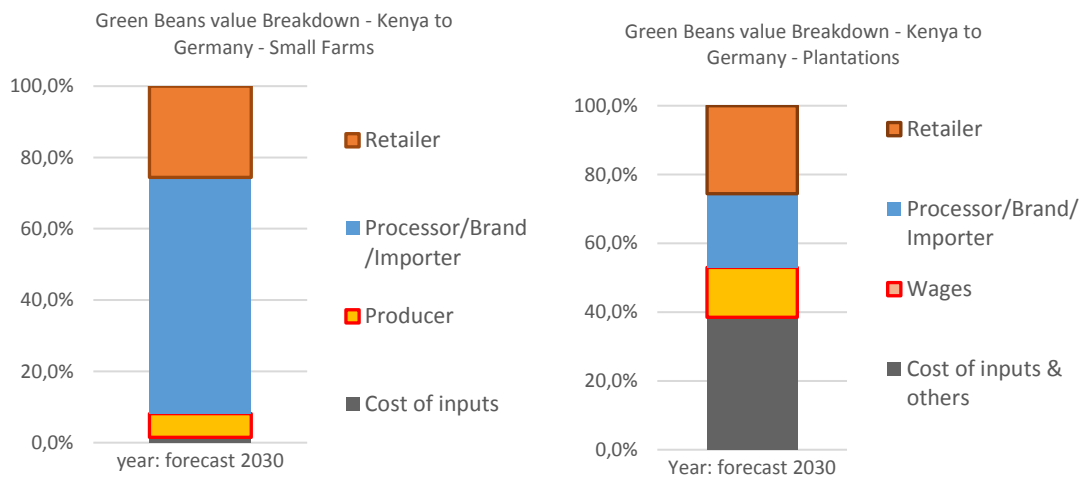
**Projections in 2030 of the value breakdown in a “Business as Usual” scenario**

Based on the previous estimates, we performed a projection of the green bean value breakdown in the year 2030 in a “Business as Usual” scenario:

- producer prices, wage levels and costs of inputs in Kenya are based on the latest projections of the World Bank in 2030 (for fuel and fertilisers’ prices)
- price trends at the supermarkets’, brands’ and processors’ levels have been extrapolated based on the last 15 years and using a linear regression (price trends seem to be closely related to market concentration which has been continuously growing for the past 20 years with no sign of trend reversal).

The results are as follows:

**Fig. 121 Value breakdown of green bean produced in Kenya, supplied by plantations, and by small farmers (forecast 2030)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

According to these estimates, the share of value captured by retailers could stabilize at 26% because of their position of major selling channel. In contrast, the share of value of brands/exporters/plantations could increase up to 66% of the total value. At the beginning of the chain, small farmers and workers could be left with respectively less than 7% and 14% of the total value. In a ‘business as usual scenario’, this pressure on prices is likely to continue affecting the difficult living conditions of small growers and farm workers in Kenya.

**Ability of small farmers and workers to earn a living income/wage and levers for change**

In order to cover the costs of green beans from Kenya, the share of value allocated for small farmers or workers should be increased at least from an estimated 0.23 USD/kg to 0.46 USD/kg (see the section on green bean global value chain for more details). This corresponds to limited

mark-up of 0.23 USD/kg, which only represents 2.5% of the end consumer price of green beans which is 8.50 EUR/kg (9.43 USD/kg).

This increase does not need to be passed on to consumers: according to our estimates, the brands/wholesalers have substantially increased their share of value from 2.70 USD per kg in 2008 to 3.70 USD per kg in 2014. This increase which happened over the last decade is enough to cover the living income of farmers and the payment of a living wage for workers.

Retailers and brands appear to have the means to address the unsustainability of the Kenyan green bean chain. To do so, they would need to ensure that the green bean they sell is not produced at the cost of the living conditions of small farmers and workers in the chain. In particular, this would require increasing the minimum wage for workers (in farming and processing) to the living wage level, and allocating enough resources for controls on the ground as it is one of the main ways to ensure that they can achieve a sustainable livelihood. In addition, they could support the establishment of a guaranteed price for smallholders enabling them to generate a living income, together with environmental and social conditions to ensure the sustainability of production.<sup>391</sup>

## Avocado

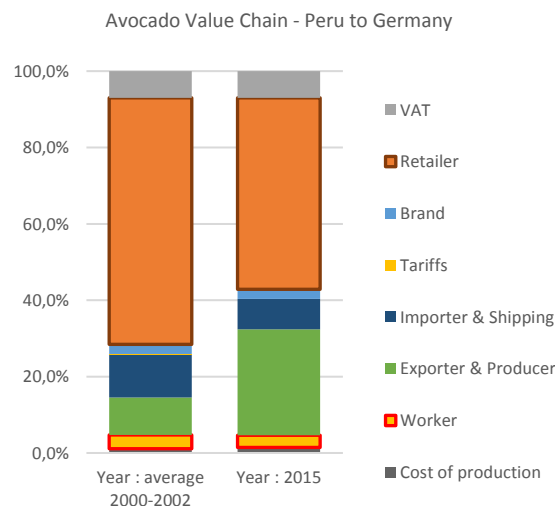
### Overview of the sector in Germany

For an overview of the sector, the structure of the chain and its evolution, see section 3 on the avocado global value chain.

### Comparison of the value breakdown in the 1990's and in 2015

Our estimations of value breakdown (expressed in nominal currency so as to avoid potential distortions linked to correction for inflation) are as follows:

**Fig. 122 Value breakdown avocado produced in Peru (average 2000-2001 and 2015)**



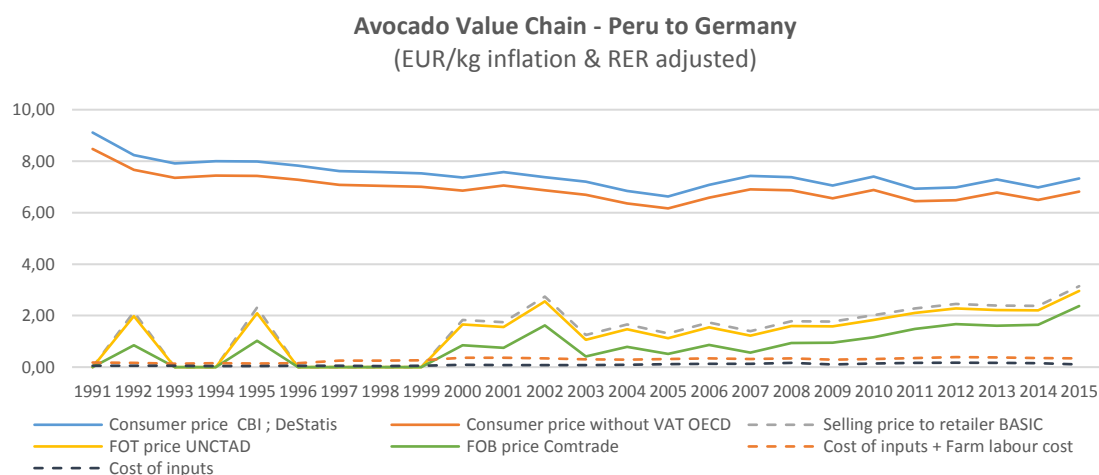
Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

As illustrated above, the share of value retained by retailers is the largest and has decreased substantially since 2000 from 64.5% down to 50%. The value remaining in Peru has increased from 26% up to 40.5%, essentially captured by plantations, while the share of the total value for workers has decreased from 3.5% down to 3%.

To investigate further this situation, we have analysed the value evolution of the avocado producer prices and wages, export FOB prices and costs of production since the early 1990s. The results for the main destinations of Peruvian avocado are provided below.

### Analysis of the value breakdown

**Fig. 123 Value breakdown of avocado produced in Peru (2000-2015)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

On the consumer side, taking into account the evolution of costs of living in Germany, the diagram illustrates that the consumer prices have steadily declined by 25% between 1992 and 2005, then remained stable. Retailers appear to have “cushioned” the evolution of avocado prices further up in the chain (i.e. limiting increases in case of peaks, but also remaining stable in case of drops).

In Peru, the plantations have managed to increase substantially their share of value, and subsequently the FOB export price which has more than doubled since 2010 (see the section on avocado global value chain for more details).

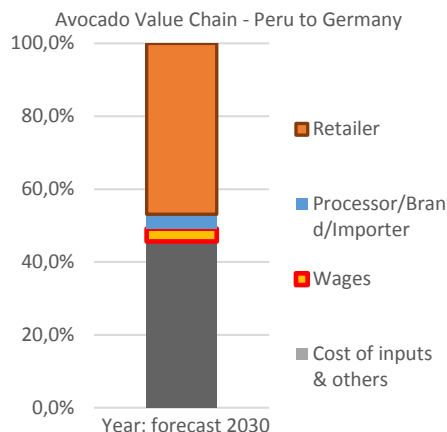
### Projections in 2030 of the value breakdown in a “Business as Usual” scenario

Based on the previous estimates, we performed a projection of the avocado value breakdown in the year 2030 in a “Business as Usual” scenario:

- producer prices, wage levels and costs of inputs in Peru are based on the latest projections of the World Bank in 2030 (for fuel and fertilisers’ prices)
- price trends at the supermarkets’ and producers’ levels have been extrapolated based on the last 15 years and using a linear regression (price trends seem to be closely related to market concentration which has been continuously growing for the past 20 years with no sign of trend reversal).

The results are as follows:

**Fig. 124 Value breakdown of avocado (forecast 2030)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

According to these estimates, the share of value captured by retailers could stabilize at 47% because of their position of major selling channel. In contrast, the share of value of plantations could decrease because of the rise in input costs. At the beginning of the chain, workers could be left with 3.5% of the total value. In a ‘business as usual scenario’, this pressure on prices is likely to continue affecting the wages and labour conditions of the avocado workers.

#### **Ability of workers to earn a living wage and levers for change**

In order to cover the costs of production and ensure that workers can earn a living wage, the share of value for workers in Peru should be increased from 0.26 USD/kg currently to 0.29 USD/kg (see the section on the avocado global value chain for more details). This corresponds to a mark-up of 0.03 USD/kg, which represents less than 1% of the end consumer price of avocado which is 7.33 EUR/kg (8.14 USD/kg).

This increase does not need to be passed on to consumers: according to our estimates, the retailers have increased their share of value from 5.10 USD per kg in 2000 to 5.50 USD per kg in 2014. This increase which happened in the last 15 years is more than enough to cover the payment of a living wage for avocado workers in Peru.

Retailers appear to have the means to address the unsustainability of the Peruvian avocado chain. To do so, they would need to ensure that the avocado they sell is not produced at the cost of the living conditions of workers, as well as the environment. In the case of Peru, they could promote the rise of the minimum wage for workers to ensure it covers the costs basic needs of their families – which is an effective tool to secure living income in the sector – by leaving a sufficient share of the value in the producing country so that the costs of sustainable production can be covered.<sup>392</sup>



# Tomato

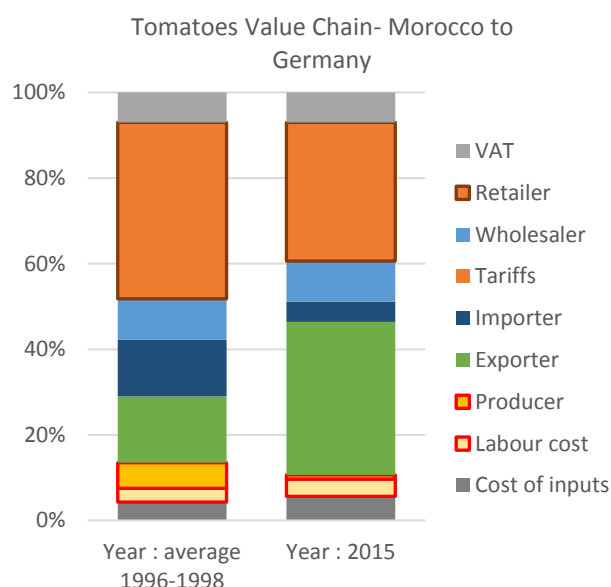
## Overview of the sector in Germany

For an overview of the sector, the structure of the chain and its evolution, see section 3 on the tomato global value chain.

## Comparison of the value breakdown in the 1990's and in 2015

Our estimations of value breakdown (expressed in nominal currency so as to avoid potential distortions linked to correction for inflation) are as follows:

**Fig. 125 Value breakdown tomato produced in Morocco (average 2000-2001 and 2015)**



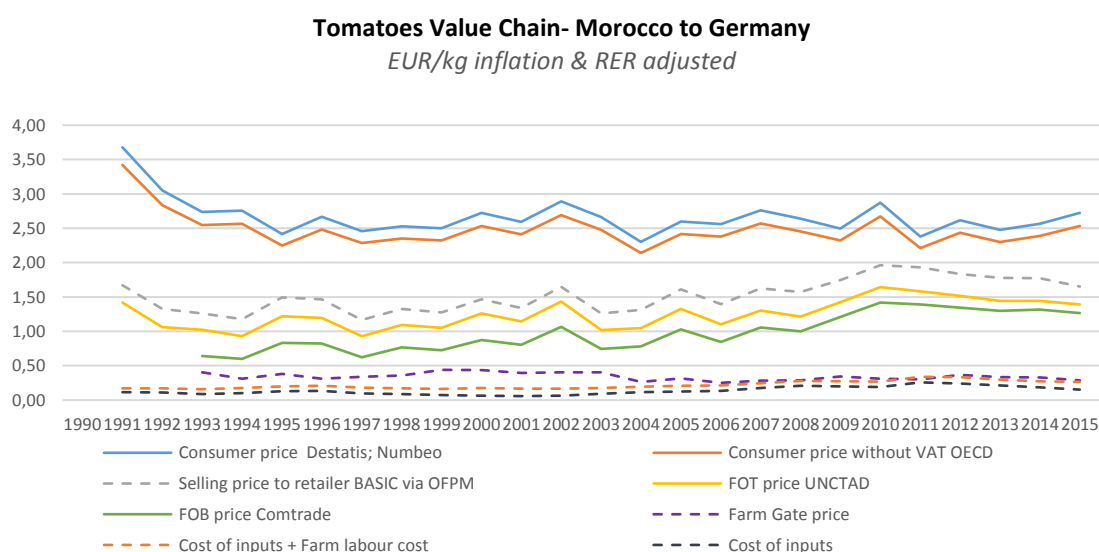
Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

As illustrated above, the share of value retained by retailers is the largest and has decreased substantially since 2000 from 41% down to 32.5%. The value remaining in Morocco has increased from 29% up to 46.5%, essentially captured by large producers and exporters, while the share of the total value for workers has remained stable at around 4%.

To investigate further this situation, we have analysed the value evolution of the tomato producer prices and wages, export FOB prices and costs of production since the early 1990s. The results for the main destinations of Moroccan tomato are provided below.

## Analysis of the value breakdown

**Fig. 126 Value breakdown of tomato produced in Morocco (2000-2015)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

On the consumer side, taking into account the evolution of costs of living in Germany, the diagram illustrates that the consumer prices have significantly declined by 38% between 1991 and 1995, then remained stable although partially volatile. Retailers appear to have followed the CIF import prices albeit since 2007 where they seem to have stagnated.

In Morocco, the exporters and large farms have managed to increase substantially their share of value since 2006, and subsequently the FOB export price which has increased by 30% since then (see the section on tomato global value chain for more details).

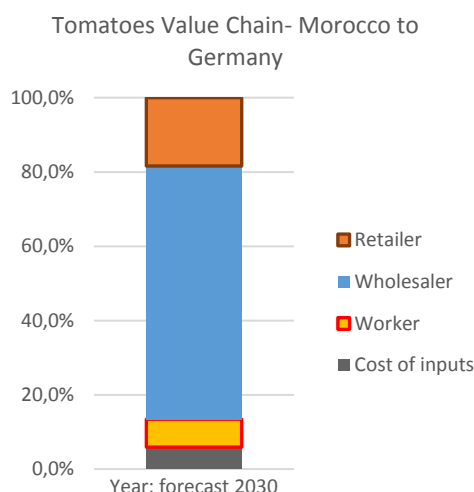
### Projections in 2030 of the value breakdown in a “Business as Usual” scenario

Based on the previous estimates, we performed a projection of the tomato value breakdown in the year 2030 in a “Business as Usual” scenario:

- producer prices, wage levels and costs of inputs in Morocco are based on the latest projections of the World Bank in 2030 (for fuel and fertilisers’ prices)
- price trends at the supermarkets’ and producers’ levels have been extrapolated based on the last 15 years and using a linear regression (price trends seem to be closely related to market concentration which has been continuously growing for the past 20 years with no sign of trend reversal).

The results are as follows:

**Fig. 127 Value breakdown of tomato (forecast 2030)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

According to these estimates, the share of value captured by retailers could decrease further and reach 18.5% because of the competition for value with wholesalers/exporters whose share could reach 68%. At the beginning of the chain, workers could be left with 7.5% of the total value. In a 'business as usual scenario', this pressure on prices is likely to continue affecting the wages and labour conditions of the tomato workers.

#### **Ability of workers to earn a living wage and levers for change**

In order to cover the costs of production and ensure that workers can earn a living wage, the share of value for workers in Morocco should be increased from 0.32 USD/kg currently to 0.69 USD/kg (see the section on the tomato global value chain for more details). This corresponds to a mark-up of 0.39 USD/kg, which represents 13% of the end consumer price of tomato which is 2.72 EUR/kg (3.02 USD/kg).

This increase does not need to be passed on to consumers: according to our estimates, the retailers have increased their share of value from 0.40 USD per kg in 2011 to 1.00 USD per kg in 2015. This increase which happened in the last 5 years is enough to cover the payment of a living wage for tomato workers in Morocco.

Retailers appear to have the means to address the unsustainability of the Moroccan tomato chain. To do so, they would need to ensure that the tomato they sell is not produced at the cost of the living conditions of workers, as well as the environment. In the case of Morocco, they could promote the rise of the minimum wage for workers to ensure it covers the costs basic needs of their families – which is an effective tool to secure living income in the sector – by leaving a sufficient share of the value in the producing country so that the costs of sustainable production can be covered.<sup>393</sup>

# NETHERLANDS

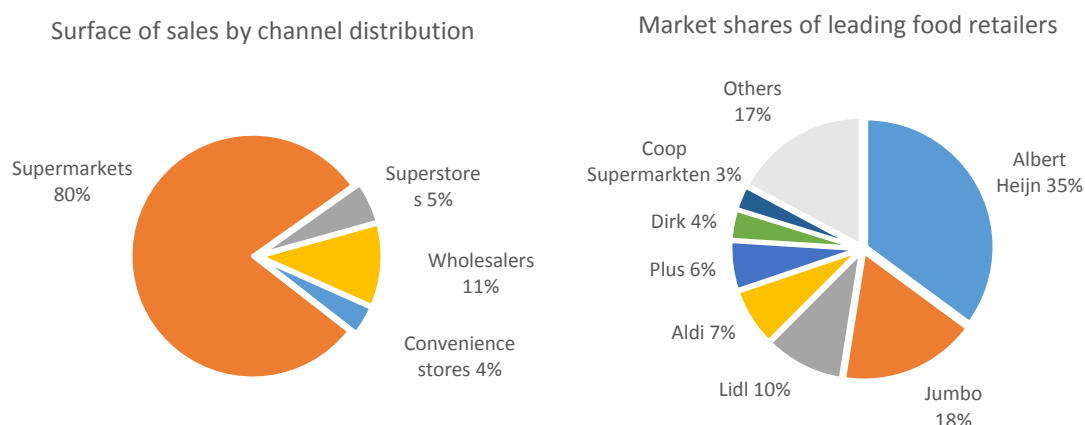
## Overview of the food retail sector in the country

Approximately 80% of the Dutch food retail outlets are full service supermarkets, operating on floor space between 500 and 1,500 square meters located downtown and in residential areas. The remaining 20% includes mainly convenience stores situated near office buildings, city centre, motorways and train/metro stations, some wholesalers and just a few superstores (located in shopping malls and industrial parks).<sup>394</sup>

Retailers tend to operate their stores separately by product category and have 2 or 3 preferred suppliers responsible for the full range of products within each category (fruits & vegetables, meat products, seafood products, groceries, beverages, bakery products, etc.). For the international branded and specialty products, retailers usually work with a few specialized importers. Supermarkets' private label products are significantly growing in the country, as in the rest of Europe, but their penetration level is still relatively low: they account for 29% of Dutch supermarkets' food sales, compared to 51% in Spain and 45% in the UK.<sup>395</sup>

Traditional food channels (grocery stores, butcher stores, bakeries etc.) increasingly face competition from these food retail chains, trying to survive through extra service, sales of high-quality added value products and niche markets.<sup>396</sup>

**Fig. 128 Main retail outlets and retailers' market shares in Netherlands**



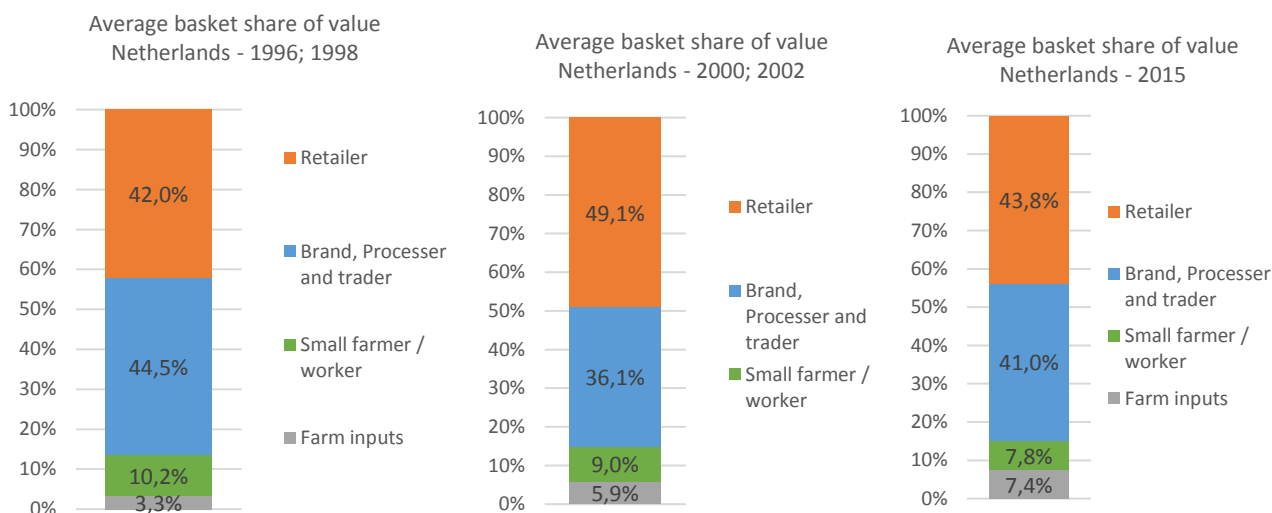
Source: BASIC, based on Euromonitor and USDA data (2015)

The retail sector is quite concentrated in the Netherlands. The top two food retail chains, Albert Heijn (which has merged in 2016 with the Belgian leader Delhaize to become one of the top 5 European retailers) and Jumbo, have a combined market share of 53%. German discounters Aldi and Lidl are their direct competitors, together accounting for 17% of the market. Independent food retail stores are increasingly leaving the scene; a trend accelerated by shrinking margins and on-going consolidation in the retail market. The concentration is further reinforced by the existence of buying alliances among retailers that enable them to coordinate their procurement across borders and obtain the lowest possible prices for well-known brands and/or basic private label groceries. A typical example is Superunie which buys for 13 smaller supermarket chains in Holland (Plus Holding, Deen Supermarkten, Coop Holding, etc.).<sup>397</sup>

# Overview of the food basket value breakdown

The evolution of the value breakdown of the basket of goods for the Netherlands is detailed below for 1996-1998, 2000-2002 and 2015:

**Fig. 129 Value breakdown of the Dutch basket of goods**



Source: BASIC

As illustrated above, the share of value retained by retailers appears to have been globally stable since 1996, mainly at the expense of intermediate actors as well as small farmers and workers. The detailed analysis of each product in the basket is provided in the following sub-sections.

## Coffee

### Overview of the sector in Netherlands

With nearly 17 million inhabitants, the Netherlands accounts for approximately 4% of the total European Union consumption of green coffee (Dutch consumption amounted to 96,000 tonnes in 2014). The per capita coffee consumption in the Netherlands was estimated at an average of 5.82kg in 2014, which is similar to the per capita consumption registered in Italy, but low when compared to Nordic countries, including Sweden (10.4kg/year) and Finland (11.4kg/year).<sup>398</sup>

About 70% of all coffee in the Netherlands is consumed in the home and purchased in supermarkets and the remaining 30% in the out-of-home market (offices, coffee bars and restaurants...). The most popular coffees consumed in the Netherlands fall within the inexpensive bulk segment (the market leader is 'Roodmerk', made by Jacobs Douwe Egberts group, and composed of 40% Robusta and 60% Arabica coffee). At the same time, the demand for premium coffee is increasing rapidly in the Netherlands, in response to an increase in educated consumers who are also willing to pay higher prices for higher quality and who increasingly use home or office espresso coffee machines.<sup>399</sup>

The Netherlands holds a more modest position in Europe in terms of green-coffee imports and re-exports, relative to Belgium and Germany: 8th-largest importer of green coffee, accounting

for nearly 4% of all volumes imported in the EU, and 4th-largest re-exporter of green coffee beans. In July 2015, D.E. Master Blenders and Mondelez completed the transactions to combine their business into Jacob Douwe Egberts. Based in Amsterdam, the large-scale roaster has strengthened its leading position in the world market. At the same time however, the Dutch coffee market is also characterized by a relatively large number of small roasters serving the increasing interest of Dutch consumers in high-quality/speciality coffees. The Netherlands is also the epicentre of sustainability initiatives within the coffee sector.<sup>400</sup>

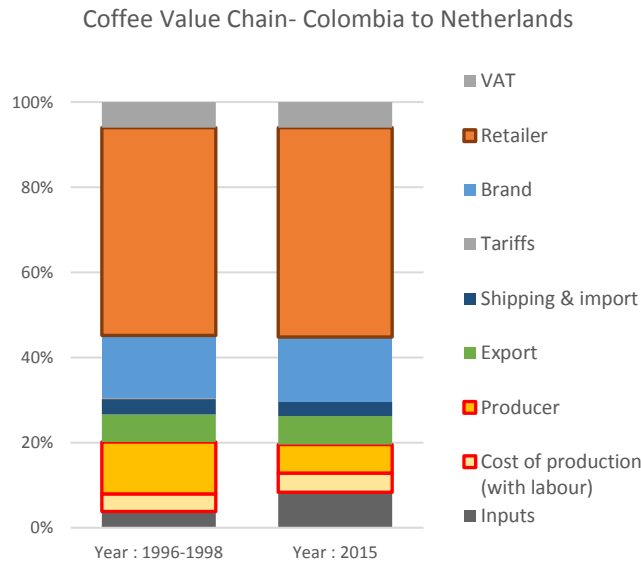
Netherlands' most important suppliers of conventional green coffee are Brazil (30%), Viet Nam (13%), Honduras (10%) and Colombia (8%).

For an overview of the sector, the structure of the chain and its evolution, see section 3 on the coffee global value chain.

### Comparison of the value breakdown in the 1990's and in 2015

Our estimations of value breakdown (expressed in nominal currency so as to avoid potential distortions linked to correction for inflation) are as follows:

**Fig. 130 Value breakdown of coffee produced in Colombia (average 1996-1998 and 2015)**



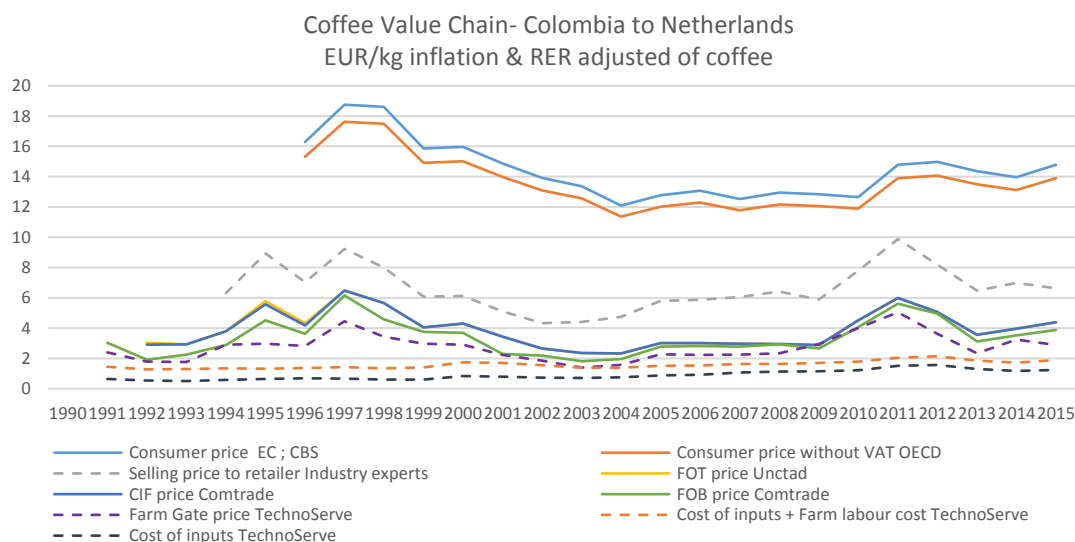
Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

As illustrated above, the share of value retained by retailers is the largest and has tended to stabilize since 1996 at 49%. In comparison, the share of value of brands/roasters is the 2<sup>nd</sup> largest, also stable at 15% and the value remaining in Colombia has stagnated at approx. 27%. This is not taking into account the costs of inputs (fertilizers and pesticides) which has more than doubled in proportion, generating strong economic pressure on both coffee growers and workers.

To investigate further this situation, we have analysed the value evolution of the coffee producer prices, export FOB prices and costs of production since the early 1990s. The results for the main destinations of Colombian coffee are provided below.

### Analysis of the value breakdown

**Fig. 131 Value breakdown of coffee produced in Colombia (1991-2015)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

On the consumer side, taking into account the evolution of costs of living in the Netherlands, the diagram illustrates that the consumer prices have globally followed the trends of the coffee CIF import prices since 1991, but have also relatively declined by 5%-10% since 1991. Most importantly the retailers appear to have “cushioned” the evolution of the coffee price on world markets with lower increases but also prices that remain relatively stable when international coffee prices fall. This is especially the case since 2012, which explains why the share of value captured by retailers is on the rise.

In the middle of the chain, the selling price (of roasters) to retailers seem to be much more aligned with the evolution of the coffee CIF import price, and even slightly amplifies peaks such as in 2010-2011 during the rust epidemics.

In Colombia, the value left for small coffee growers as well as workers has undergone two spikes in 1994-98 because of the end of the international coffee agreement and in 2010-12 because of the ravages of rust combined with El Nino/La Nina effects. In 2015, producers only sell their coffee to the same unit price than in 1991 – one corrected for inflation – but production costs have sharply risen, thereby squeezing what is left for them to live on (see the section on coffee global value chain for more details).

As pointed out by Daviron and Ponte (2005) a “coffee paradox” emerges, characterized by decreasing and unstable prices to farmers on the one side and increasing consumer prices on the other side: the value of coffee for consumers over the last 3 years is not so much linked to the green coffee price, but to the ways of combining different coffees in blends, roasting and marketing, and selling them in bars and coffee shops.<sup>401</sup>

**Projections in 2030 of the value breakdown in a “Business as Usual” scenario**

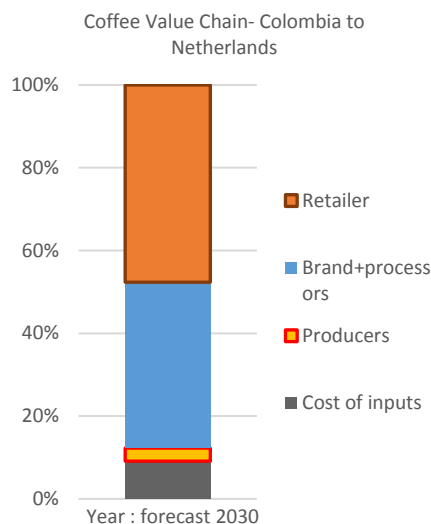
Based on the previous estimates, we performed a projection of the coffee value breakdown in the year 2030 in a “Business as Usual” scenario:

- producer prices, wage levels and costs of inputs in Colombia are based on the latest projections of the World Bank in 2030 (for coffee FOB prices, fuel and fertilisers’ prices)
- price trends at the supermarkets’ and roasters’ levels have been extrapolated based on the last 15 years and using a linear regression (price trends seem to be closely related to market

concentration which has been continuously growing for the past 20 years with no sign of trend reversal).

The results are as follows:

**Fig. 132 Value breakdown of coffee (forecast 2030)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

According to these estimates, the share of value captured by retailers would remain at 28% and brands, roasters and traders at 40%. At the beginning of the chain, producers could be left with 3% of the total value instead of 7% today. In a 'business as usual scenario', this pressure on prices is likely to accelerate further the difficulties of small coffee growers and the disappearance of the smallest ones.

### Ability of small farmers to earn a living income and levers for change

In order to cover the costs of production and ensure that both workers and small farmers can earn a living wage, the share of value for farmers in Colombia should be increased from 0.9 USD/kg currently to 1.27 USD/kg (see the section on coffee global value chain for more details). This corresponds to a mark-up of less than 0.37 euros/kg, which only represents 2.5% of the end consumer price of coffee which is 14,78 EUR/kg (16.40 USD/kg).

This increase does not need to be passed on to consumers: according to our estimates, the retailers have increased their share of value from 5.50 USD per kg in 2011 to 8.00 USD per kg in 2015. This increase which happened over the last 5 years is more than enough to cover the payment of a living wage to coffee farmers and workers in Colombia.

Retailers appear to have the means to address the unsustainability of the Colombian coffee chain, and have started to do so through selling Fair trade and organic coffee. However, they would need to generalize their commitments and take on their responsibility to ensure that the coffee they sell is not produced at the cost of the living conditions of producers and workers, as well as the environment. In the case of Colombia, they could promote the establishment of a minimum support price for farmers and the increase of the minimum wage for workers – which are effective tools to secure living income in the sector – by leaving a sufficient share of the value in the producing country so that the costs of sustainable production can be covered. <sup>402</sup>



# Tea

## Overview of the sector in Netherlands

Although the Netherlands is a relatively small country (about 17 million inhabitants), it is Europe's 5th largest consumer of tea, amounting to 9,000 tonnes in 2015. The current growth in tea consumption is based primarily on its (perceived) health benefits. Most teas are sold to consumers as blends: mixtures of teas from 20 or more origins to achieve a certain flavour profile. More recently, single origin teas are also increasingly sold in specialised tea shops.<sup>403</sup>

As 75% of tea is consumed at home, the retail channel is the most dominant force in the Dutch tea market. Jacobs Douwe Egberts remains the largest tea packer in the Netherlands due to its traditionally popular Pickwick brand, followed by the Dutch retailer Albert Heijn (with its private label).<sup>404</sup>

In 2015, Dutch total tea imports amounted to about 26,000 tonnes (increasing annually by 1.6% since 2011) and a value of 99 million EUR, making the Netherlands the 4th largest tea importer in Europe, after the United Kingdom, Germany, and Poland. Black tea represents 77% of imports, decreasing at a rate of 2.3% per year whereas green tea imports grow by more than 25% per year. Netherlands also exports a total volume of 17,000 tonnes of tea, with a value of 68 million EUR (with an average increase rate of 13.7% per year since 2011).<sup>405</sup>

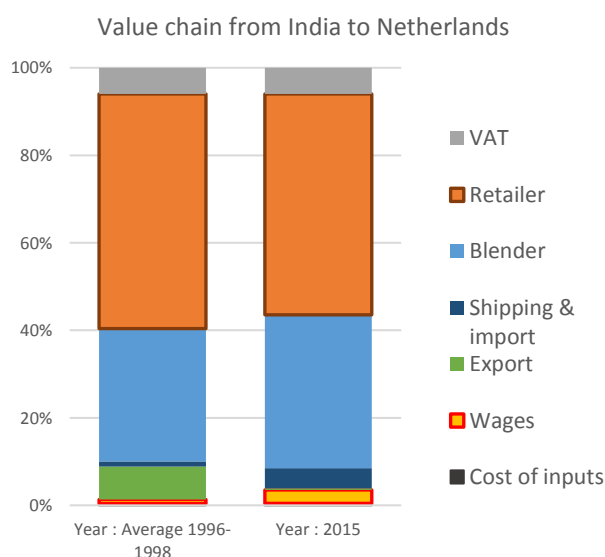
Netherlands' most important suppliers of conventional tea are Sri Lanka (19%), India (10%), and China (9%).

For an overview of the sector, the structure of the chain and its evolution, see section 3 on the tea global value chain.

## Comparison of the value breakdown in the 1990's and in 2015

Our estimations of value breakdown (expressed in nominal currency so as to avoid potential distortions linked to correction for inflation) are as follows:

**Fig. 133 Value breakdown of tea produced in India (average 1996-1998 and 2015)**



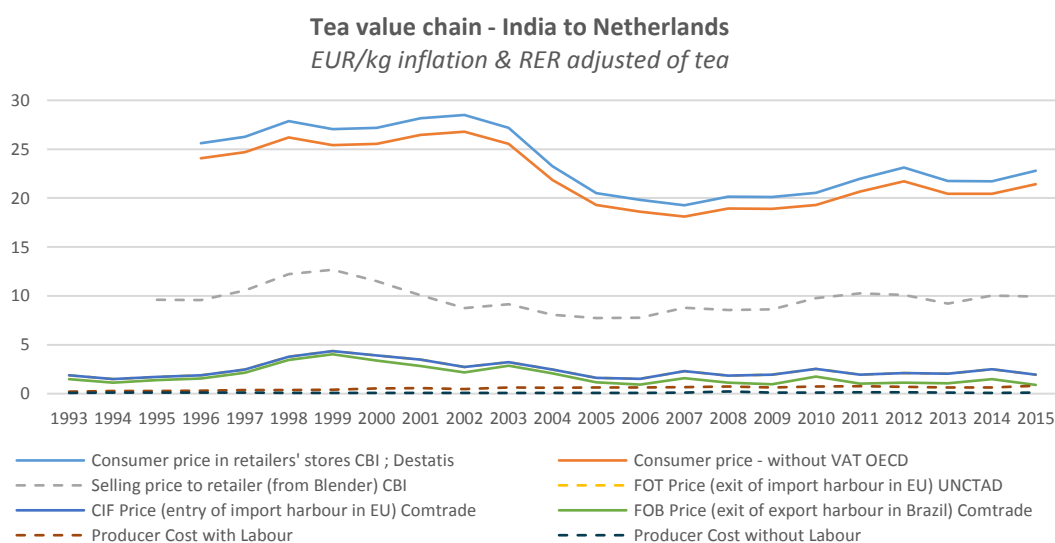
Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

As illustrated above, the share of value retained by retailers is the largest and has tended to decline since 1996 from 54% down to 50%. In comparison, the share of value of brands/blenders is the 2<sup>nd</sup> largest and has increased from 30% up to 35%, showing their growing influence over the chain. In contrast, the value remaining in India has decreased significantly from 9% to 4%.

To investigate further this situation, we have analysed the value evolution of the tea producer prices and wages, export FOB prices and costs of production since the early 1990s. The results for the main destinations of Indian tea are provided below.

### Analysis of the value breakdown

**Fig. 134 Value breakdown of tea produced in India (1991-2015)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

On the consumer side, taking into account the evolution of costs of living in the Netherlands, the diagram illustrates that the consumer prices have remained stable until 2003, then sharply decreased by 27% until 2007, and slightly recovered since then. Retailers appear to have amplified the evolution of the selling price of tea by brands and blenders.

In the middle of the chain, the tea blenders appear to have followed the trend of CIF import prices until 2010 and increased their share of value significantly since then.

In India, the export prices have dropped significantly in the beginning of the 1990s, generating pressure on plantations with low productivity and on the workers' wages. Prices recovered slowly until the early 2000s, then declined again until 2015 which has once again exerted a strong pressure on tea plantations and workers. The relative disconnection between export FOB prices and CIF import prices since 2007 seem to reflect the power concentration in the hands of brokers and traders who capture most of the value in India (see the section on tea global value chain for more details).

### Projections in 2030 of the value breakdown in a “Business as Usual” scenario

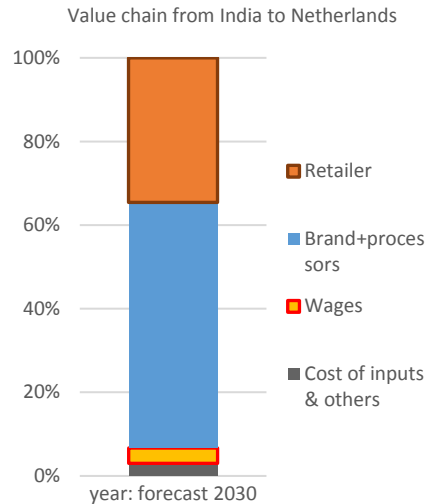
Based on the previous estimates, we performed a projection of the tea value breakdown in the year 2030 in a “Business as Usual” scenario:

- producer prices, wage levels and costs of inputs in India are based on the latest projections of the World Bank in 2030 (for tea FOB prices, fuel and fertilisers' prices)

- price trends at the supermarkets' and blenders' levels have been extrapolated based on the last 15 years and using a linear regression (price trends seem to be closely related to market concentration which has been continuously growing for the past 20 years with no sign of trend reversal).

The results are as follows:

**Fig. 135 Value breakdown of tea (forecast 2030)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

According to these estimates, the share of value captured by retailers could be reduced to 35% because of the increasing share of value accruing to brands, blenders and traders which could become the largest at 59%. At the beginning of the chain, workers could be left with 4% of the total value. In a 'business as usual scenario', this pressure on prices is likely to continue affecting the wages and labour conditions of the tea workers, as well as the disappearance of the lowest productive plantations.

### Ability of workers to earn a living wage and levers for change

In order to cover the costs of production and ensure that workers can earn a living wage, the share of value for workers in India should be increased from 0.78 USD/kg currently to 2.29 USD/kg (see the section on tea global value chain for more details). This corresponds to a mark-up of 1.51 USD/kg, which only represents 6% of the end consumer price of tea which is 22.80 EUR/kg (25.30 USD/kg).

This increase does not need to be passed on to consumers: according to our estimates, the blenders have increased their share of value from 7.30 USD per kg in 2004 to 8.85 USD per kg in 2015. This increase which happened over the last 10 years is more than enough to cover the payment of a living wage for tea workers in India.

Retailers appear to have the means to address the unsustainability of the Indian tea chain, and have started to do so through selling Fair trade and organic tea. However, they would need to generalize their commitments and take on their responsibility to ensure that the tea they sell is not produced at the cost of the living conditions of workers, as well as the environment. In the case of India, they could promote the rise of the minimum wage for workers to ensure it covers the costs basic needs of their families – which is an effective tool to secure living income in the sector – by leaving a sufficient share of the value in the producing country so that the costs of sustainable production can be covered.<sup>406</sup>

# Cocoa

## Overview of the sector in Netherlands

Chocolate is an intrinsic part of the Dutch cultural heritage: chocolate letters and sprinkles ("hagelslag") are typical Dutch inventions. However, compared to other European countries, Dutch per capita consumption of chocolate is relatively low: 4.7 kg in 2014 versus for example 9.0 kg in Switzerland and 7.9 kg in Germany. There is a growing demand for premium chocolates in the Netherlands, driven by a shift of a part of consumers towards more exclusive confectionery products, as well as by the increasing attention to the health benefits of chocolates with higher cocoa content.<sup>407</sup>

In the Netherlands, supermarkets represent the most important channel for the sale of chocolate products to consumers, representing around 71% of the sales market for chocolate and sweets. Other (much smaller) sales channels include speciality stores (for example, gourmet chocolate stores), which represent around 7.0% of the total market. The Dutch chocolate confectionery sector is very concentrated: Mars Nederland BV, Mondelēz and Nestlé having a combined market share of 46% in 2014.<sup>408</sup>

The Netherlands is the most important entry point of cocoa beans worldwide and the world's second-largest grinder after Côte d'Ivoire. This is largely due to Amsterdam, the largest cocoa port in the world, as well as the presence of the major grinding installations of Cargill and ADM. Together with ECOM Dutch Cocoa, these 3 companies grind 1/3 of the cocoa beans imported in Europe. Although the Netherlands has a very large grinding industry, there are only a few players that produce industrial chocolate, being Cargill and Crown of Holland.<sup>409</sup>

With a market share of 26%, Germany is the second-largest importer of cocoa beans in Europe after the Netherlands (37%). Cocoa bean imports amounted to more than 397,000 tonnes in 2015, with a value exceeding 1.1 billion EUR. Hamburg is by far the most important port for cocoa beans in Germany and ranks third in Europe.<sup>410</sup>

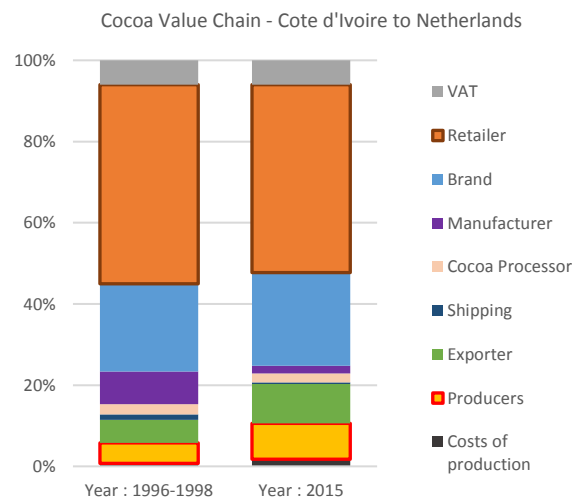
Netherlands' most important suppliers of conventional cocoa beans are Cote d'Ivoire (37%), Nigeria (17%), and Cameroon (16%).

For an overview of the sector, the structure of the chain and its evolution, see section 3 on the cocoa global value chain.

## Comparison of the value breakdown in the 1990's and in 2015

Our estimations of value breakdown (expressed in nominal currency so as to avoid potential distortions linked to correction for inflation) are as follows:

**Fig. 136 Value breakdown of a 70% dark chocolate bar made from cocoa produced in Cote d'Ivoire (average 1996-1998 & 2015)**



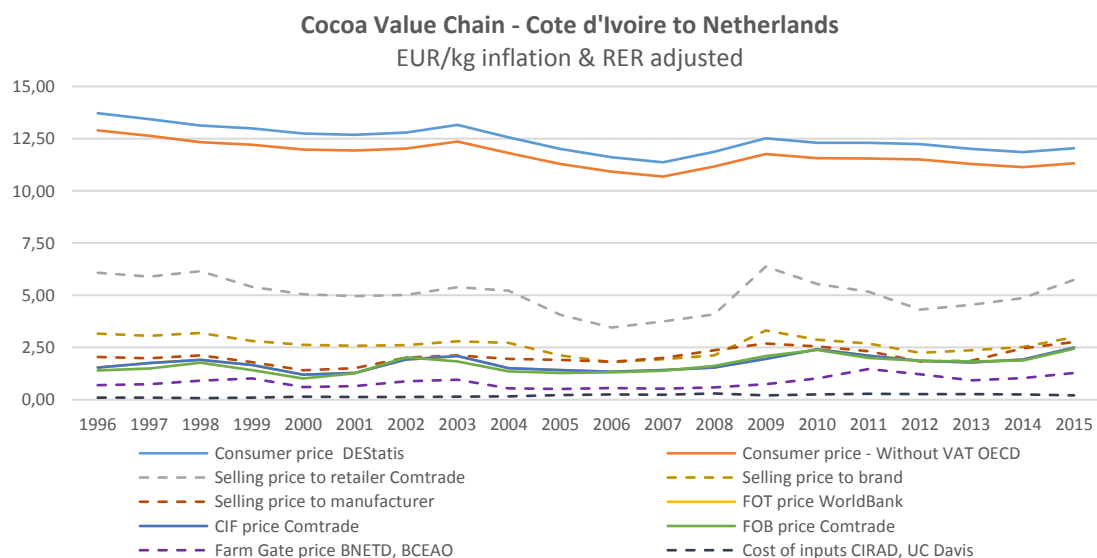
Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

As illustrated above, the share of value retained by retailers is the largest and has slightly declined from 49% down to 46%, while the share of the chocolate brands, the 2<sup>nd</sup> largest, has slightly increased from 21.5% down to 23%, showing their growing influence on the market. The value remaining in Cote d'Ivoire has increased from 11.5% up to 20%.

To investigate further this situation, we have analysed the value evolution of the cocoa producer prices and wages, export FOB prices and costs of production since the early 1990s. The results for the main destinations of Ivorian cocoa are provided below.

### Analysis of the value breakdown

**Fig. 137 Value breakdown of a 70% dark chocolate bar made from cocoa produced in Cote d'Ivoire (1991-2015)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

On the consumer side, taking into account the evolution of costs of living in the Netherlands, the diagram illustrates that the consumer prices have steadily declined by 12% since 1996. Retailers appear to have eroded their share of the value and “cushioned” the evolution of cocoa prices further up in the chain (i.e. limiting increases in case of peaks, but also remaining stable in case of drops).

In the middle of the chain, the chocolate brands (selling price to retailer) appear to have followed and amplified the trends of CIF import prices until recently and gradually increased their share of value. Upstream, the selling price to brands and manufacturers demonstrates that margins remain slim for chocolate makers and cocoa grinders, obliging them to boost volumes of cocoa in order to keep their profitability (see section 3 on the cocoa global value chain for more details).

In Cote d’Ivoire, the producer prices have dropped significantly in the beginning of the 1990s, and during the period 2003-2009, strongly affecting the small cocoa growers which couldn’t make ends meet. Prices recovered slowly until 2016 thanks to the re-establishment of a minimum support price for cocoa and its significant increase year after year. However, this price was cut by more than 30% early 2017 because of the sharp fall of cocoa price on world’s markets, plunging farmers again far below the poverty line (see the section on cocoa global value chain for more details).

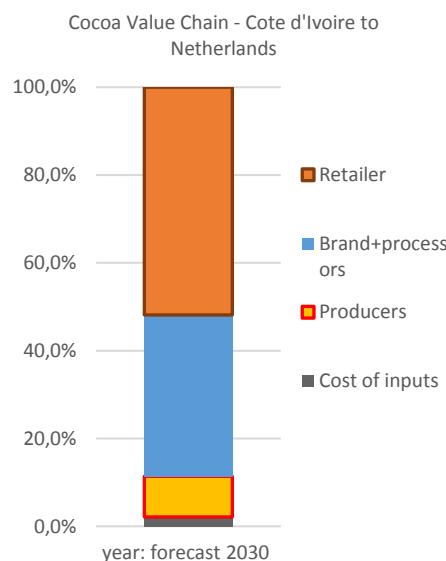
### Projections in 2030 of the value breakdown in a “Business as Usual” scenario

Based on the previous estimates, we performed a projection of the cocoa value breakdown in the year 2030 in a “Business as Usual” scenario:

- producer prices, wage levels and costs of inputs in Cote d’Ivoire are based on the latest projections of the World Bank in 2030 (for cocoa FOB prices, fuel and fertilisers’ prices)
- price trends at the supermarkets’ and brands’ levels have been extrapolated based on the last 15 years and using a linear regression (price trends seem to be closely related to market concentration which has been continuously growing for the past 20 years with no sign of trend reversal).

The results are as follows:

**Fig. 138 Value breakdown of cocoa (forecast 2030)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

According to these estimates, the share of value captured by retailers could be further increased up to 52% because of their increasing influence on the chain due to their position of major selling channel and the development of private labels. As a result, the value accruing to brands, processors and traders could be reduced at 37%. At the beginning of the chain, small cocoa growers could be left with less than 9% of the total value. In a 'business as usual scenario', this pressure on prices is likely to continue affecting the difficult living conditions of cocoa smallholders and encourage deforestation, one of the main ways for producers to maintain productivity and profitability.

### **Ability of small farmers to earn a living income and levers for change**

In order to cover the costs of production and ensure that cocoa farmers can earn a living income, the share of value for farmers in Cote d'Ivoire should be increased from 1.18 USD/kg to 1.60 USD/kg (see the section on cocoa global value chain for more details). This corresponds to very limited mark-up of 0.42 USD/kg, which only represents 3% of the end consumer price of chocolate which is 12.05 EUR/kg (13.37 USD/kg).

This increase does not need to be passed on to consumers: according to our estimates, the retailers have increased their share of value from 7.00 USD per kg in 2002 to 8.30 USD per kg in 2014. This increase which happened over the last 10 years is more than enough to cover the payment of a living wage for cocoa farmers in Cote d'Ivoire.

Retailers appear to have the means to address the unsustainability of the Ivorian cocoa chain, and have started to do so through selling Fair trade, sustainable and organic cocoa. However, they would need to generalize their commitments and take on their responsibility to ensure that the chocolate they sell is not produced at the cost of the living conditions of cocoa farmers, as well as the environment. In particular, this would require a stronger commitment of chocolate brands to offer less confectionery products where cocoa is just a commoditized ingredient, and more chocolate products that value the origin and quality of cocoa, hence the work of farmers paid at a fair price, enabling them to cover their costs of production and the living needs of their families.<sup>411</sup>

## **Rice**

### **Overview of the sector in Netherlands**

Europe is one of the biggest rice consumption markets, with an increasing demand in specialty rice. Most rice, including basmati and jasmine rice, is sold through supermarkets. and arrives in North-Western Europe in bulk through importers that are specialised in sourcing, milling, trading and/or managing local brands. Thanks to its major maritime ports, the Netherlands forms an important European Union entry point for rice from developing countries. Large rice brand companies that dominate in European retail are: Ebro Foods, Westmill, Tilda and Marbour.<sup>412</sup>

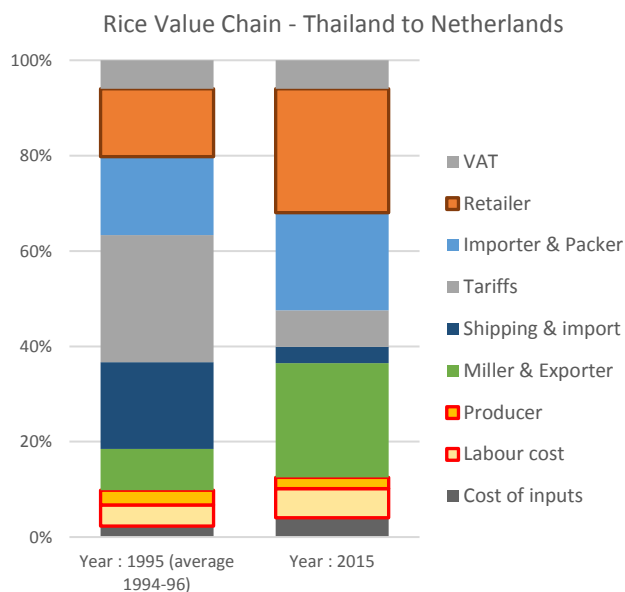
Netherlands' most important suppliers of conventional rice are India (22%), Thailand (13%), Cambodia (12%) and Spain (8%).

For an overview of the sector, the structure of the chain and its evolution, see section 3 on the rice global value chain.

### **Comparison of the value breakdown in the 1990's and in 2015**

Our estimations of value breakdown (expressed in nominal currency so as to avoid potential distortions linked to correction for inflation) are as follows:

**Fig. 139 Value breakdown of rice produced in Thailand (average 1996-1998 & 2015)**



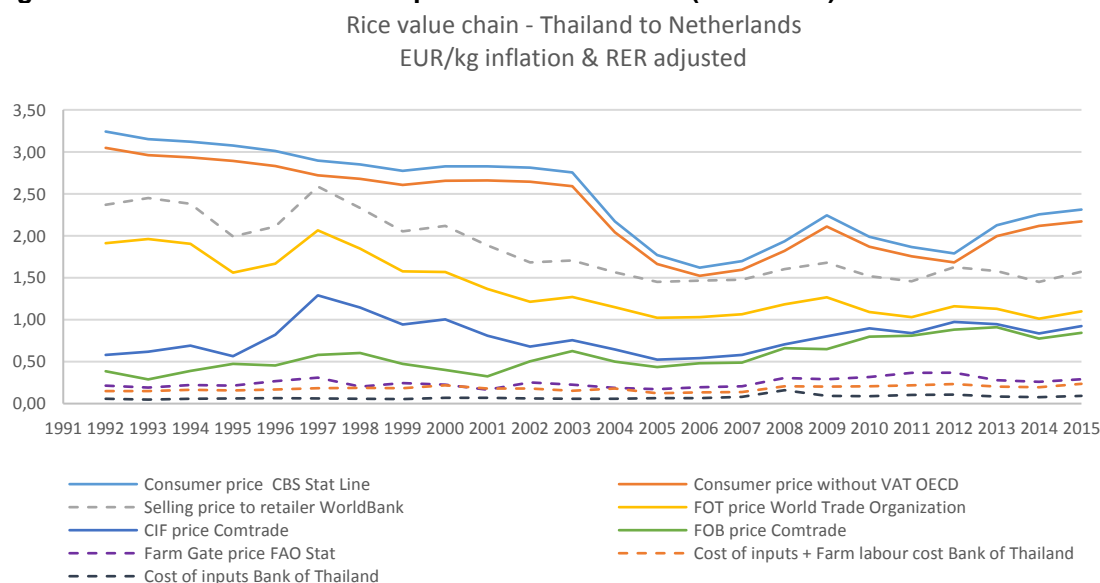
Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

As illustrated above, the share of value retained by retailers is the largest and has increased very significantly from 14% up to 26%, showing their growing influence over the chain, in particular through the growing success of their private label. The share of the packers and brands has also grown, albeit less significantly, from 16.5% up to 20%. The value remaining in Thailand has reached 36.5%, mainly captured by millers and exporters which share of value has increased from 8.5% to 24%, the 2<sup>nd</sup> largest in the chain.

To investigate further this situation, we have analysed the value evolution of the rice producer prices and wages, export FOB prices and costs of production since the early 1990s. The results for the main destinations of Thai rice are provided below.

**Analysis of the value breakdown**

**Fig. 140 Value breakdown of rice produced in Thailand (1991-2015)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).



On the consumer side, taking into account the evolution of costs of living in the Netherlands, the diagram illustrates that the consumer prices have steadily decreased until 2004, then fell by almost 50%, peaked again in 2009 (most probably because of the food price crisis), then fall back and recovered. Retailers appear to have “cushioned” the evolution of rice prices further up in the chain (i.e. limiting increases in case of peaks, but also remaining stable in case of drops) and increased again their margins over the last two years.

In the middle of the chain, the packers and brands (selling price to retailer) seem to have followed the trend of CIF import prices over the same period, and progressively increased their share of value.

In Thailand, the share of value of millers and exporters has grown very significantly since 2003, demonstrating their growing influence on the chain at the detriment of small rice growers. The situation is all the more difficult for producers than the costs of farm inputs have doubled since the early 1990s and the support price system managed by the government has been suspended in 2014, triggering a decline in producer prices since then (see section 3 on the rice global value chain for more details).

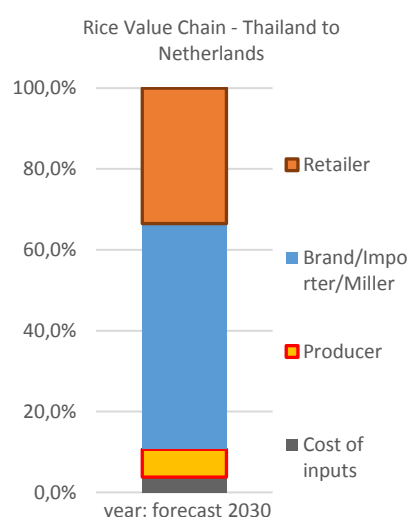
### Projections in 2030 of the value breakdown in a “Business as Usual” scenario

Based on the previous estimates, we performed a projection of the rice value breakdown in the year 2030 in a “Business as Usual” scenario:

- producer prices, wage levels and costs of inputs in Thailand are based on the latest projections of the World Bank in 2030 (for rice FOB prices, fuel and fertilisers’ prices)
- price trends at the supermarkets’ and brands’ levels have been extrapolated based on the last 15 years and using a linear regression (price trends seem to be closely related to market concentration which has been continuously growing for the past 20 years with no sign of trend reversal).

The results are as follows:

**Fig. 141 Value breakdown of rice (forecast 2030)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

According to these estimates, the share of value captured by retailers could reach 33.5% because of their increasing influence on the chain due to their position of major selling channel and the development of private labels. As a result, the value accruing to brands, processors and traders could be reduced at 56%. At the beginning of the chain, small rice growers could be left with less than 7% of the total value. In a 'business as usual scenario', this pressure on prices is likely to continue affecting the difficult living conditions of rice smallholders and accelerate the disappearance of the smallest ones.

### **Ability of small farmers to earn a living income and levers for change**

In order to cover the costs of production and ensure that workers can earn a living wage, the share of value for farmers in Thailand should be increased from 0.22 USD/kg to 0.31 USD/kg (see the section on rice global value chain for more details). This corresponds to very limited mark-up of 0.09 USD/kg, which only represents 4% of the end consumer price of rice which is 2.31 EUR/kg (2.56 USD/kg).

This increase does not need to be passed on to consumers: according to our estimates, the retailers have substantially increased their share of value from 0.07 USD per kg in 2012 to 0.65 USD per kg in 2015. This increase which happened over the last 3 years is more than enough to cover the payment of a living wage for rice farmers in Thailand.

Retailers appear to have the means to address the unsustainability of the Thai rice chain, and have started to do so through selling Fair trade and organic rice. However, they would need to generalize their commitments and take on their responsibility to ensure that the rice they sell is not produced at the cost of the living conditions of rice farmers and workers. In Thailand, they could promote the re-establishment of a minimum support price for farmers and the increase of the minimum wage for workers – which are effective tools to secure living income in the sector – by leaving a sufficient share of the value in the producing country so that the costs of sustainable production can be covered.

## **Shrimp**

### **Overview of the sector in Netherlands**

In Europe, more and more consumers are buying shrimps at the supermarket for preparation at home, instead of eating them at restaurants, which benefits the White-leg shrimp which share on the retail market is on the rise as a result of price-oriented consumers. The general trend in Europe is to shorten the supply chain and retailers and food service companies are increasingly buying finished goods directly from the source country. Freight. Frozen mainly enter in Europe by ship through Rotterdam (the Netherlands), Antwerp (Belgium), Hamburg or Bremen (Germany), and Marseille (France). The top 7 importers, i.e. Spain, France, Italy, the UK, Belgium, Germany and the Netherlands, together account for nearly 90% of the total value of frozen shrimp and prawn import value in Europe (3.3 billion EUR per year).<sup>413</sup>

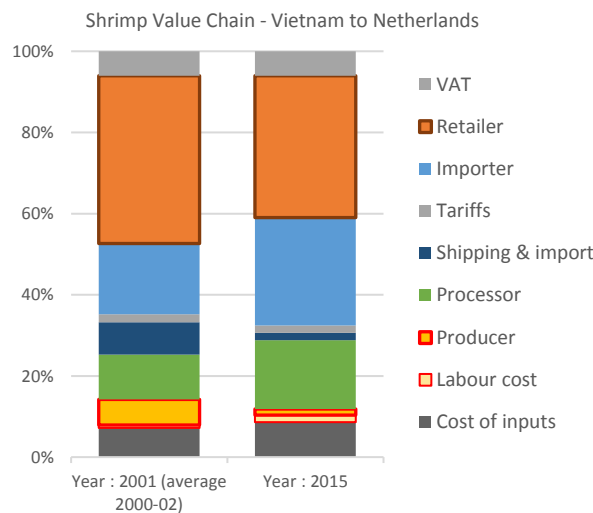
Netherlands' most important suppliers of shrimps are Morocco (52%), Viet Nam (15%) and Indonesia (10%).

For an overview of the sector, the structure of the chain and its evolution, see section 3 on the shrimp global value chain.

### **Comparison of the value breakdown in the 1990's and in 2015**

Our estimations of value breakdown (expressed in nominal currency so as to avoid potential distortions linked to correction for inflation) are as follows:

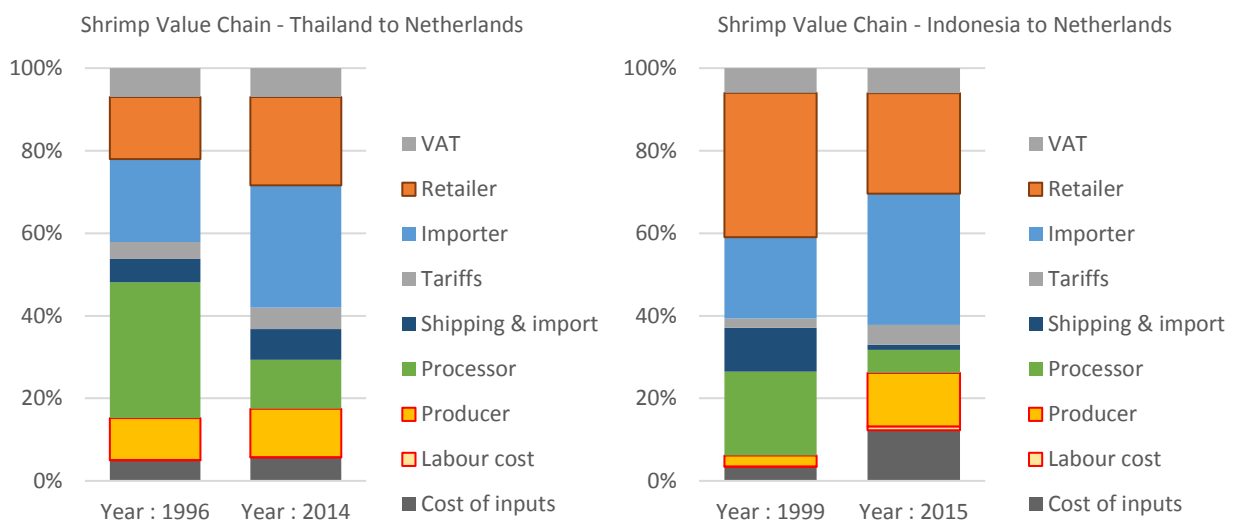
**Fig. 142 Value breakdown of shrimp produced in Viet Nam (average 2000-2002 & 2015)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

As illustrated above, the share of value retained by retailers is the largest and has decreased from 41% to 35%, but kept their influence over the chain. The share of the shrimp importers/wholesalers has increased too from 17% down to 26.5% while the share of processors in Viet Nam has substantially increased from 11% to 17%. Most importantly, the share of shrimp farmers has shrunk from 6.5% to 1.5%, as they have had to face the rise of input costs without being able to pass on this increase onto processors, because of their weak bargaining position.

**Fig. 143 Value breakdown of shrimp produced in Thailand and Indonesia**



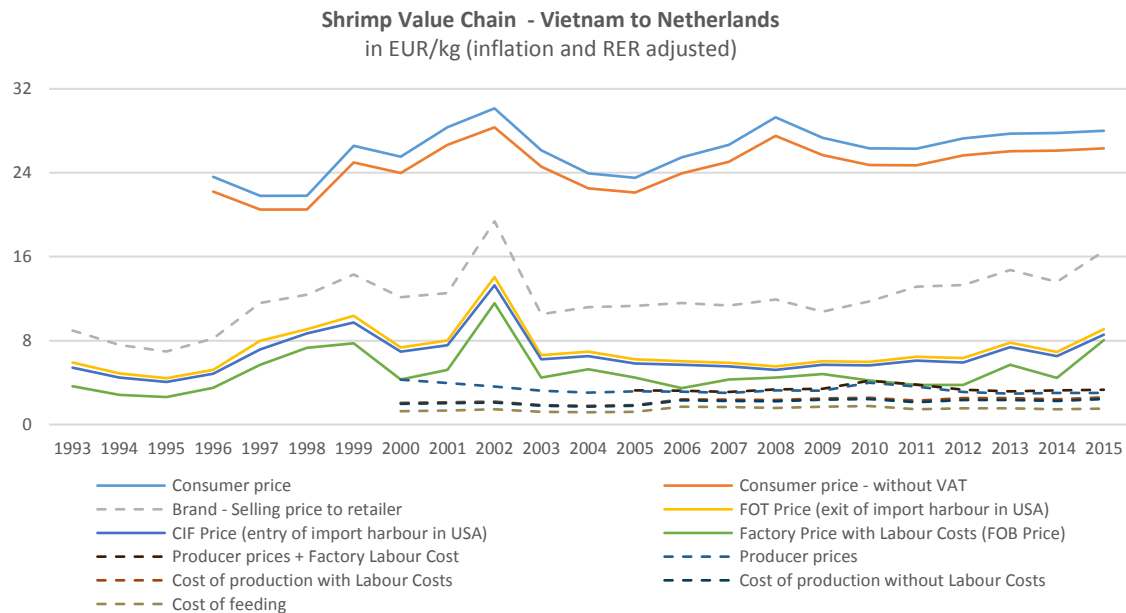
Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

Our estimates for shrimps from Thailand and Indonesia are partly distinct from the previous value breakdown: retailers appear to capture 22-24% of the total value (significantly increasing in the case of Thailand, while decreasing in the case of Indonesia similarly to Viet Nam). Importers have also increased their share to approximately 30% in both cases, and the processors have been apparently under pressure, reducing their share markedly from more than 33% and 20%, down to 12% and 6% respectively. Eventually, producers have apparently

increased their share, but this is linked to the recent development of corporate intensive aquaculture at the expense of small farmers (especially in the case of Indonesia). To investigate further this situation, we have analysed the value evolution of the shrimp production prices and wages, export FOB prices and costs of production since the early 1990s. The results for the Vietnamese, Thai and Indonesian shrimp value chains are provided below.

### Analysis of the value breakdown

**Fig. 144 Value breakdown of shrimp produced in Viet Nam (1991-2015)**



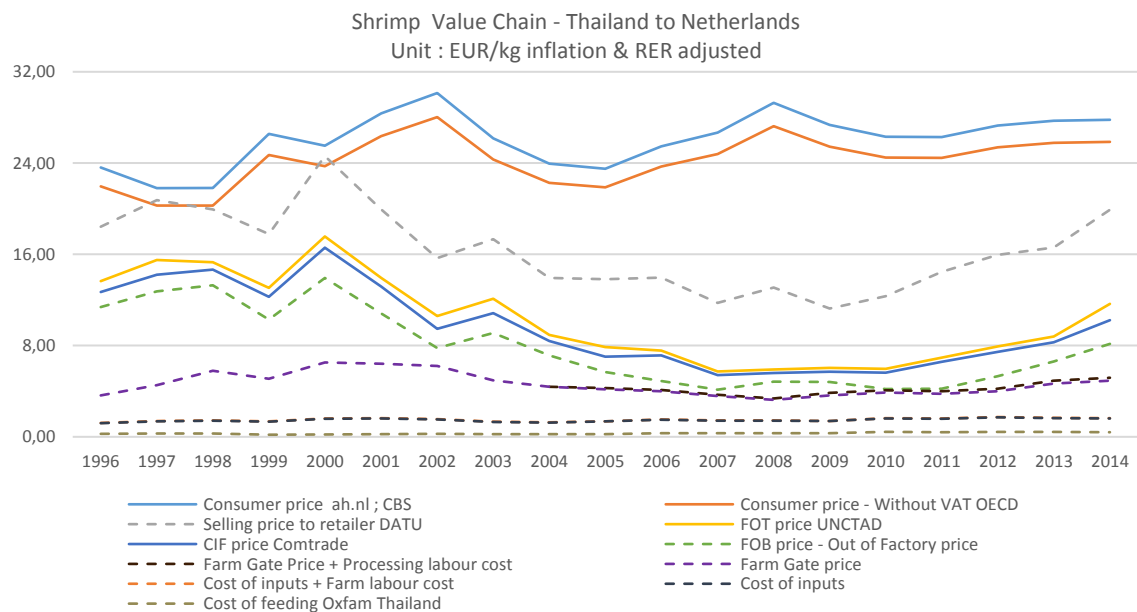
Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

On the consumer side, taking into account the evolution of costs of living in the Netherlands, the diagram illustrates that the consumer prices have been quite volatile, despite the fact that retailers have “cushioned” the evolution of shrimp prices further up in the chain (i.e. limiting increases in case of peaks, but also remaining stable in case of drops). Retailers also appear to have firmly increased their control over the total value since 2006.

In the middle of the chain, the brands/wholesalers (selling price to retailers) have amplified the trends in CIF import prices and competed with retailers to maintain their margin, and even increase them since 2008.

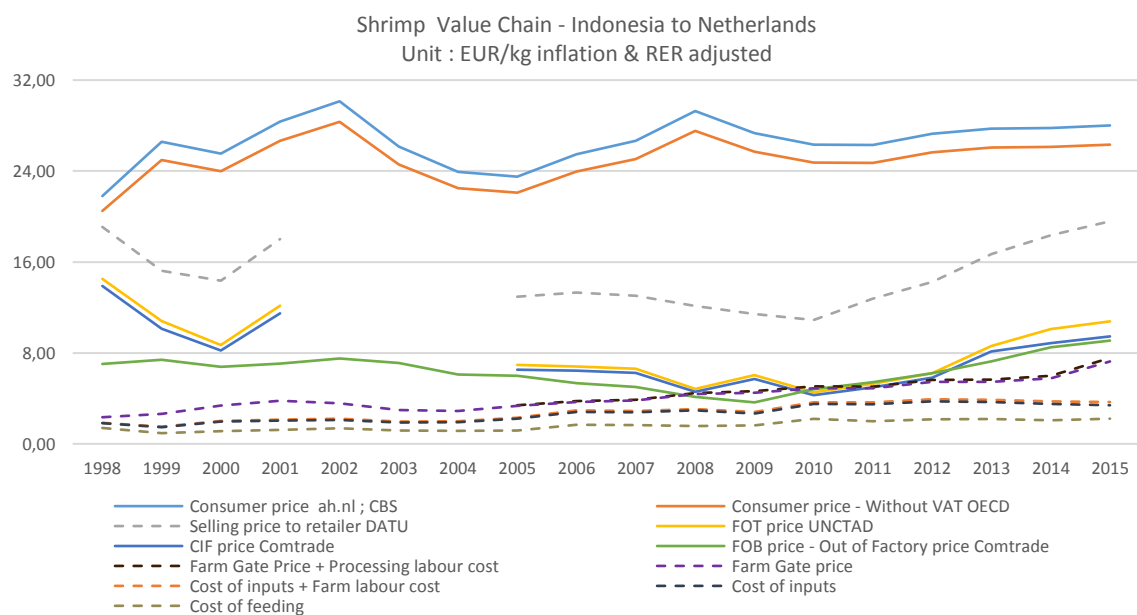
In Viet Nam, the processors (out of factory price) appear to have faced increasing costs (hence decreasing margins) up until 2011, then were apparently able to increase their share of value thanks to their vertically integrated systems. However, their slim margins most probably oblige them to boost production volumes in order to keep their profitability. Upstream, the small shrimp farmers are facing the largest pressure with a strong decrease of their share of value since 2000 because they got squeezed between the increase of input prices and the pressure from processors/manufacturers (see the section on shrimp global value chain for more details).

**Fig. 145 Value breakdown of shrimp produced in Thailand (1995-2015)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports

**Fig. 146 Value breakdown of shrimp produced in Indonesia (1991-2015)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports

As illustrated in the two diagrams above, the evolution of value breakdown for shrimps sourced from Thailand and Indonesia follow a similar pattern as for Viet Nam with an important share for retailers and importers, and an increasing pressure on workers in processing factories.

### Projections in 2030 of the value breakdown in a “Business as Usual” scenario

Based on the previous estimates, we performed a projection of the shrimp value breakdown in the year 2030 in a “Business as Usual” scenario:

- producer prices, wage levels and costs of inputs are based on the latest projections of the World Bank in 2030 (for shrimp FOB price, fuel and fertilisers’ prices)
- price trends at the supermarkets’, brands’ and processors’ levels have been extrapolated based on the last 15 years and using a linear regression (price trends seem to be closely

related to market concentration which has been continuously growing for the past 20 years with no sign of trend reversal).

The results are as follows:

**Fig. 147 Value breakdown of shrimp (forecast 2030)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

According to these estimates, the share of value captured by retailers could shrink to 22.5% in the case of Viet Nam and increase to more than 40% in the cases of Thai and Indonesian shrimps, reflecting the increasing competition with brands and processors whose share could substantially expand up to 69% of the total value in the case of Viet Nam and 46%-50% for Thai and Indonesian shrimps. At the beginning of the chain, small farmers could be left with less than 6% of the total value. In a 'business as usual scenario', this pressure on prices is likely to continue affecting the difficult living conditions of shrimp farmers in Viet Nam as well as the workers in the shrimp processing industry.

#### **Ability of small farmers and workers to earn a living income/wage and levers for change**

In order to cover the costs of sustainable production, the share of value for farmers in Viet Nam, Thailand and Indonesia should be increased at least by 0.28 USD/kg (see the section on shrimp global value chain for more details), which only represents 1% of the end consumer price of shrimp which is 28.00 EUR /kg (31.07 USD/kg).

This increase does not need to be passed on to consumers: according to our estimates, the retailers have substantially increased their share of value from 7.10 USD per kg in 2002 to 10.80 USD per kg in 2015. This increase which happened over the last 15 years is more than enough to cover the living income of farmers and the payment of a living wage for workers.

Retailers and brands appear to have the means to address the unsustainability of the Vietnamese shrimp chain, and have started to make some voluntary commitments in this direction. However, they would need to generalize their engagement and take on their responsibility to ensure that the shrimp they sell is not produced at the cost of the living conditions of small farmers and workers in the chain. In particular, this would require increasing the minimum wage for workers (on vessels, as well as in farming and processing) to the living wage level, and allocating enough resources for controls on the ground as it is one of the main ways to ensure that they can achieve a sustainable livelihood. In addition, they could support the establishment of a guaranteed price for the small shrimp farmers together with environmental and social conditions to ensure the sustainability of production.<sup>414</sup>

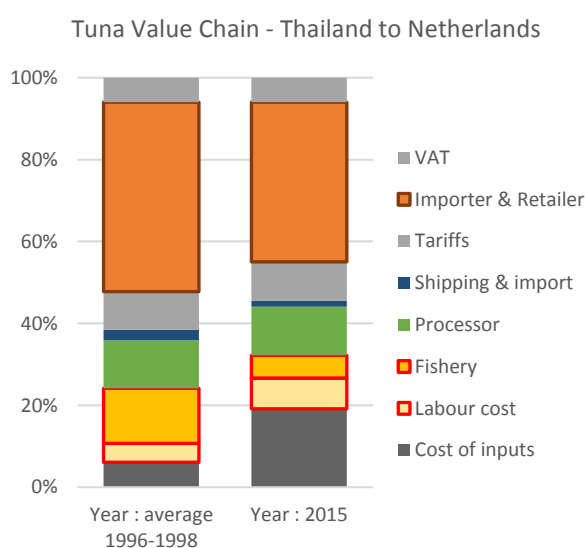
## Canned tuna

### Overview of the sector in Netherlands

Yellowfin tuna is the most important tuna in terms of European consumption. In France and Spain, there is also a high preference for albacore tuna. Looking at consumption per capita in Europe, tuna only plays a small role, due to its relatively high price. From the overall per-capita fish and seafood consumption in Europe (22.6 kg), it is estimated that about 2.7 kg is tuna in various forms. Canned tuna represents the lion's share of that amount (2.2 kg), followed by fresh tuna (0.5 kg) and frozen tuna (0.10 kg). Most canned tuna is sold through retailers that control a large part of the market thanks to their private labels (up to 40% market share and more). Canned tuna enters Europe by ship through the ports of Rotterdam (the Netherlands), Antwerp (Belgium), Hamburg or Bremen (Germany), Vigo (Spain) and Marseille (France).<sup>415</sup>

For an overview of the sector, the structure of the chain and its evolution, see section 3 on the canned tuna global value chain.

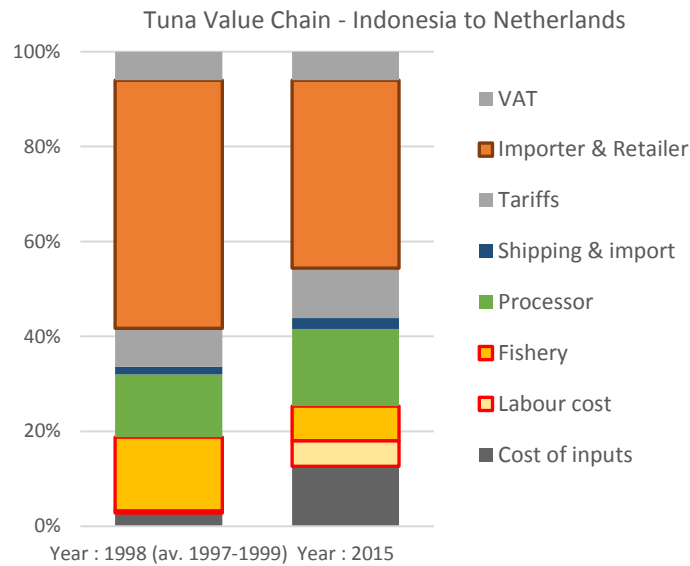
**Fig. 148 Value breakdown of canned tuna produced in Thailand (average 1996-1998 & 2015)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

As illustrated above, the share of value retained by retailers is the largest and has declined from 46% down to 39%, their large influence over the chain, especially through the dominance of their private labels, being in stronger competition with brands in recent years. The share of the manufacturers of canned tuna has remained constant at 9.5%. Most importantly, the share of fisheries has shrunk from 14.5% to 2.5%, as they have had to face the sheer rise of fuel and operation costs without being able to pass on this increase onto processors, because of their weak bargaining position. This leaves only 2.5% on average for labour costs on vessels.

**Fig. 149 Value breakdown of canned tuna produced Indonesia**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

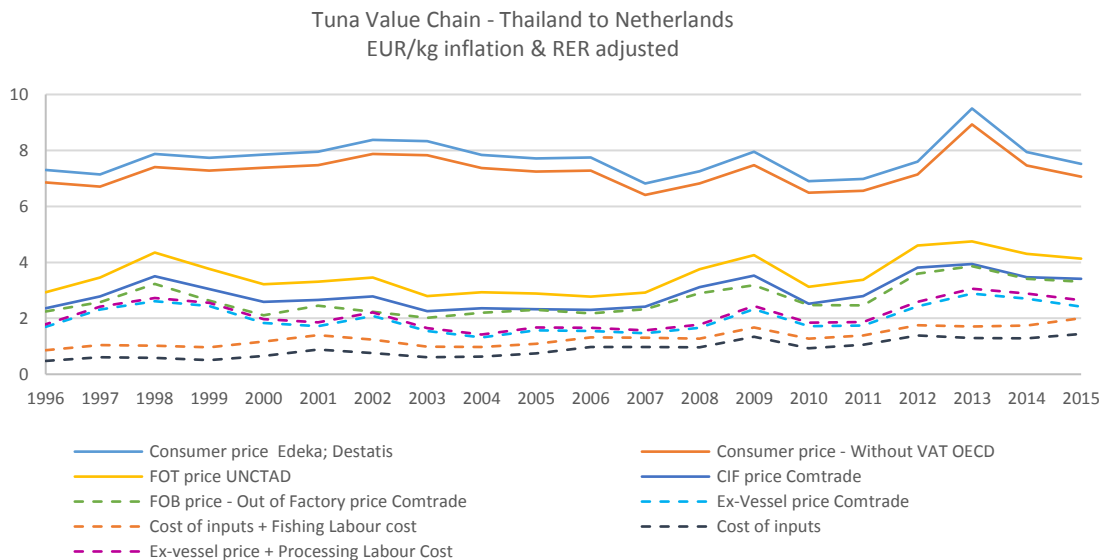
Our estimates for canned tuna from Indonesia is quite similar from the previous value breakdown: retailers appear to retain their large influence over the chain, their share declining from 52% to 39% of the total value. Importers have increased their share from 8% to 10%, and the processors have apparently managed to increase theirs too from 13% to 16%. Eventually, fisheries appear to be under strong pressure, their share declining sharply from 15.5% to 7% because of the combined pressure of buyers' price pressure and increasing internal costs.

To investigate further this situation, we have analysed the value evolution of the canned tuna production prices and wages, export FOB prices and costs of production since the early 1990s. The results for the main destinations of Thai and Indonesian canned tuna are provided below.

### Analysis of the value breakdown



**Fig. 150 Value breakdown of canned tuna produced in Thailand (1996-2015)**

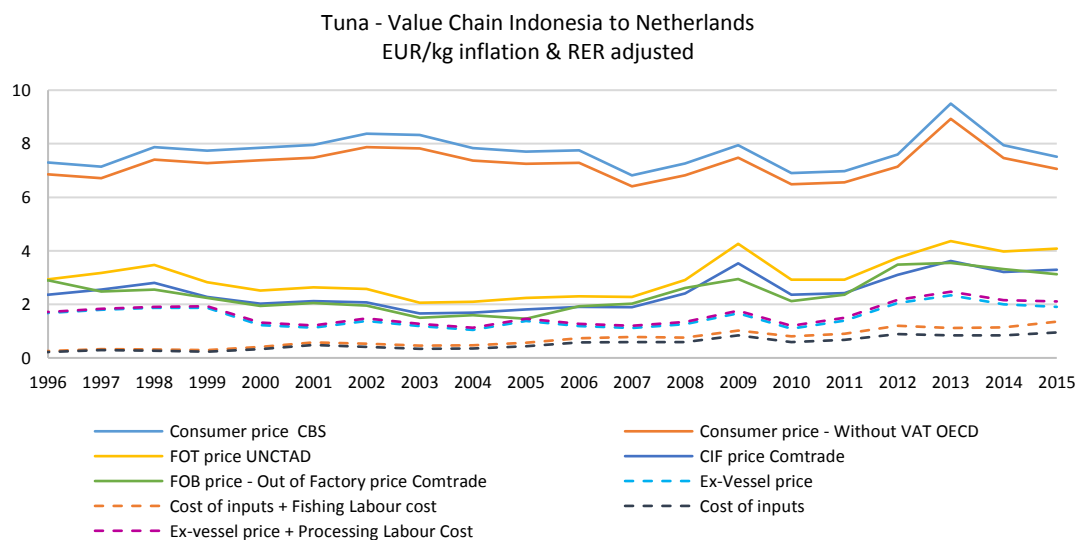


Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

On the consumer side, taking into account the evolution of costs of living in Netherlands, the diagram illustrates that the consumer prices have remained globally stable from 1996 to 2015, albeit for small and short spikes in 2009 and 2013. Retailers appear to have kept their strong control over the period, but amplified increases of prices upstream since 2007 (in comparison with the stabilizing effect they had previously).

In Thailand, the manufacturers (out of factory price) appear to have followed the trend of CIF import prices and were able to maintain their share thanks to their vertically integrated systems. However, their slim margins most probably oblige them to boost production volumes in order to keep their profitability. Upstream, the fisheries are facing the largest pressure with a strong decrease of their share of value since 1998, albeit for a small and short recovery in 2013-2014, because they got squeezed between the strong increase of fuel prices and the pressure on price from processors/manufacturers. The pressure is passed onto the workers, the majority being migrant, and on the level of their wages (see the section on canned tuna global value chain for more details).

**Fig. 151 Value breakdown of canned tuna produced in Indonesia (1991-2015)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports

As illustrated in the diagram above, the evolution of value breakdown for canned tuna sourced from Indonesia follows a similar pattern as for Thailand with a dominant share for retailers, and an increasing pressure on fisheries, with significant potential impacts on the working conditions and wages of workers on tuna vessels.

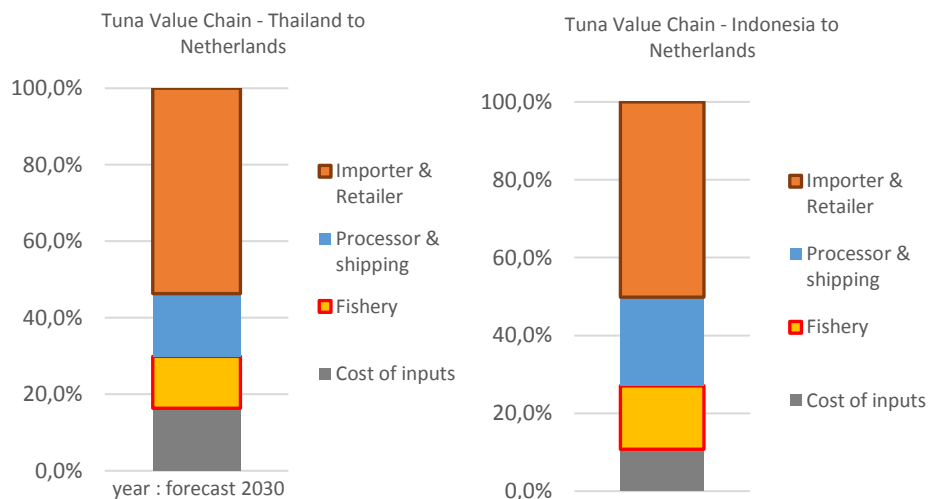
**Projections in 2030 of the value breakdown in a “Business as Usual” scenario**

Based on the previous estimates, we performed a projection of the canned tuna value breakdown in the year 2030 in a “Business as Usual” scenario:

- producer prices, wage levels and costs of inputs in Thailand are based on the latest projections of the World Bank in 2030 (for grain, fuel and fertilisers’ prices)
- price trends at the supermarkets’, brands’ and fisheries’ levels have been extrapolated based on the last 15 years and using a linear regression (price trends seem to be closely related to market concentration which has been continuously growing for the past 20 years with no sign of trend reversal).

The results are as follows:

**Fig. 152 Value breakdown of canned tuna (forecast 2030)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

According to these estimates, the share of value captured by retailers could be restored and increased to 50% and more because of their increasing influence on the chain due to their position of major selling channel and the development of private labels. At the beginning of the chain, fisheries could be left with only 14-16% of the total value. In a ‘business as usual scenario’, this pressure on prices is likely to continue affecting the difficult living conditions of workers on Thai vessels as well as on the Indonesian fleet.

**Ability of workers to earn a living wage and levers for change**

In order to cover the costs of sustainable production, the share of value for workers in Thailand and Indonesia should be increased at least by 0.08 USD/kg (see the section on canned tuna global value chain for more details), which only represents 1% of the end consumer price of canned tuna which is 7.51 EUR/kg (8.34 USD/kg). This increase does not need to be passed on to consumers: according to our estimates, the retailers have increased their share of value from 3.25 USD per kg in 2012 to 4.20 USD per kg in 2014. This increase is more than enough to cover the payment of a living wage for workers in Thai fisheries.

Retailers and brands appear to have the means to address the unsustainability of the Thai canned tuna chain, and have started to make some voluntary commitments in this direction. However, they would need to generalize their engagement and take on their responsibility to ensure that the canned tuna they sell is not produced at the cost of the living conditions of workers in the chain. In particular, this would require increasing the minimum wage for workers (on vessels, as well as in processing) to the living wage level, and allocating enough resources for controls on the ground as it is one of the main ways to ensure that both can achieve a sustainable livelihood. <sup>416</sup>

## Orange juice

### Overview of the sector in Netherlands

Fruit juice saw has been in decline since 2013 in the Netherlands. The trend to polarisation witnessed during the recession, with private label and discount brands performing well at one end and premium products for special occasions/treats at the other, has been largely replaced by the emergence of the consumer health trend to avoid sugar consumption. Ambient FC juice has suffered the most from this trend, with chilled and premium juice remaining buoyant thanks to consumers' willingness to buy into the perceived superior health properties of 'fresh juice'. <sup>417</sup>

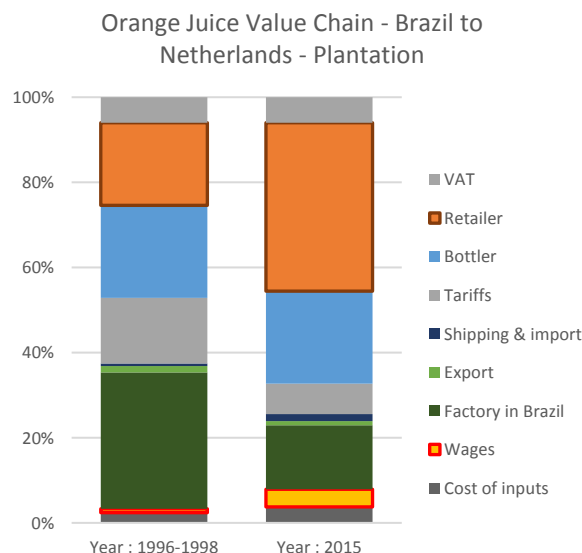
Netherlands' most important suppliers of Frozen Concentrate Orange Juice (FCOJ) are Brazil (75%), Mexico (4%) and South Africa (2%).

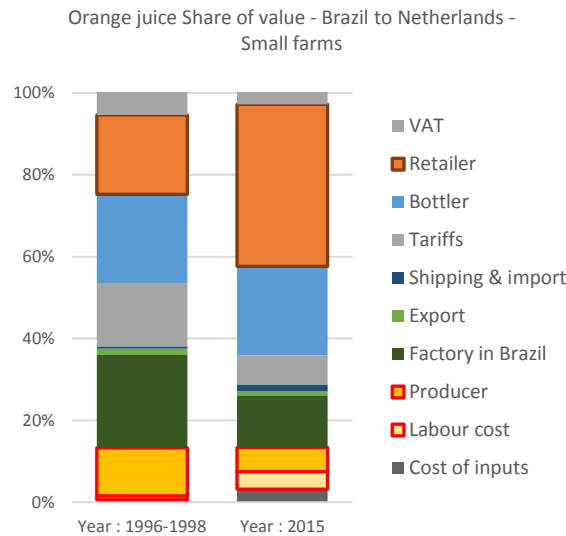
For an overview of the sector, the structure of the chain and its evolution, see section 3 on the orange juice global value chain.

### Comparison of the value breakdown in the 1990's and in 2015

Our estimations of value breakdown (expressed in nominal currency so as to avoid potential distortions linked to correction for inflation) are as follows:

**Fig. 153 Value breakdown of orange juice made from FCOJ produced in Brazil, supplied by plantations, and by small orange farmers (average 1996-1998 & 2015)**





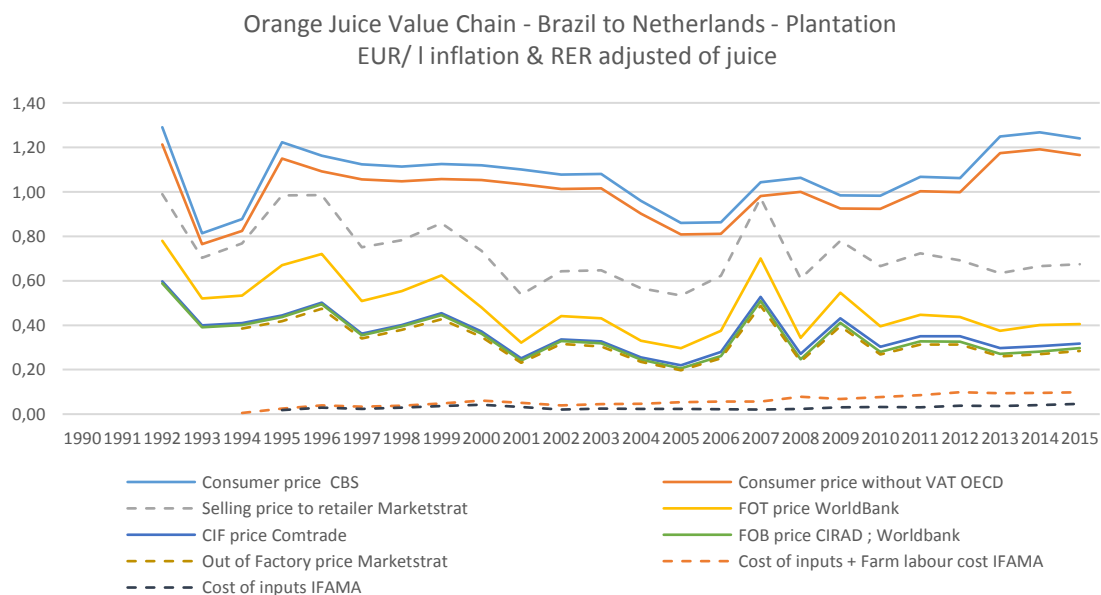
Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

As illustrated above, the share of value retained by retailers is the largest and has substantially increased from 19.5% up to 39.5%, showing their growing influence over the chain. The share of the bottlers has remained unchanged at 21.5% whereas the share of factories in Brazil have dropped from 32% down to 15% when they source orange from their own plantations (and from 22.5% down to 13% when oranges are purchased to small farmers). Most importantly, the share of small farmers has shrunk from 12% to 6%, as they have had to face the rise of input and labour costs without being able to pass on this increase onto processors, because of their weak bargaining position.

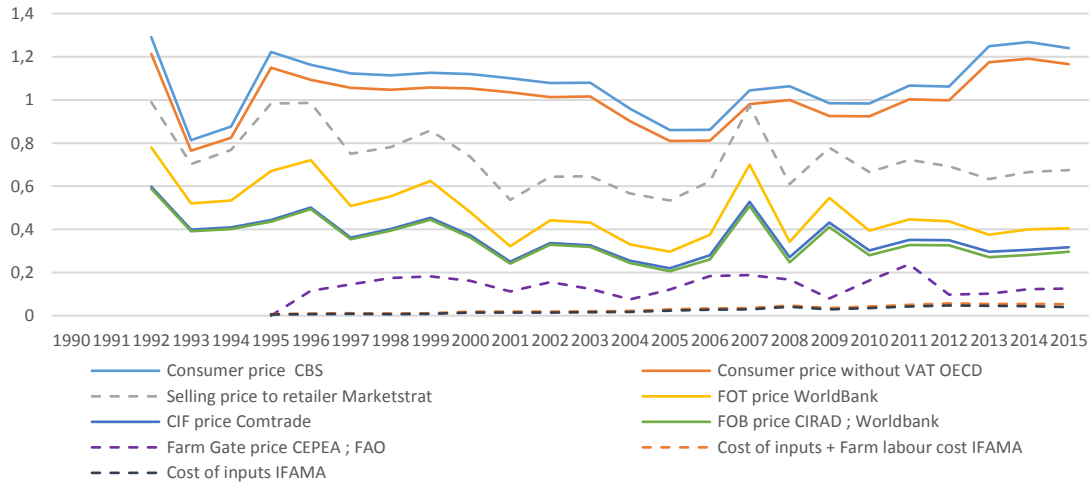
To investigate further this situation, we have analysed the value evolution of the orange producer prices and wages, export FOB prices and costs of production since the early 1990s. The results for the main destinations of Brazilian FCOJ are provided below.

### Analysis of the value breakdown

**Fig. 154 Value breakdown of orange juice made from FCOJ produced in Brazil, supplied by plantations, and by small orange farmers (1991-2015)**



Orange juice Value Chain - Brazil to Netherlands - Small growers  
EUR / l inflation & RER adjusted of juice



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

On the consumer side, taking into account the evolution of costs of living in the Netherlands, the diagram illustrates that the consumer prices have steadily declined by approx. 30% between 1991 and 2005, before increasing by 1/3 until 2015. Most importantly, retailers appear to have “cushioned” the evolution of FCOJ prices further up in the chain until 2010 (i.e. limiting increases in case of peaks, but also remaining stable in case of drops), then have started to increase substantially their share of value.

In the middle of the chain, the brands/bottlers (selling price to retailers) have amplified the trends in CIF import prices and competed with retailers to maintain their share of value.

In Brazil, the processors (out of factory price) appear to have faced increasing costs (hence decreasing margins) over the whole period and were unable to increase their share of value despite their vertically integrated systems, albeit when sourcing from small orange producers over the past 3 years thanks to falling producer prices. Their slim margins most probably oblige them to boost production volumes in order to keep their profitability and to put the largest pressure on small orange farmers who got squeezed between the increase of input prices and the pressure from processors (see the section on orange juice global value chain for more details).

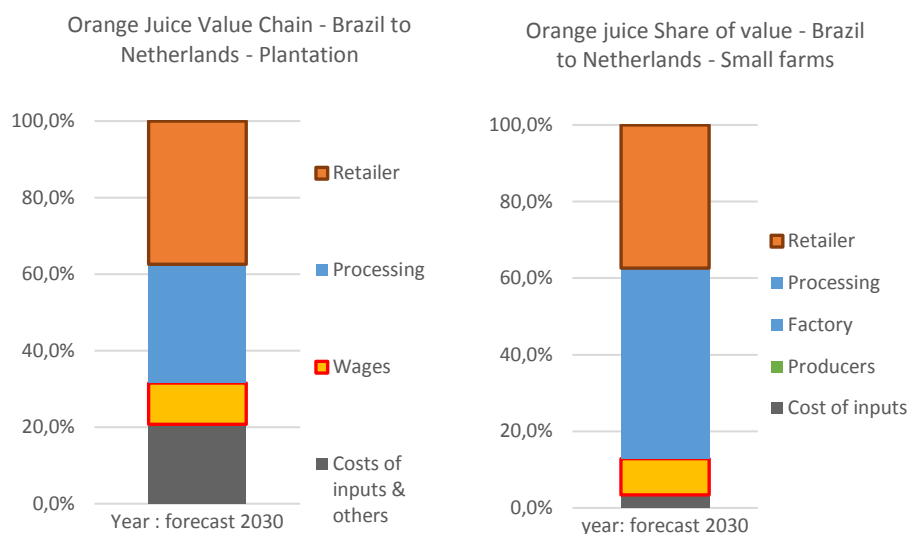
### Projections in 2030 of the value breakdown in a “Business as Usual” scenario

Based on the previous estimates, we performed a projection of the orange juice value breakdown in the year 2030 in a “Business as Usual” scenario:

- producer prices, wage levels and costs of inputs in Brazil are based on the latest projections of the World Bank in 2030 (for fuel and fertilisers’ prices)
- price trends at the supermarkets’, brands’ and processors’ levels have been extrapolated based on the last 15 years and using a linear regression (price trends seem to be closely related to market concentration which has been continuously growing for the past 20 years with no sign of trend reversal).

The results are as follows:

**Fig. 155 Value breakdown of orange juice made from FCOJ produced in Brazil, supplied by plantations, and by small orange farmers (forecast 2030)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

According to these estimates, the share of value captured by retailers could stabilize to 37.5% because of their position of major selling channel and the development of private labels. The share of value of brands/bottlers and importers could increase to 31% of the total value. At the beginning of the chain, small farmers and workers could be left with respectively less than 9.5% and 11% of the total value. In a 'business as usual scenario', this pressure on prices is likely to continue affecting the difficult living conditions of small orange growers and especially farm workers in Brazil.

#### **Ability of small farmers and workers to earn a living income/wage and levers for change**

In order to cover the costs of orange juice from Brazil, the share of value for small farmers or workers should be increased at least from an estimated 0.08 USD/kg up to 0.14 USD/kg (see the section on orange juice global value chain for more details). This corresponds to very limited mark-up of 0.06 USD/kg, which only represents 6% of the end consumer price of orange juice which is 1.24 EUR/L (1.38 USD/L).

This increase does not need to be passed on to consumers: according to our estimates, the retailers have substantially increased their share of value from 0.20 USD per kg in 2009 to 0.54 USD per kg in 2015. This increase which happened over the last 5-6 years is enough to cover the living income of farmers and the payment of a living wage for workers.

Retailers and brands appear to have the means to address the unsustainability of the Brazilian orange juice chain. To do so, they would need to ensure that the orange juice they sell is not produced at the cost of the living conditions of small farmers and workers in the chain. In particular, this would require increasing the minimum wage for workers (in farming and processing) to the living wage level, and allocating enough resources for controls on the ground as it is one of the main ways to ensure that they can achieve a sustainable livelihood. In addition, they could support the establishment of a guaranteed price for the small orange growers enabling them to generate a living income, together with environmental and social conditions to ensure the sustainability of production.<sup>418</sup>

# Banana

## Overview of the sector in Netherlands

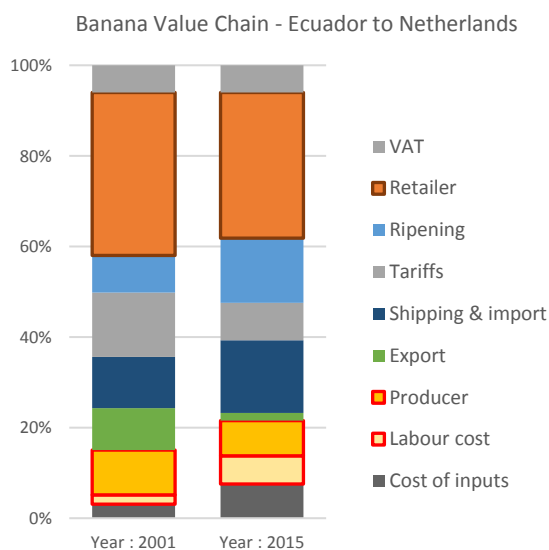
The fresh fruit market in the Netherlands is the 7<sup>th</sup> biggest in Europe, its total size being estimated at more than 200,000 tonnes.<sup>419</sup>

The Dutch banana market is characterized by a strong presence of large retailers and buying groups with significant buyer power, the 3 main retailers controlling over 85% of total banana purchases. In recent years, the increasing trend of direct sourcing and the growing penetration of hard discounters have strengthened the competition at the import and wholesale levels. However, brands still play a role towards Dutch consumers (especially Chiquita), Chiquita is the leader with 35% market share, followed by Fyffes with 25%. Other significant players are Dole (20%), Cobana (8%), Del Monte (6%), Banacol (5%) and the well-established wholesaler de Groot (7%).<sup>420</sup>

The main banana producing countries supplying the Dutch market are Ecuador (25%), Colombia (21%) and Costa Rica (11%).

For an overview of the sector, the structure of the chain and its evolution, see section 3 on the banana global value chain.

**Fig. 156 Value breakdown of banana produced in Ecuador (average 2000-2002 and 2015)**

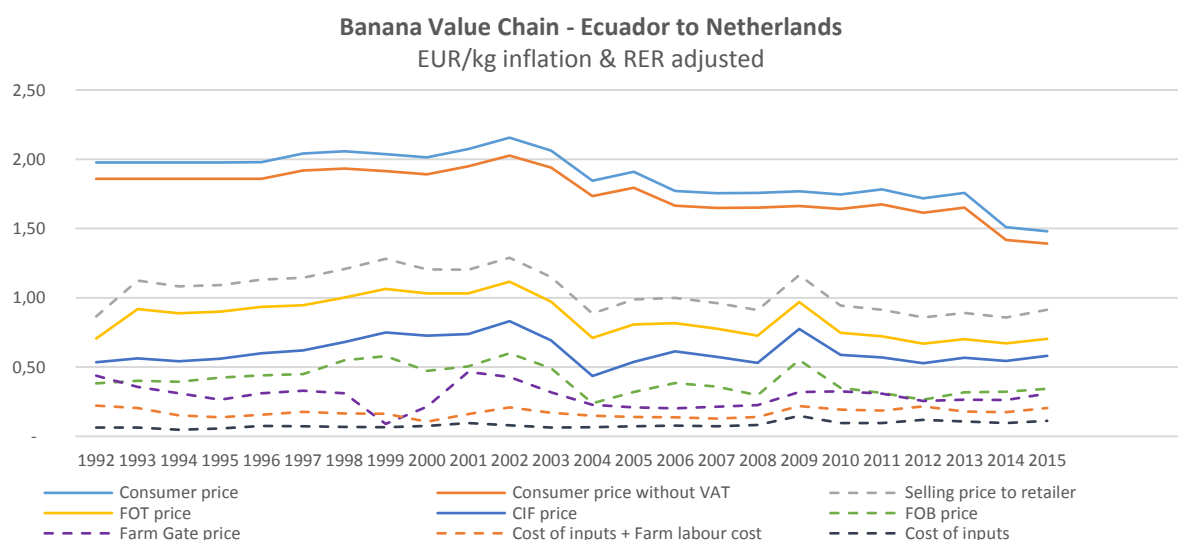


Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

These estimates show that the retail share has slightly decreased from 36% down to 32% over the past 15 years whilst the share of traders (shipping to ripening) has increased from 34% up to 38.5%. At the other side of the chain in Ecuador, the value left for banana producers by sales to buyers has decreased from 10% down to 7.5%. In the case of workers, although the share has apparently increased since 2001, the situation is not better as the costs of living have increased more rapidly than wages.

## Analysis of the value breakdown

**Fig. 157 Value breakdown of banana produced in Ecuador (1993-2015)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

On the consumer side, taking into account the evolution of costs of living in the Netherlands, the diagram illustrates the downward trend of the banana price since 1994 which have decreased by more than 20% in real terms.

In the middle of the chain, the CIF import price of bananas has followed a similar tendency, but the wholesale price has reduced much more significantly, due to the significant decrease of banana tariffs in Europe since the agreement in the WTO. As a result, the diagram illustrates that retailers have managed to maintain their share of value in real terms since 2004, using their increased bargaining power to pressure the rest of the banana chain.

In Ecuador, the value left for banana growers as well as workers has decreased significantly since the early 1990's and does not enable them to cover their costs of production and the livelihoods of their families (see the section on [banana's global value chain](#) for more details).

As illustrated in our diagram, the estimated export price of bananas appears to have decreased to such a point that it is only slightly above the average producer price in Ecuador, suggesting that a strong pressure is put on producers. As a result, the income earned by small banana growers in Ecuador appears to be only half the living wage in 2015 according to the government estimates. Whilst the situation of workers seems more favourable thanks to the enforcement of the minimum wage law, recent studies have shown that a significant proportion of workers' households didn't achieve a living income<sup>421</sup>.

### Projections in 2030 of the value breakdown in a "Business as Usual" scenario

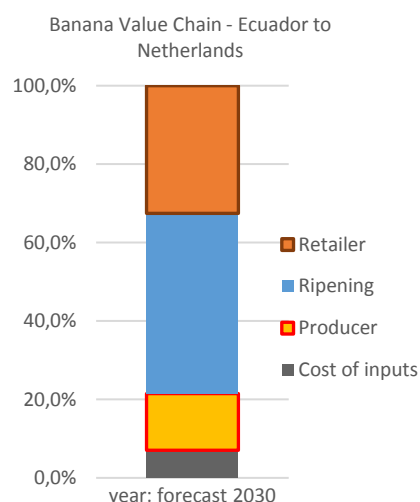
Based on the previous estimates, we performed a projection of the banana value breakdown in the year 2030 in a "Business as Usual" scenario:

- producer prices, wage levels and costs of inputs in Ecuador are based on the latest projections of the World Bank in 2030 (for banana FOB prices, fuel and fertilisers' prices)
- price trends at the supermarkets' and fruit companies' levels have been extrapolated based on the last 15 years and using a projection model similar to the one used by the World Bank (price trends seem to be closely related to retailers' market concentration which has been continuously growing for the past 20 years with no sign of trend reversal).

The results are as follows:



**Fig. 158 Value breakdown of banana produced in Ecuador (forecast 2030)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

According to these estimates, the share of value captured by retailers could stabilize at 32% of the total value of fresh bananas, while the share of fruit companies would amount to 46% and producers and workers would be sharing 14.5% of the end value of bananas, which would be insufficient to enable them making a decent living.

In a 'business as usual scenario', this pressure on prices is likely to accelerate further the disappearance of small growers in the world banana trade, a continuous trend that has been taking place over the past decades; it is also likely to increase further the 'flexibilisation' of working conditions which is already affecting many workers, in order to address the retailers' demand for cheap imported bananas.

The result may well be highly concentrated banana chains, from retailers down to producers, which will most probably lack resilience and increase further the social and environmental impacts in producing countries.

**Ability of small farmers and workers to earn a living income/wage and levers for change**

In order to cover the costs of production and ensure that both workers and small farmers can earn a living wage, the export price of bananas from Ecuador should be increased by 0.03 USD/kg (see the section on [banana's global value chain](#) for more details). This corresponds to limited mark-up compared to the end consumer price of bananas which is 1.39 EUR/kg (1.64 USD/kg).

This increase does not need to be passed on to consumers: according to our estimates, the retailers have increased their share of value from 0.70 USD/kg in 2009 to 1.00 USD per kg in 2013. This increase which happened recently is more than enough to cover the payment of a living wage to banana farmers and workers in Ecuador. In addition, direct sourcing could be a way for retailers to keep low costs in the middle stages of the chain (although the important role of traders who take most of the logistics and financial risks should be kept in mind, as demonstrated by the experience of UK retailers).

Retailers appear to have the means to address the unsustainability of the Ecuadorian banana chain, and have started to do so through selling Fair trade and organic bananas. However, they would need to generalize their commitments and take on their responsibility to ensure that the

banana they sell is not produced at the cost of the living conditions of producers and workers, as well as the environment. In the case of Ecuador, they could promote the minimum support price for farmers and the minimum wage for workers – which are effective tools to secure living income in the banana sector – by leaving a sufficient share of the banana value in the producing country so that the costs of sustainable production can be covered.

Given the concentration of market power in the hands of retailers who currently exert economic pressure down the chain while imposing strong conditions on suppliers (in terms of quality, health security, consistency...), this is likely to require stricter public regulations to be enforced, in consumer countries as well as producer countries.<sup>422</sup>

## Table grape

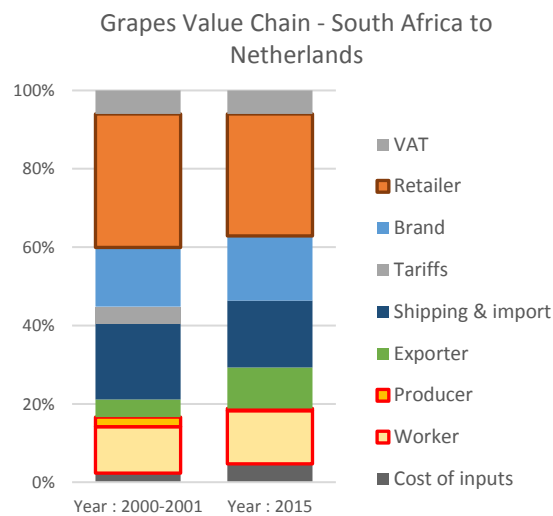
### Overview of the sector in Netherlands

For an overview of the sector, the structure of the chain and its evolution, see section 3 on the grape global value chain.

### Comparison of the value breakdown in the 1990's and in 2015

Our estimations of value breakdown (expressed in nominal currency so as to avoid potential distortions linked to correction for inflation) are as follows:

**Fig. 159 Value breakdown grape produced in South Africa (average 2000-2001 and 2015)**



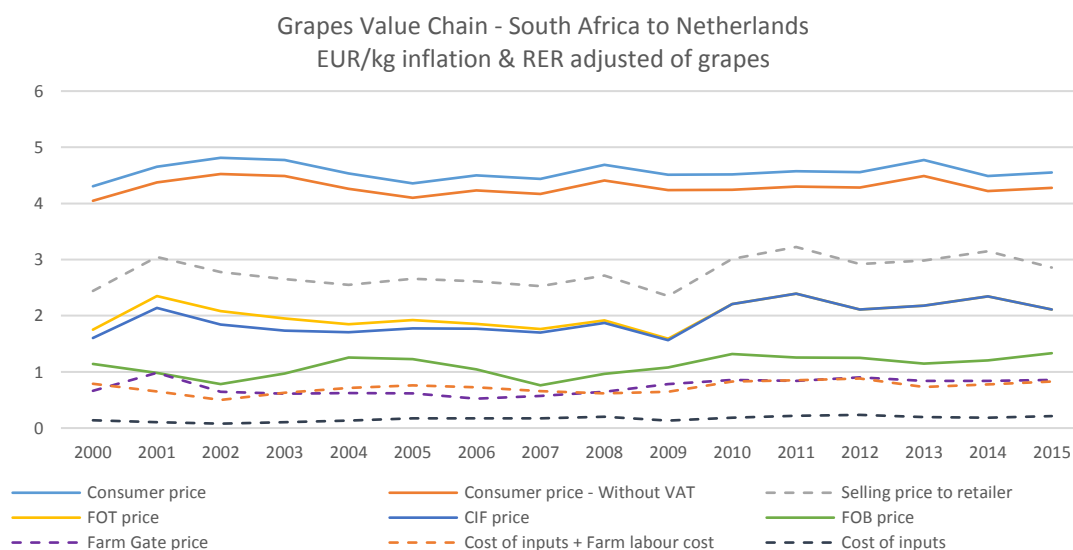
Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

As illustrated above, the share of value retained by retailers is the largest and has slightly declined since 2000 from 34% down to 31%. In contrast, the share of value of wholesalers has remained globally stable at 15%. The value remaining in South Africa has significantly increased from 21% up to 29%.

To investigate further this situation, we have analysed the value evolution of the table grape producer prices and wages, export FOB prices and costs of production since the early 1990s. The results for the main destinations of South African grape are provided below.

## Analysis of the value breakdown

**Fig. 160 Value breakdown of grape produced in South Africa (2000-2015)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

On the consumer side, taking into account the evolution of costs of living in the Netherlands, the diagram illustrates that the consumer prices have been globally stable between 2000 and 2015. Retailers appear to have “cushioned” the evolution of grape prices further up in the chain (i.e. limiting increases in case of peaks, but also remaining stable in case of drops).

In the middle of the chain, the wholesalers (retail price to retailer) appear to have followed the trend of CIF import prices and slightly improved their share of the total value.

In South Africa, the plantations have been facing a sharp increase in farm inputs since the end of the 1990s which has squeezed their share of value. In order to maintain their failing margin, a general trend of casualization of labour has been observed among South African plantations, and a move of the vineyard towards regions where grape can be produced and sold more profitably in early December (see the section on grape global value chain for more details).

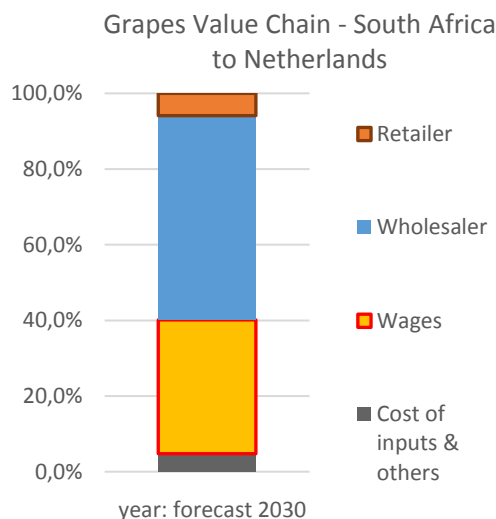
### Projections in 2030 of the value breakdown in a “Business as Usual” scenario

Based on the previous estimates, we performed a projection of the grape value breakdown in the year 2030 in a “Business as Usual” scenario:

- producer prices, wage levels and costs of inputs in South Africa are based on the latest projections of the World Bank in 2030 (for fuel and fertilisers’ prices)
- price trends at the supermarkets’, wholesalers’ and producers’ levels have been extrapolated based on the last 15 years and using a linear regression (price trends seem to be closely related to market concentration which has been continuously growing for the past 20 years with no sign of trend reversal).

The results are as follows:

**Fig. 161 Value breakdown of grape (forecast 2030)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

According to these estimates, the share of value captured by retailers could decrease down to 6% because of the competition with wholesalers/exporters/plantations whose share could increase at 54% of the total value. At the beginning of the chain, workers could account for 32% of the total value.

### Ability of workers to earn a living wage and levers for change

In order to cover the costs of production and ensure that workers can earn a living wage, the share of value for workers in South Africa should be increased from 0.69 USD/kg currently to 0.89 USD/kg (see the section on the grape global value chain for more details). This corresponds to a mark-up of 0.20 USD/kg, which represents less than 5% of the end consumer price of table grape which is 4.55 EUR/kg (5.05USD/kg).

This increase does not need to be passed on to consumers: according to our estimates, the wholesalers have increased their share of value from 0.44 USD per kg in 2000 to 10.85 USD per kg in 2015. This increase which happened in the last 15 years is enough to cover the payment of a living wage for table grape workers in South Africa.

Retailers appear to have the means to address the unsustainability of the South African grape chain, and have started to do so through selling Fair trade, sustainable and organic grapes. However, they would need to generalize their commitments and take on their responsibility to ensure that the grape they sell is not produced at the cost of the living conditions of workers, as well as the environment. In the case of South Africa, they could promote the rise of the minimum wage for workers to ensure it covers the costs basic needs of their families – which is an effective tool to secure living income in the sector – by leaving a sufficient share of the value in the producing country so that the costs of sustainable production can be covered.<sup>423</sup>

## Green bean

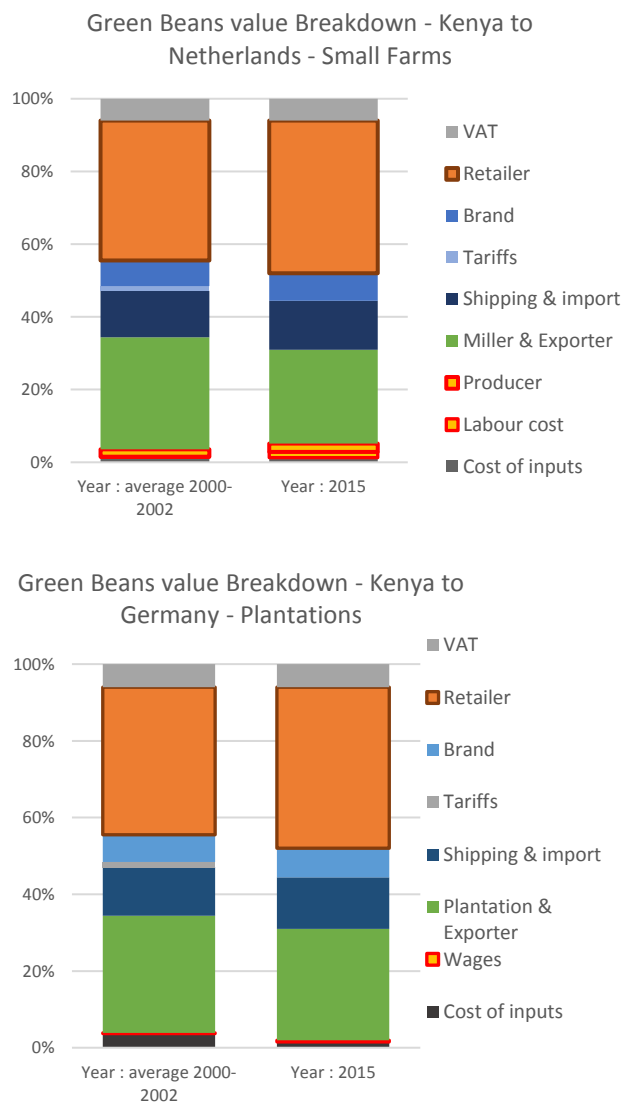
### Overview of the sector in Netherlands

For an overview of the sector, the structure of the chain and its evolution, see section 3 on the green bean global value chain.

## Comparison of the value breakdown in the 1990's and in 2015

Our estimations of value breakdown (expressed in nominal currency so as to avoid potential distortions linked to correction for inflation) are as follows:

**Fig. 162 Value breakdown of green bean produced in Kenya, supplied by plantations, and by small farmers (average 2000-2002 & 2015)**



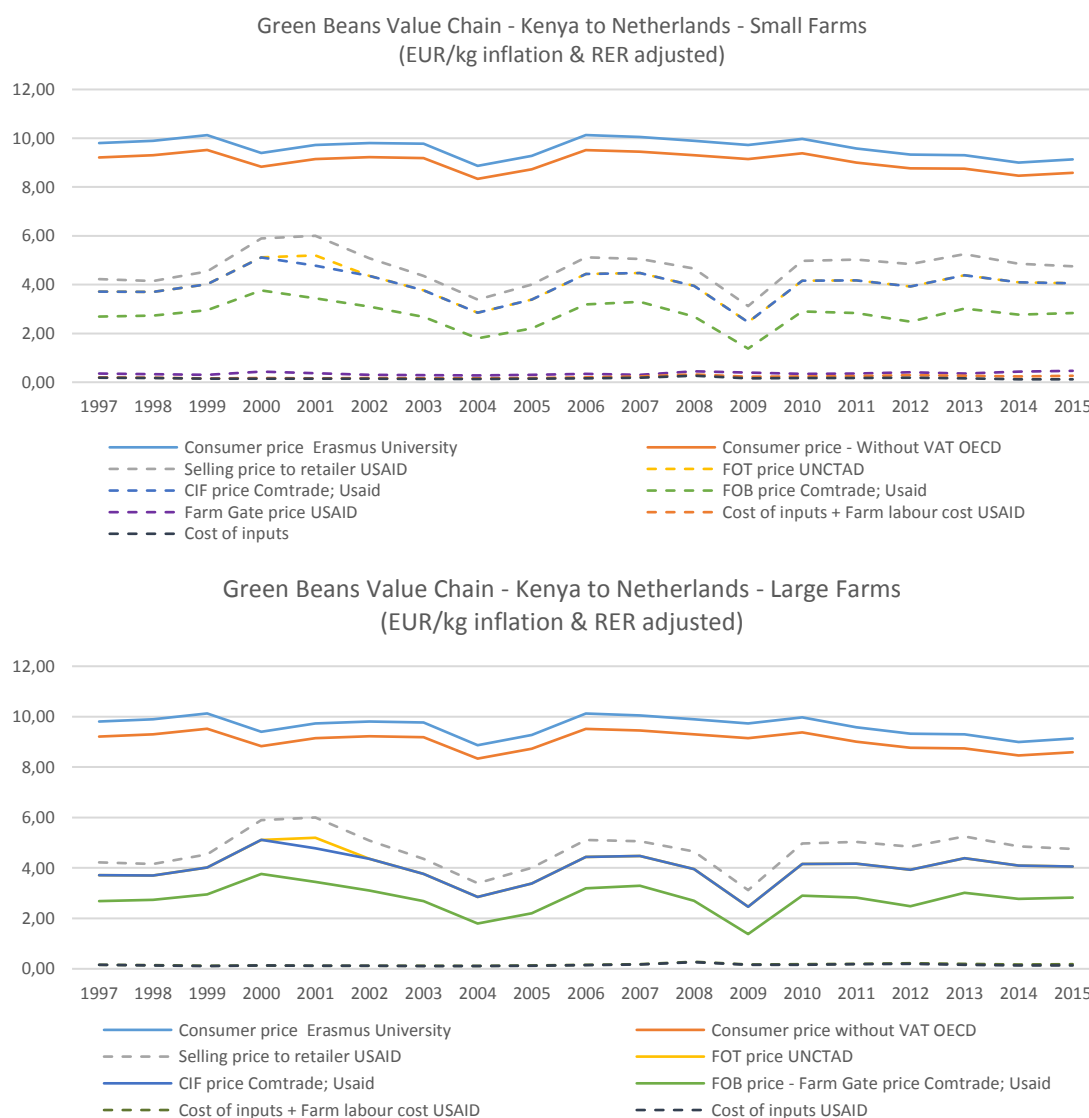
Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

As illustrated above, the share of value retained by retailers is the largest and has increased from 38% up to 42%, showing their growing influence over the chain. The share of the brands/wholesalers has remained stable at around 8%, whereas the share of the plantations/exporters in Kenya have slightly declined from 31% down to 29% when they source beans from their own farms (and from 31% down to 26% when beans are purchased to small farmers). Finally, the share of small farmers and workers' wages amount to 1.5% and 0.5% respectively.

To investigate further this situation, we have analysed the value evolution of the green bean producer prices and wages, export FOB prices and costs of production since the early 1990s. The results for the main destinations of Kenyan beans are provided below.

## Analysis of the value breakdown

**Fig. 163 Value breakdown of green bean produced in Kenya, supplied by plantations, and by small farmers (1991-2015)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

On the consumer side, taking into account the evolution of costs of living in the Netherlands, the diagram illustrates that the consumer prices have steadily declined by approx. 12% between 1997 and 2015. Most importantly, retailers appear to have “cushioned” the evolution of green beans prices further up in the chain (i.e. limiting increases in case of peaks, but also remaining stable in case of drops).

In the middle of the chain, the brands/wholesalers (selling price to retailers) have mainly followed the trends in CIF import prices and slightly increased their value share.

In Kenya, the processors (out of factory price) appear to have managed to maintain and sometimes increase their share of value over the whole period thanks to their vertically integrated systems, especially when sourcing from small farmers who got squeezed by plantations which are in a strong bargaining position and able to impose decreasing producer prices, as well as casualisation of labour for workers (see the section on green bean global value chain for more details).

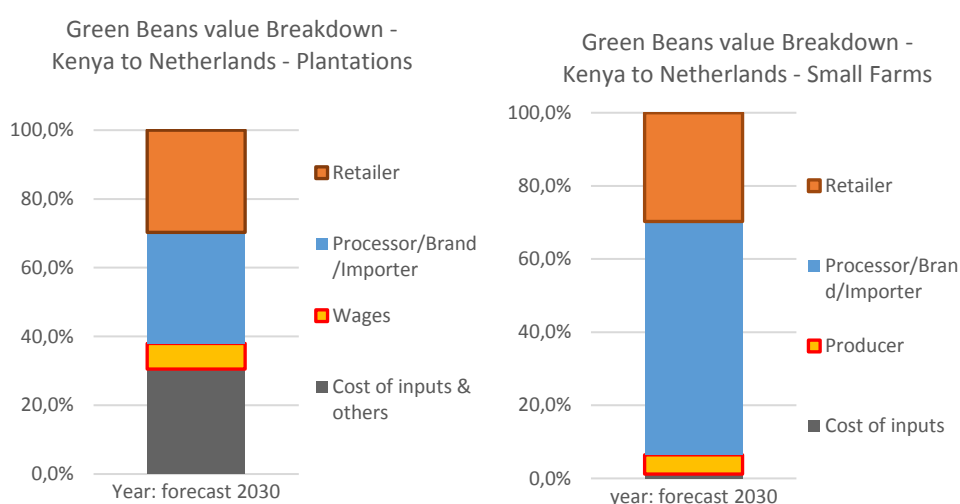
## Projections in 2030 of the value breakdown in a “Business as Usual” scenario

Based on the previous estimates, we performed a projection of the green bean value breakdown in the year 2030 in a “Business as Usual” scenario:

- producer prices, wage levels and costs of inputs in Kenya are based on the latest projections of the World Bank in 2030 (for fuel and fertilisers’ prices)
- price trends at the supermarkets’, brands’ and processors’ levels have been extrapolated based on the last 15 years and using a linear regression (price trends seem to be closely related to market concentration which has been continuously growing for the past 20 years with no sign of trend reversal).

The results are as follows:

**Fig. 164 Value breakdown of green bean produced in Kenya, supplied by plantations, and by small farmers (forecast 2030)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

According to these estimates, the share of value captured by retailers could decrease and stabilize at 30% because of the competition for value with brands/exporters/plantations who could increase up to 64% of the total value. At the beginning of the chain, small farmers and workers could be left with respectively less than 5.5% and 7.5% of the total value. In a ‘business as usual scenario’, this pressure on prices is likely to continue affecting the difficult living conditions of small growers and farm workers in Kenya.

### Ability of small farmers and workers to earn a living income/wage and levers for change

In order to cover the costs of green beans from Kenya, the share of value allocated for small farmers or workers should be increased at least from an estimated 0.23 USD/kg to 0.46 USD/kg (see the section on green bean global value chain for more details). This corresponds to limited mark-up of 0.23 USD/kg, which only represents 2.5% of the end consumer price of green beans which is 9.13 EUR/kg (10.13 USD/kg).

This increase does not need to be passed on to consumers: according to our estimates, the brands/wholesalers have increased their share of value from 3.05 USD per kg in 2001 to 4.25 USD per kg in 2015. This increase which happened over the last 15 years is enough to cover the living income of farmers and the payment of a living wage for workers.

Retailers and brands appear to have the means to address the unsustainability of the Kenyan green bean chain. To do so, they would need to ensure that the green bean they sell is not produced at the cost of the living conditions of small farmers and workers in the chain. In particular, this would require increasing the minimum wage for workers (in farming and processing) to the living wage level, and allocating enough resources for controls on the ground as it is one of the main ways to ensure that they can achieve a sustainable livelihood. In addition, they could support the establishment of a guaranteed price for smallholders enabling them to generate a living income, together with environmental and social conditions to ensure the sustainability of production.<sup>424</sup>

## Avocado

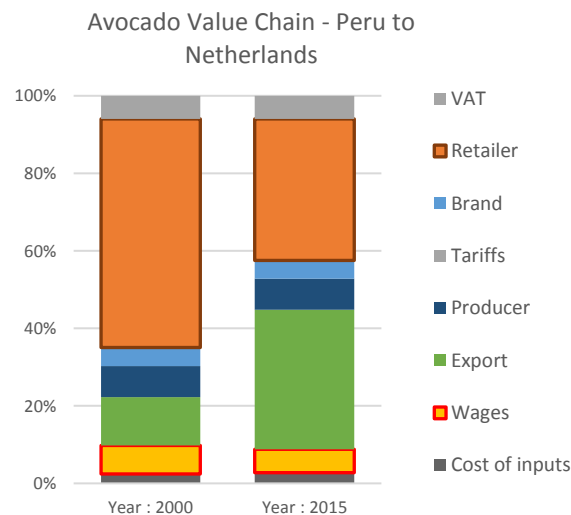
### Overview of the sector in Netherlands

For an overview of the sector, the structure of the chain and its evolution, see section 3 on the avocado global value chain.

### Comparison of the value breakdown in the 1990's and in 2015

Our estimations of value breakdown (expressed in nominal currency so as to avoid potential distortions linked to correction for inflation) are as follows:

**Fig. 165 Value breakdown avocado produced in Peru (average 2000-2001 and 2015)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

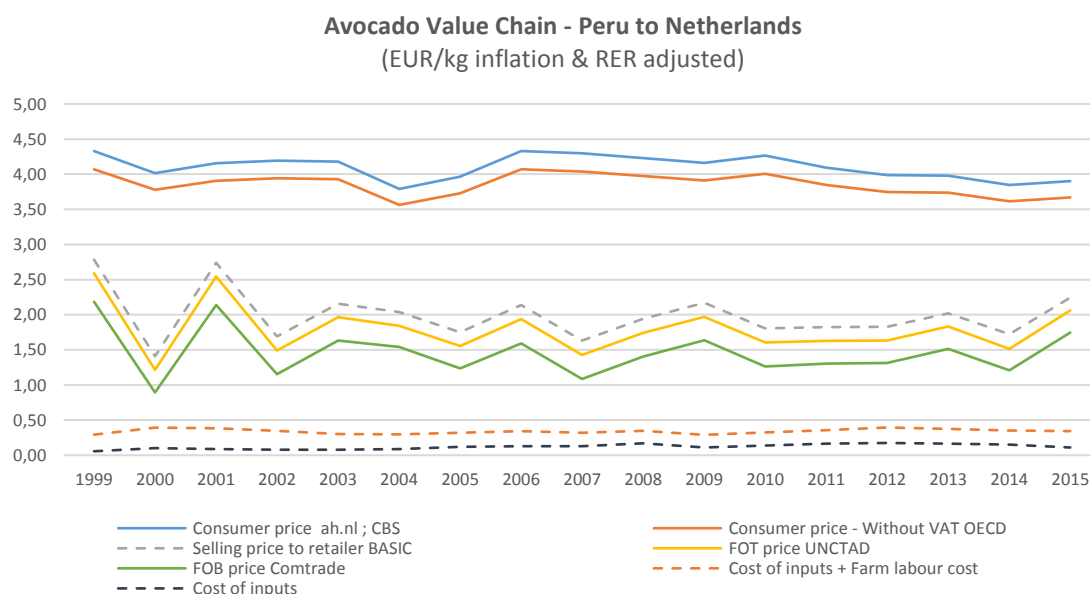
As illustrated above, the share of value retained by retailers is the largest and has decreased substantially since 2000 from 59% down to 36.5%. The value remaining in Peru has increased from 30% up to 53%, essentially captured by plantations, while the share of the total value for workers has decreased from 7.5% down to 6%.

To investigate further this situation, we have analysed the value evolution of the avocado producer prices and wages, export FOB prices and costs of production since the early 1990s. The results for the main destinations of Peruvian avocado are provided below.



## Analysis of the value breakdown

**Fig. 166 Value breakdown of avocado produced in Peru (2000-2015)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

On the consumer side, taking into account the evolution of costs of living in the Netherlands, the diagram illustrates that the consumer prices have globally declined by 17% between 1999 and 2015. Retailers appear to have “cushioned” the evolution of avocado prices further up in the chain (i.e. limiting increases in case of peaks, but also remaining stable in case of drops).

In Peru, the plantations have managed to maintain or increase their share of value (see the section on avocado global value chain for more details).

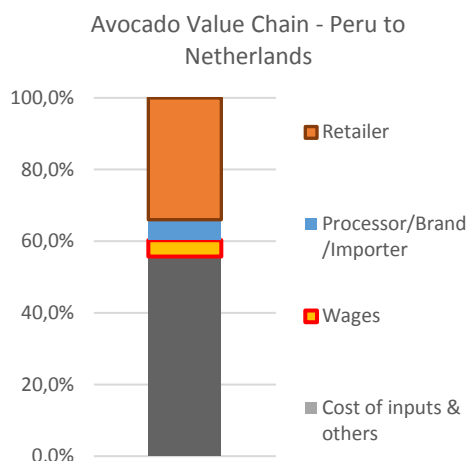
### Projections in 2030 of the value breakdown in a “Business as Usual” scenario

Based on the previous estimates, we performed a projection of the avocado value breakdown in the year 2030 in a “Business as Usual” scenario:

- producer prices, wage levels and costs of inputs in Peru are based on the latest projections of the World Bank in 2030 (for fuel and fertilisers’ prices)
- price trends at the supermarkets’ and producers’ levels have been extrapolated based on the last 15 years and using a linear regression (price trends seem to be closely related to market concentration which has been continuously growing for the past 20 years with no sign of trend reversal).

The results are as follows:

**Fig. 167 Value breakdown of avocado (forecast 2030)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

According to these estimates, the share of value captured by retailers could stabilize at 34% because of their position of major selling channel. In contrast, the share of value of plantations could decrease because of the rise in input costs. At the beginning of the chain, workers could be left with 4.5% of the total value. In a ‘business as usual scenario’, this pressure on prices is likely to continue affecting the wages and labour conditions of the avocado workers.

### Ability of workers to earn a living wage and levers for change

In order to cover the costs of production and ensure that workers can earn a living wage, the share of value for workers in Peru should be increased from 0.26 USD/kg currently to 0.29 USD/kg (see the section on the avocado global value chain for more details). This corresponds to a mark-up of 0.03 USD/kg, which represents less than 1% of the end consumer price of avocado which is 3.90 EUR/kg (4.33 USD/kg).

This increase does not need to be passed on to consumers: according to our estimates, the retailers have increased their share of value from 1.10 USD per kg in 2000 to 1.60 USD per kg in 2015. This increase which happened in the last 15 years is more than enough to cover the payment of a living wage for avocado workers in Peru.

Retailers appear to have the means to address the unsustainability of the Peruvian avocado chain. To do so, they would need to ensure that the avocado they sell is not produced at the cost of the living conditions of workers, as well as the environment. In the case of Peru, they could promote the rise of the minimum wage for workers to ensure it covers the costs basic needs of their families – which is an effective tool to secure living income in the sector – by leaving a sufficient share of the value in the producing country so that the costs of sustainable production can be covered.<sup>425</sup>

## Tomato

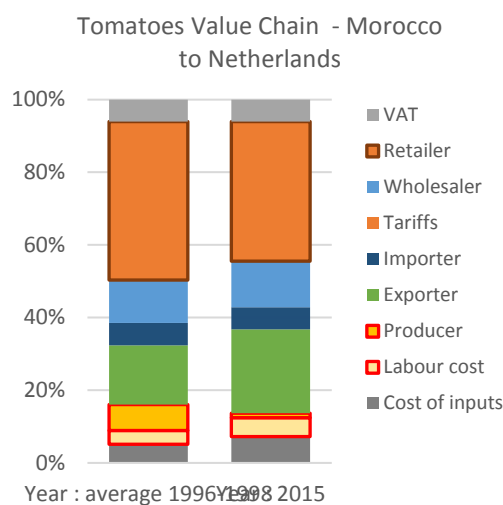
### Overview of the sector in Netherlands

For an overview of the sector, the structure of the chain and its evolution, see section 3 on the tomato global value chain.

## Comparison of the value breakdown in the 1990's and in 2015

Our estimations of value breakdown (expressed in nominal currency so as to avoid potential distortions linked to correction for inflation) are as follows:

**Fig. 168 Value breakdown tomato produced in Morocco (average 2000-2001 and 2015)**



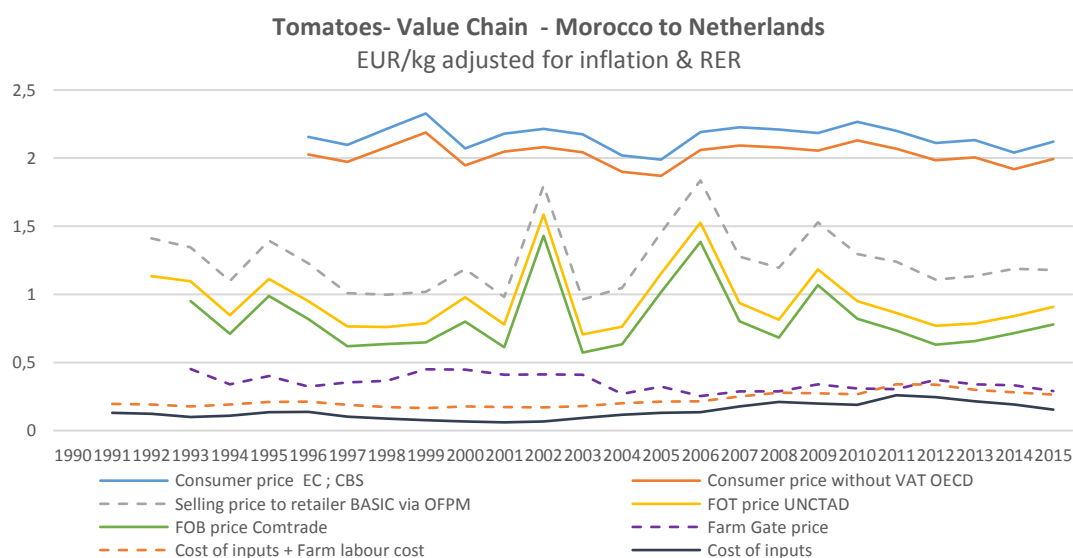
Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

As illustrated above, the share of value retained by retailers is the largest and has decreased substantially since 2000 from 43.5% down to 38.5%. The value remaining in Morocco has increased from 32.5% up to 37%, essentially captured by large producers and exporters, while the share of the total value for workers has remained stable at around 5%.

To investigate further this situation, we have analysed the value evolution of the tomato producer prices and wages, export FOB prices and costs of production since the early 1990s. The results for the main destinations of Moroccan tomato are provided below.

### Analysis of the value breakdown

**Fig. 169 Value breakdown of tomato produced in Morocco (2000-2015)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports

On the consumer side, taking into account the evolution of costs of living in the Netherlands, the diagram illustrates that the consumer prices have remained globally stable between 1997 and 2015. Retailers appear to have “cushioned” the evolution of tomato prices further up in the chain (i.e. limiting increases in case of peaks, but also remaining stable in case of drops), and managed to increase their share of value significantly since 2010.

In Morocco, the exporters and large farms have managed to increase substantially their share of value since 2006 (see the section on tomato global value chain for more details).

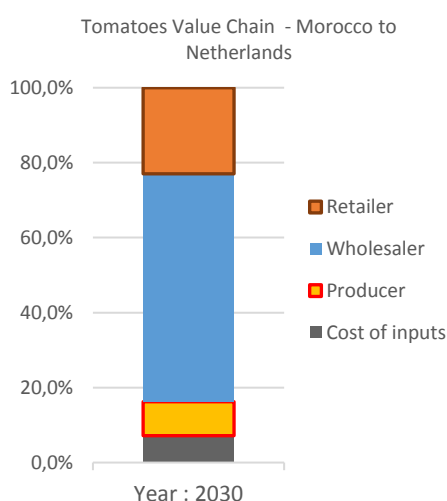
### Projections in 2030 of the value breakdown in a “Business as Usual” scenario

Based on the previous estimates, we performed a projection of the tomato value breakdown in the year 2030 in a “Business as Usual” scenario:

- producer prices, wage levels and costs of inputs in Morocco are based on the latest projections of the World Bank in 2030 (for fuel and fertilisers’ prices)
- price trends at the supermarkets’ and producers’ levels have been extrapolated based on the last 15 years and using a linear regression (price trends seem to be closely related to market concentration which has been continuously growing for the past 20 years with no sign of trend reversal).

The results are as follows:

**Fig. 170 Value breakdown of tomato (forecast 2030)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

According to these estimates, the share of value captured by retailers could decrease further and reach 23% because of the competition for value with wholesalers/exporters whose share could reach 61%. At the beginning of the chain, workers could be left with 9% of the total value. In a ‘business as usual scenario’, this pressure on prices is likely to continue affecting the wages and labour conditions of the tomato workers.

### Ability of workers to earn a living wage and levers for change

In order to cover the costs of production and ensure that workers can earn a living wage, the share of value for workers in Morocco should be increased from 0.32 USD/kg currently to 0.69 USD/kg (see the section on the tomato global value chain for more details). This corresponds to a mark-up of 0.39 USD/kg, which represents 16% of the end consumer price of tomato which is 2.12 EUR/kg (2.35 USD/kg).

This increase does not need to be passed on to consumers: according to our estimates, the retailers have increased their share of value from 0.28 USD per kg in 2006 to 0.90 USD per kg in 2015. This increase which happened in the last 10 years is enough to cover the payment of a living wage for tomato workers in Morocco.

Retailers appear to have the means to address the unsustainability of the Moroccan tomato chain. To do so, they would need to ensure that the tomato they sell is not produced at the cost of the living conditions of workers, as well as the environment. In the case of Morocco, they could promote the rise of the minimum wage for workers to ensure it covers the costs basic needs of their families – which is an effective tool to secure living income in the sector – by leaving a sufficient share of the value in the producing country so that the costs of sustainable production can be covered.<sup>426</sup>

# UNITED KINGDOM

## Overview of the food retail sector in the country

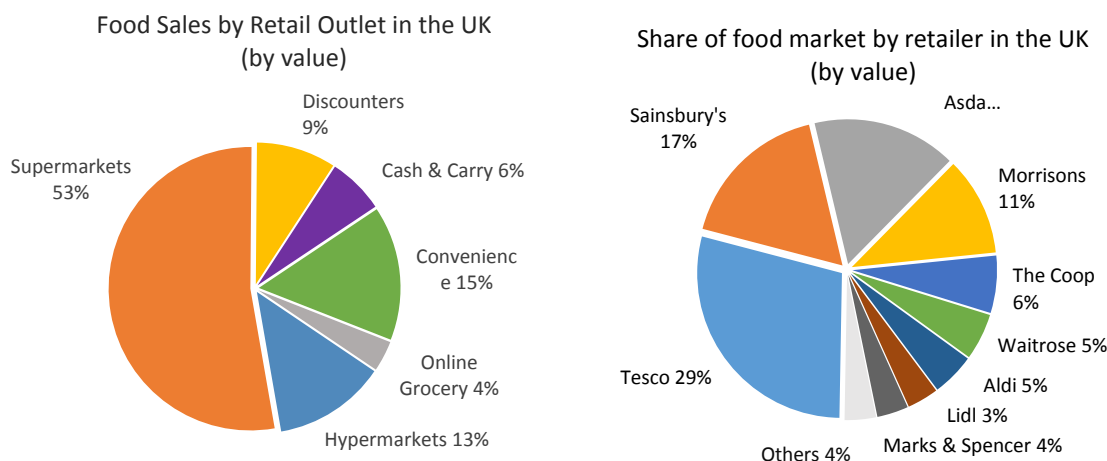
The UK grocery sector is one of the most diverse and sophisticated in the world. It was worth £175 billion (220 billion euros) in 2014, rising by 2.8 % over 2013. Food & grocery expenditures account for 54 pence in every £1.00 of retail spending (excluding restaurants).<sup>427</sup>

Grocery sales channels in the UK are split into five categories<sup>428</sup>:

- Hypermarkets (superstores) are defined as stores that have a sales area above 25,000 square feet, selling a broad range of grocery and non-food items.
- Supermarkets have a sales area of 3,000-25,000 square feet and a broad range of items.
- Discounters which main features are everyday low price and limited product ranges. Stores are smaller and relatively uniform in size and layout. Stores range from 8,600 square feet to 16,000 square feet. They carry predominately private label products.
- Convenience stores that have sales areas of less than 3,000 square feet, are open for long hours, and sell products from at least eight different grocery categories.
- Cash & Carry stores which are no frills type operations where products are not usually displayed on shelves but rather on pallets or fixtures supplied by the manufacturer.
- Alternative channels are mainly made up of online purchases.

The UK's grocery retail landscape is undergoing a significant structural change, with online, convenience and discount retailing all registering robust growth. Most noteworthy is the rapid growth of the online channel (with double-digit figures, UK being the most dynamic online grocery market in the world) but which still only represents 4% of the grocery market.<sup>429</sup>

**Fig. 171 Main retail outlets and retailers' market shares in the UK**



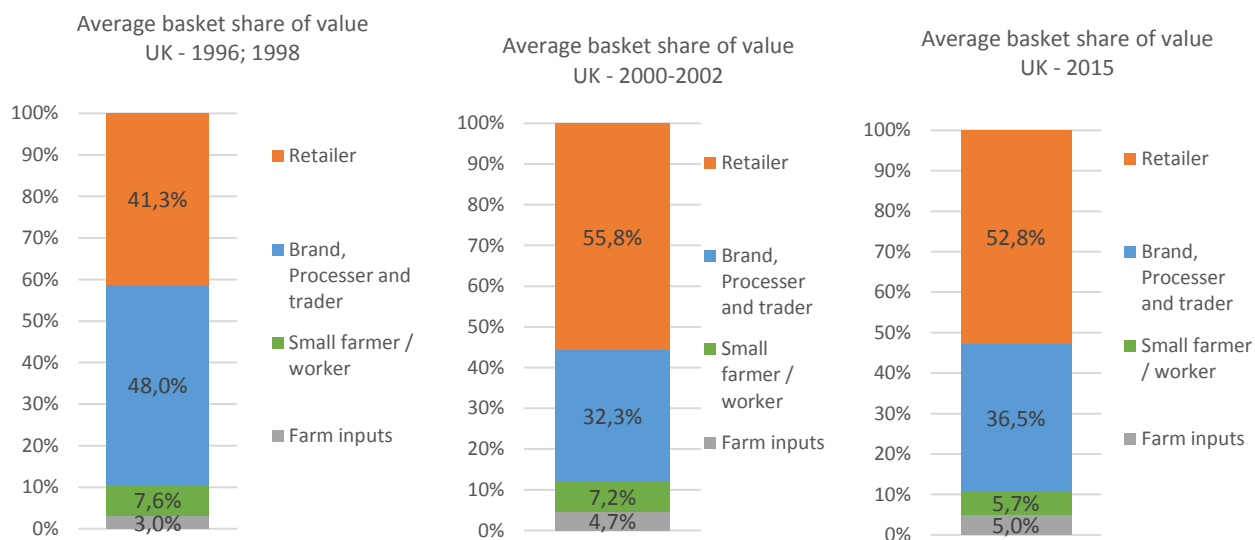
Source: BASIC, based on Euromonitor, Planet Retail and USDA data (2015)

Five supermarket chains dominate UK food retailing, accounting for 79.5 % of the market. The concentration of the market is roughly the same as the average level in Europe. Tesco is the market leader, with 28.8 % market share, followed by Asda/Wal-Mart with 17.2 %, Sainsbury's has 16.1 %, Morrison's with 11 % and the Cooperative with 6.4 %. Other UK supermarket chains include Waitrose, Aldi, Lidl and Marks & Spencer.<sup>430</sup>

# Overview of the food basket value breakdown

The evolution of the value breakdown of the basket of goods for the UK is detailed below for 1996-1998, 2000-2002 and 2015:

**Fig. 172 Value breakdown of the UK basket of goods**



Source: BASIC

As illustrated above, the share of value retained by retailers appears to have significantly increased since 1996, at the expense of intermediate actors as well as small farmers and workers. The detailed analysis of each product in the basket is provided in the following sub-sections.

## Coffee

### Overview of the sector in United Kingdom

With 64 million inhabitants, the United Kingdom accounted for around 7% of all green coffee consumed in the European Union in 2014 (approx. 174,000 tonnes). Despite being the 5th-largest market in the EU, the United Kingdom has a relatively low per capita consumption of coffee. It is estimated that each British person consumes only around 2.8kg of coffee (green coffee equivalent) per year, much lower in comparison to other markets, including the Netherlands (5.82kg/year), Germany (6.8 kg/year) and Sweden (10.4kg/year).<sup>431</sup>

In 2014, Nestlé led the UK coffee market with a retail value share of 43% and a retail volume share of 33%. This is the result of the company's strong presence in instant coffee, which continues to dominate the coffee-drinking culture in the UK, with a total volume share of nearly 60%. Nestlé accounts for around 50% of the soluble coffee market, with Jacobs Douwe Egberts (formerly Mondelez) accounting for more than 20%. Although the major trading centres are located outside the United Kingdom, the country does have a considerable number of traders and roasters. In the UK, however, roasters are generally part of international companies.<sup>432</sup>

The UK is the 6th-largest importer of green coffee beans in Europe, accounting for nearly 4.5% of all imports in 2014 (approx. 152,000 tonnes and 330 million GBP), having increased at an

annual rate of 2.4% in volume and 5.2% in value since 2010. The UK is also the 6<sup>th</sup> largest European coffee exporter, mainly destined to Ireland, accounting for 1% of EU coffee re-exports (approx. 5,600 tonnes and 23 million GBP). <sup>433</sup>

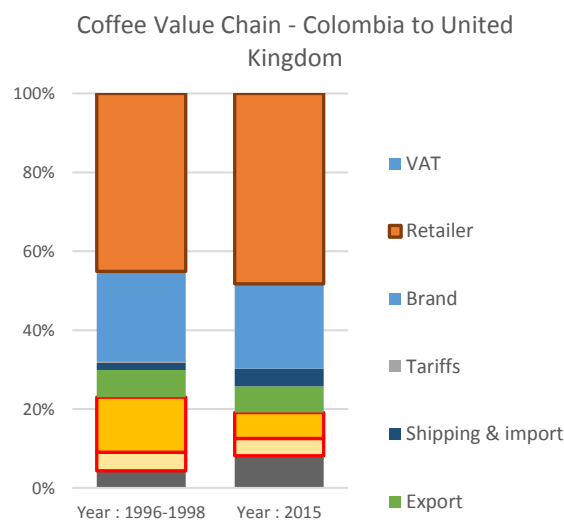
UK's most important suppliers of conventional green coffee are Brazil (36%), Colombia (13%), Indonesia (11%) and Viet Nam (10%).

For an overview of the sector, the structure of the chain and its evolution, see section 3 on the coffee global value chain.

### Comparison of the value breakdown in the 1990's and in 2015

Our estimations of value breakdown (expressed in nominal currency so as to avoid potential distortions linked to correction for inflation) are as follows:

**Fig. 173 Value breakdown of coffee produced in Colombia (average 1996-1998 and 2015)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

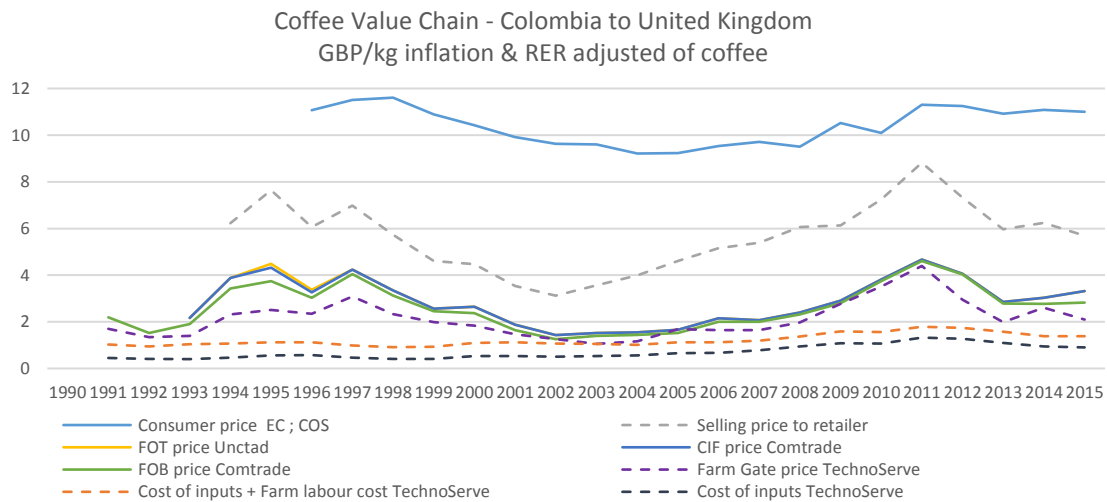
As illustrated above, the value breakdown mirrors the evolution of the coffee chain where supermarket chains have a growing influence (through the development of private label) as well as coffee brands and roasters. The share of value retained by retailers is the largest and has tended to increase since 1996 (from 45% in 1996-98 to 48% in 2015). In comparison, the share of value of brands/roasters is the 2<sup>nd</sup> largest but has somehow declined from 23% to 22% and the value remaining in Colombia has stagnated at approx. 25%. This is not taking into account the costs of inputs (fertilizers and pesticides) which has more than doubled in proportion, generating strong economic pressure on both coffee growers and workers.

To investigate further this situation, we have analysed the value evolution of the coffee producer prices, export FOB prices and costs of production since the early 1990s. The results for the main destinations of Colombian coffee are provided below.

### Analysis of the value breakdown



**Fig. 174 Value breakdown of coffee produced in Colombia (1991-2015)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

On the consumer side, taking into account the evolution of costs of living in the UK, the diagram illustrates that the consumer prices have globally followed the trends of the coffee CIF import prices since 1991. Most importantly the retailers appear to have “cushioned” the evolution of the coffee price on world markets with lower increases but also prices that remain relatively stable when international coffee prices fall. This is especially the case since 2012, which explains why the share of value captured by retailers is on the rise.

In the middle of the chain, the selling price (of roasters) to retailers seem to be much more aligned with the evolution of the coffee CIF import price, and even slightly amplifies peaks such as in 2010-2011 during the rust epidemics.

In Colombia, the value left for small coffee growers as well as workers has undergone two spikes in 1994-98 because of the end of the international coffee agreement and in 2010-12 because of the ravages of rust combined with El Niño/La Niña effects. In 2015, producers only sell their coffee to the same unit price than in 1991 – one corrected for inflation – but production costs have sharply risen, thereby squeezing what is left for them to live on (see the section on coffee global value chain for more details).

As pointed out by Daviron and Ponte (2005) a “coffee paradox” emerges, characterized by decreasing and unstable prices to farmers on the one side and increasing consumer prices on the other side: the value of coffee for consumers over the last 3 years is not so much linked to the green coffee price, but to the ways of combining different coffees in blends, roasting and marketing, and selling them in bars and coffee shops.<sup>434</sup>

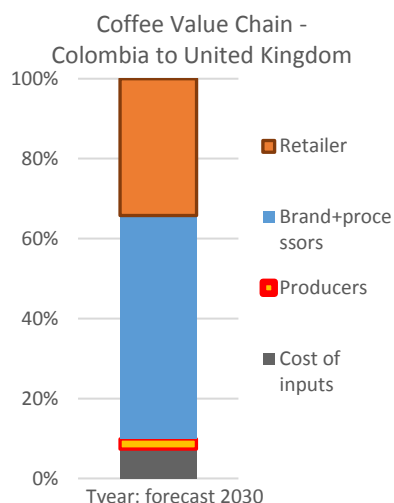
### Projections in 2030 of the value breakdown in a “Business as Usual” scenario

Based on the previous estimates, we performed a projection of the coffee value breakdown in the year 2030 in a “Business as Usual” scenario:

- producer prices, wage levels and costs of inputs in Colombia are based on the latest projections of the World Bank in 2030 (for coffee FOB prices, fuel and fertilisers’ prices)
- price trends at the supermarkets’ and roasters’ levels have been extrapolated based on the last 15 years and using a linear regression (price trends seem to be closely related to market concentration which has been continuously growing for the past 20 years with no sign of trend reversal).

The results are as follows:

**Fig. 175 Value breakdown of coffee (forecast 2030)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

According to these estimates, the share of value captured by retailers could be reduced to 34% because of the increasing share of value accruing to brands, roasters and traders. At the beginning of the chain, producers could be left with 3% of the total value instead of 7% today. In a 'business as usual scenario', this pressure on prices is likely to accelerate further the difficulties of small coffee growers and the disappearance of the smallest ones.

#### **Ability of small farmers to earn a living income and levers for change**

In order to cover the costs of production and ensure that both workers and small farmers can earn a living wage, the share of value for farmers in Colombia should be increased from 0.9 USD/kg currently to 1.27 USD/kg (see the section on coffee global value chain for more details). This corresponds to a mark-up of less than 0.37 euros/kg, which only represents 2.5% of the end consumer price of coffee which is 11 GBP/kg (16.81 USD/kg).

This increase does not need to be passed on to consumers: according to our estimates, the retailers have increased their share of value from 5.9 USD per kg in 2011 to 8.10 USD per kg in 2015. This increase which happened over the last 5 years is more than enough to cover the payment of a living wage to coffee farmers and workers in Colombia.

Retailers appear to have the means to address the unsustainability of the Colombian coffee chain, and have started to do so through selling Fair trade and organic coffee. However, they would need to generalize their commitments and take on their responsibility to ensure that the coffee they sell is not produced at the cost of the living conditions of producers and workers, as well as the environment. In the case of Colombia, they could promote the establishment of a minimum support price for farmers and the increase of the minimum wage for workers – which are effective tools to secure living income in the sector – by leaving a sufficient share of the value in the producing country so that the costs of sustainable production can be covered. <sup>435</sup>

# Tea

## Overview of the sector in United Kingdom

The United Kingdom is by far the largest tea consuming country in Europe, with total tea consumption amounting to about 113,000 tonnes in 2015. Ireland is the only European country with a higher per capita tea consumption of 2.19 kg per year, as compared to 1.94 kg in the UK. Although tea remains the most popular hot drink in the country (165 million cups being drunk every day), coffee has gained more popularity at the expense of tea (currently about 70 million cups every day).<sup>436</sup>

With regard to tea brands, there are two frontrunners on the UK market: Tata Global Beverages (owner of the brand Tetley) with a market share of 20% just above Unilever Foods (owner of the brands Lipton and PG Tips) with a market share of 19%. Tea is mainly consumed at home in the UK and these two companies are present as staples in the cupboards of most households within the country. Other British tea companies that have a good reputation both at home and abroad are Twinings, Typhoo and Yorkshire.<sup>437</sup>

The British tea market has traditionally been characterised by black tea consumption. However, there is a noticeable shift away from black tea to other categories of tea, mostly fruit/herbal teas and green tea. Between 2012 and 2014, sales of ordinary black teabags fell by 13%, whereas sales of fruit and herbal teabags increased by 31%, sales of speciality teabags increased by 15% and sales of green teabags leaped by 50%, these teas being perceived to be healthier and appealing to the younger generations. In response, tea brands have spent millions of pounds diversifying into new ranges of green tea (as illustrated by the launch by PG Tips of a complete range of green teas, alongside its fruit and herbal teas, in 2014). The British market is a mature market, highly competitive and prices tend to be very low. The supermarket price wars add to the focus on low purchase prices, and prices continued dropping in recent years.<sup>438</sup>

The United Kingdom is the largest European tea market with tea imports amounting to some 133,000 tonnes (97% black tea and 3% green tea), with a value of about 310 million GBP in 2015. Even though tea imports have shown an average annual decrease of 3.6% in volume since 2011, the UK still accounts for 39% of all European tea imports. Exports are also decreasing but still amounted to 20,000 tonnes, with a value of 111 million GBP in 2015.<sup>439</sup>

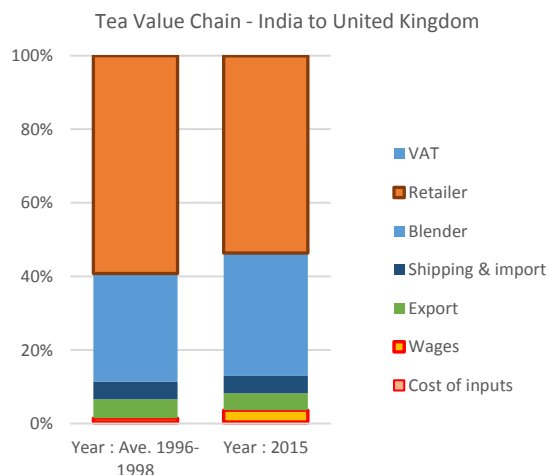
UK's most important suppliers of conventional tea are Kenya (40%), India (15%), and Malawi (4%).

For an overview of the sector, the structure of the chain and its evolution, see section 3 on the tea global value chain.

## Comparison of the value breakdown in the 1990's and in 2015

Our estimations of value breakdown (expressed in nominal currency so as to avoid potential distortions linked to correction for inflation) are as follows:

**Fig. 176 Value breakdown of tea produced in India (average 1996-1998 and 2015)**



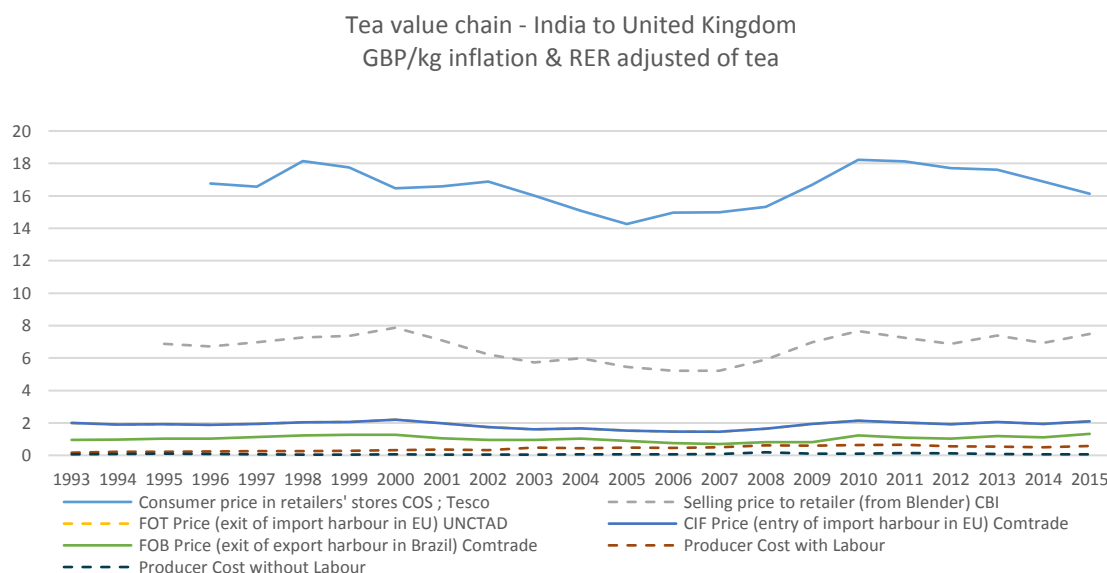
Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

As illustrated above, the share of value retained by retailers is the largest and has tended to decline since 1996 from 59% down to 54%. In comparison, the share of value of brands/blenders is the 2<sup>nd</sup> largest and has increased from 29% up to 33%, showing their growing influence over the chain. In contrast, the value remaining in India has slightly increased from 6.6% to 8.2%.

To investigate further this situation, we have analysed the value evolution of the tea producer prices and wages, export FOB prices and costs of production since the early 1990s. The results for the main destinations of Indian tea are provided below.

**Analysis of the value breakdown**

**Fig. 177 Value breakdown of tea produced in India (1991-2015)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

On the consumer side, taking into account the evolution of costs of living in the UK, the diagram illustrates that the consumer prices have remained stable until 2002, then decreased by 16%

until 2008, and slightly recovered since then. Retailers appear to have amplified the evolution of the selling price of tea by brands and blenders.

In the middle of the chain, the tea blenders appear to have followed the trend of CIF import prices until 2010 and increased their share of value significantly since then.

In India, the export prices seem to have remained stable when expressed in GBP, but dropped in local currency in the beginning of the 1990s and once again over the past 15 years, generating pressure on plantations with low productivity and consequently on the workers' wages. The relative disconnection between export FOB prices and CIF import prices since 2007 seem to reflect the power concentration in the hands of brokers and traders who capture most of the value in India (see the section on tea global value chain for more details).

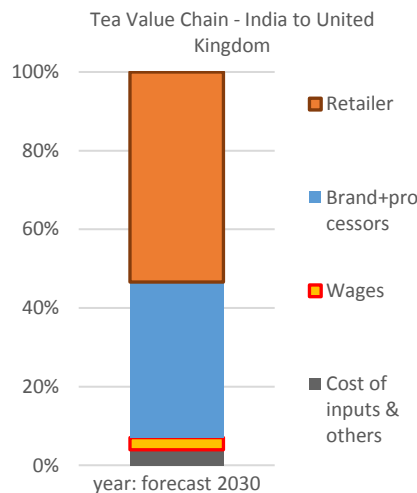
**Projections in 2030 of the value breakdown in a “Business as Usual” scenario**

Based on the previous estimates, we performed a projection of the tea value breakdown in the year 2030 in a “Business as Usual” scenario:

- producer prices, wage levels and costs of inputs in India are based on the latest projections of the World Bank in 2030 (for tea FOB prices, fuel and fertilisers' prices)
- price trends at the supermarkets' and blenders' levels have been extrapolated based on the last 15 years and using a linear regression (price trends seem to be closely related to market concentration which has been continuously growing for the past 20 years with no sign of trend reversal).

The results are as follows:

**Fig. 178 Value breakdown of tea (forecast 2030)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

According to these estimates, the share of value captured by retailers could be reduced to 26% because of the increasing share of value accruing to brands, blenders and traders which could become the largest at 61%. At the beginning of the chain, workers could be left with only 1% of the total value. In a ‘business as usual scenario’, this pressure on prices is likely to continue affecting the wages and labour conditions of the tea workers, as well as the disappearance of the lowest productive plantations.

**Ability of workers to earn a living wage and levers for change**

In order to cover the costs of production and ensure that workers can earn a living wage, the share of value for workers in India should be increased from 0.78 USD/kg currently to 2.29 USD/kg (see the section on tea global value chain for more details). This corresponds to a mark-up of 1.51 USD/kg, which only represents 6% of the end consumer price of tea which is 16.1 GBP/kg (24.70 USD/kg).

This increase does not need to be passed on to consumers: according to our estimates, the blenders have increased their share of value from 6.60 USD per kg in 2003 to 8.20 USD per kg in 2015. This increase which happened over the last 10 years is more than enough to cover the payment of a living wage for tea workers in India.

Retailers appear to have the means to address the unsustainability of the Indian tea chain, and have started to do so through selling Fair trade and organic tea. However, they would need to generalize their commitments and take on their responsibility to ensure that the tea they sell is not produced at the cost of the living conditions of workers, as well as the environment. In the case of India, they could promote the rise of the minimum wage for workers to ensure it covers the costs basic needs of their families – which is an effective tool to secure living income in the sector – by leaving a sufficient share of the value in the producing country so that the costs of sustainable production can be covered.<sup>440</sup>

## Cocoa

### Overview of the sector in United Kingdom

The per capita consumption of chocolate in the United Kingdom is high, at 7.5 kg in 2014. This makes the United Kingdom the 5th largest chocolate consuming nation. Plain milk chocolate is the favourite, eaten by 73% of consumers. Filled chocolate is also popular, eaten by 49% of consumers. Dark chocolate is still a relative niche market, eaten by 37%, in strong increase. The main sales channels for chocolate in the UK are supermarkets and convenience stores. They are especially important for mass products of big brands and private label chocolate now accounts for 1/3 of all new releases of chocolate products.<sup>441</sup>

The UK is the 7th largest chocolate exporter in the EU, amounting to 150,000 tonnes at a value of 615 million GBP in 2014, this high export volumes being attributed to large chocolate manufacturers in the country including Cadbury (owned by Mondelez), Nestle and Mars. The country is also the 7th largest cocoa grinder in Europe, the largest actor being Cadbury. Finally, with a market share of 3.5%, the United Kingdom is the 7th largest importer of cocoa beans in Europe, amounting to more than 60,000 tonnes and 117 million GBP in 2014. The total volume of imports of cocoa beans to the UK decreased on average by 18% per year between 2010 and 2014, while import of cocoa powder increased by 19% and chocolate imports grew by 6.9% over the same time frame (Chocolate import is the highest of all cocoa product imported, with an annual volume of more than 390,000 tonne).<sup>442</sup>

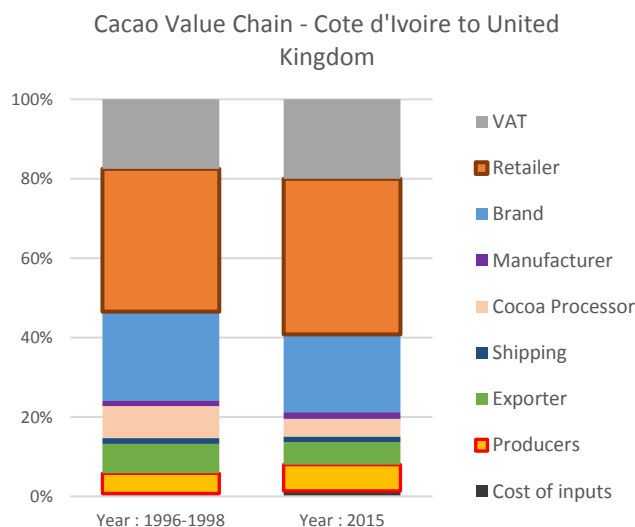
UK's most important suppliers of conventional cocoa beans are Cote d'Ivoire (71%), Nigeria (27%), and Peru (1%).

For an overview of the sector, the structure of the chain and its evolution, see section 3 on the cocoa global value chain.

### Comparison of the value breakdown in the 1990's and in 2015

Our estimations of value breakdown (expressed in nominal currency so as to avoid potential distortions linked to correction for inflation) are as follows:

**Fig. 179 Value breakdown of a 70% dark chocolate bar made from cocoa produced in Cote d'Ivoire (average 1996-1998 & 2015)**



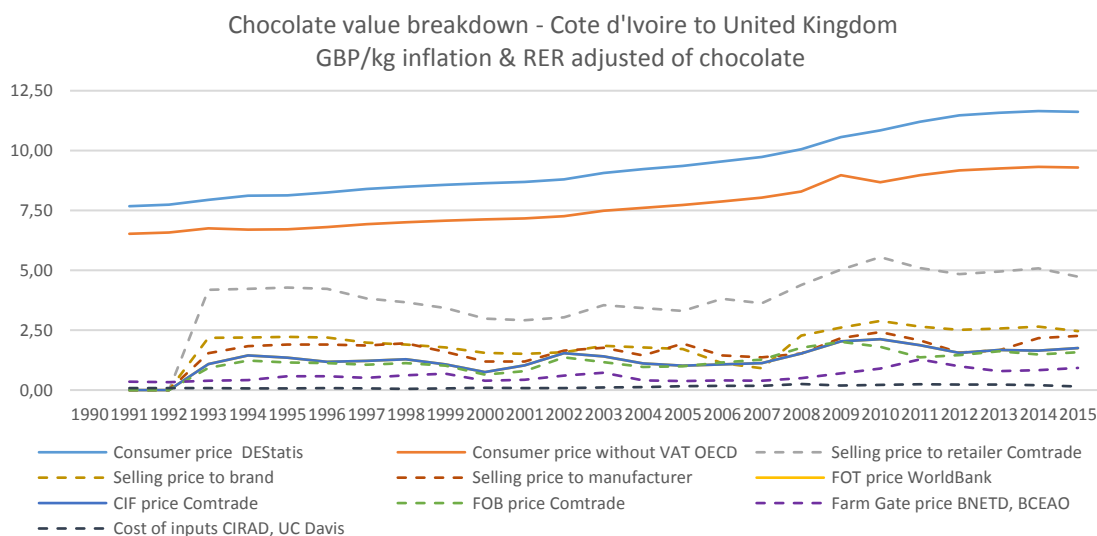
Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

As illustrated above, the share of value retained by retailers is the largest and has increased substantially from 36% up to 39%, showing their growing influence over the chain. In contrast, the share of the chocolate brands, the 2<sup>nd</sup> largest, has declined from 22.5% down to 19.5%. The value remaining in Cote d'Ivoire has globally stagnated at 13%.

To investigate further this situation, we have analysed the value evolution of the cocoa producer prices and wages, export FOB prices and costs of production since the early 1990s. The results for the main destinations of Ivorian cocoa are provided below.

**Analysis of the value breakdown**

**Fig. 180 Value breakdown of a 70% dark chocolate bar made from cocoa produced in Cote d'Ivoire (1991-2015)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

On the consumer side, taking into account the evolution of costs of living in the UK, the diagram illustrates that the consumer prices have steadily and strongly increased by more than 45% since 1993. Retailers appear to have substantially increased their share of the total value over this period.

In the middle of the chain, the chocolate brands (selling price to retailer) appear to have followed and amplified the trend of CIF import prices until recently and increased their share of value over the last 3-4 years. Upstream, the selling price to brands and manufacturers demonstrates that margins remain slim for chocolate makers and cocoa grinders, obliging them to boost volumes of cocoa in order to keep their profitability (see section 3 on the cocoa global value chain for more details).

In Cote d'Ivoire, the producer prices have dropped significantly throughout the 1990s, and during the period 2003-2009, strongly affecting the small cocoa growers which couldn't make ends meet. Prices recovered slowly until 2016 thanks to the re-establishment of a minimum support price for cocoa and its significant increase year after year. However, this price was cut by more than 30% early 2017 because of the sharp fall of cocoa price on world's markets, plunging farmers again far below the poverty line (see the section on cocoa global value chain for more details).

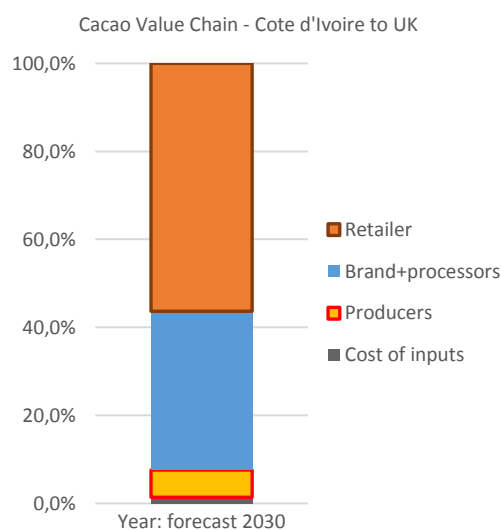
### Projections in 2030 of the value breakdown in a “Business as Usual” scenario

Based on the previous estimates, we performed a projection of the cocoa value breakdown in the year 2030 in a “Business as Usual” scenario:

- producer prices, wage levels and costs of inputs in Cote d'Ivoire are based on the latest projections of the World Bank in 2030 (for cocoa FOB prices, fuel and fertilisers' prices)
- price trends at the supermarkets' and brands' levels have been extrapolated based on the last 15 years and using a linear regression (price trends seem to be closely related to market concentration which has been continuously growing for the past 20 years with no sign of trend reversal).

The results are as follows:

**Fig. 181 Value breakdown of cocoa (forecast 2030)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).



According to these estimates, the share of value captured by retailers could be further increased up to 56% because of their increasing influence on the chain due to their position of major selling channel and the development of private labels. As a result, the value accruing to brands, processors and traders could be reduced at 36%. At the beginning of the chain, small cocoa growers could be left with less than 6% of the total value. In a 'business as usual scenario', this pressure on prices is likely to continue affecting the difficult living conditions of cocoa smallholders and encourage deforestation, one of the main ways for producers to maintain productivity and profitability.

### **Ability of small farmers to earn a living income and levers for change**

In order to cover the costs of production and ensure that cocoa farmers can earn a living income, the share of value for farmers in Cote d'Ivoire should be increased from 1.18 USD/kg to 1.60 USD/kg (see the section on cocoa global value chain for more details). This corresponds to very limited mark-up of 0.42 USD/kg, which only represents 3% of the end consumer price of chocolate which is 11.60 GBP/kg (17.74 USD/kg).

This increase does not need to be passed on to consumers: according to our estimates, the retailers have increased their share of value from 4.70 USD per kg in 2010 to almost 7.00 USD per kg in 2015. This increase which happened over the last 5 years is more than enough to cover the payment of a living wage for cocoa farmers in Cote d'Ivoire.

Retailers appear to have the means to address the unsustainability of the Ivorian cocoa chain, and have started to do so through selling Fair trade, sustainable and organic cocoa. However, they would need to generalize their commitments and take on their responsibility to ensure that the chocolate they sell is not produced at the cost of the living conditions of cocoa farmers, as well as the environment. In particular, this would require a stronger commitment of chocolate brands to offer less confectionery products where cocoa is just a commoditized ingredient, and more chocolate products that value the origin and quality of cocoa, hence the work of farmers paid at a fair price, enabling them to cover their costs of production and the living needs of their families.<sup>443</sup>

## **Rice**

### **Overview of the sector in United Kingdom**

Europe is one of the biggest rice consumption markets, with an increasing demand in specialty rice. Most rice, including basmati and jasmine rice, is sold through supermarkets, and arrives in North-Western Europe in bulk through importers that are specialised in sourcing, milling, trading and/or managing local brands. The United Kingdom leads with the import of mainly basmati rice from India. Large rice brand companies that dominate in European retail are: Ebro Foods, Westmill, Tilda and Marbour.<sup>444</sup>

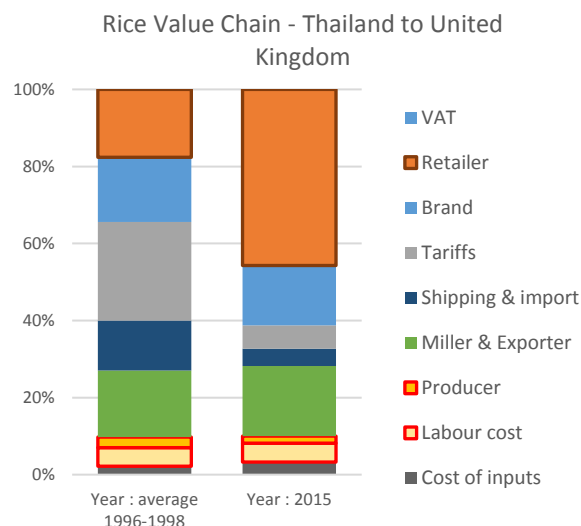
UK's most important suppliers of conventional rice are India (32%), Italy (15%), Spain (12%), Pakistan (10%) and Thailand (7%).

For an overview of the sector, the structure of the chain and its evolution, see section 3 on the rice global value chain.

### **Comparison of the value breakdown in the 1990's and in 2015**

Our estimations of value breakdown (expressed in nominal currency so as to avoid potential distortions linked to correction for inflation) are as follows:

**Fig. 182 Value breakdown of rice produced in Thailand (average 1996-1998 & 2015)**



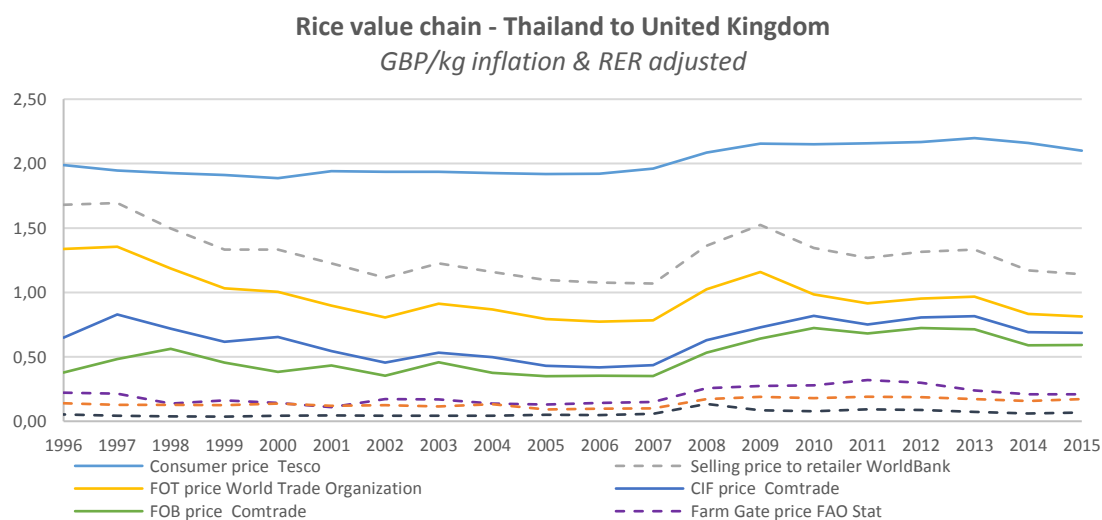
Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

As illustrated above, the share of value retained by retailers is the largest and has increased very significantly from 18% up to 45.5%, showing their growing influence over the chain, in particular through the growing success of their private label. In contrast, the share of the packers and brands has slightly declined, from 16.5% down to 15.5%. The value remaining in Thailand has reached 28%, mainly captured by millers and exporters which share of value has increased from 17% to 18%, the 2<sup>nd</sup> largest in the chain.

To investigate further this situation, we have analysed the value evolution of the rice producer prices and wages, export FOB prices and costs of production since the early 1990s. The results for the main destinations of Thai rice are provided below.

**Analysis of the value breakdown**

**Fig. 183 Value breakdown of rice produced in Thailand (1991-2015)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

On the consumer side, taking into account the evolution of costs of living in the UK, the diagram illustrates that the consumer prices remained very stable since 1996 (increasing by less than

5% over the last decade). Retailers appear to have “cushioned” the evolution of rice prices further up in the chain (i.e. limiting increases in case of peaks, but also remaining stable in case of drops), and started to increase substantially their share of the total value since 2009.

In the middle of the chain, the packers and brands (selling price to retailer) seem to have followed and amplified the trend of CIF import prices over the same period, and progressively increased their share of value too.

In Thailand, the share of value of millers and exporters has grown very significantly since 2008, demonstrating their growing influence on the chain at the detriment of small rice growers. The situation is all the more difficult for producers than the costs of farm inputs have doubled since the early 1990s and the support price system managed by the government has been suspended in 2014, triggering a decline in producer prices since then (see section 3 on the rice global value chain for more details).

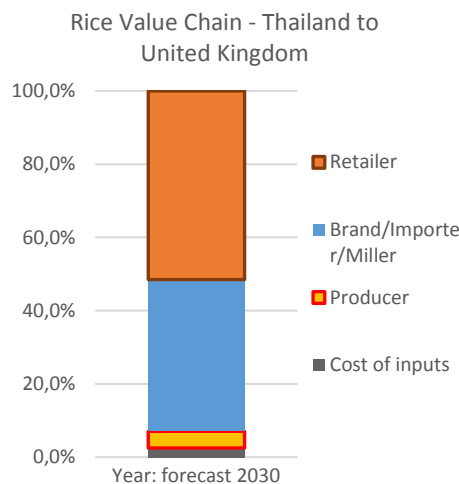
### Projections in 2030 of the value breakdown in a “Business as Usual” scenario

Based on the previous estimates, we performed a projection of the rice value breakdown in the year 2030 in a “Business as Usual” scenario:

- producer prices, wage levels and costs of inputs in Thailand are based on the latest projections of the World Bank in 2030 (for rice FOB prices, fuel and fertilisers’ prices)
- price trends at the supermarkets’ and brands’ levels have been extrapolated based on the last 15 years and using a linear regression (price trends seem to be closely related to market concentration which has been continuously growing for the past 20 years with no sign of trend reversal).

The results are as follows:

**Fig. 184 Value breakdown of rice (forecast 2030)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

According to these estimates, the share of value captured by retailers could reach 51.5% because of their increasing influence on the chain due to their position of major selling channel and the development of private labels. As a result, the value accruing to brands, processors and traders could be reduced to 41.5%. At the beginning of the chain, small rice growers could be left with less than 5% of the total value. In a ‘business as usual scenario’, this pressure on

prices is likely to continue affecting the difficult living conditions of rice smallholders and accelerate the disappearance of the smallest ones.

### **Ability of small farmers to earn a living income and levers for change**

In order to cover the costs of production and ensure that workers can earn a living wage, the share of value for farmers in Thailand should be increased from 0.22 USD/kg to 0.31 USD/kg (see the section on rice global value chain for more details). This corresponds to very limited mark-up of 0.09 USD/kg, which only represents 3% of the end consumer price of rice which is 2.10 GBP/kg (3.20 USD/kg).

This increase does not need to be passed on to consumers: according to our estimates, the retailers have substantially increased their share of value from 0.94 USD per kg in 2005 to 1.47 USD per kg in 2015. This increase which happened over the last 10 years is more than enough to cover the payment of a living wage for rice farmers in Thailand.

Retailers appear to have the means to address the unsustainability of the Thai rice chain, and have started to do so through selling Fair trade and organic rice. However, they would need to generalize their commitments and take on their responsibility to ensure that the rice they sell is not produced at the cost of the living conditions of rice farmers and workers. In Thailand, they could promote the re-establishment of a minimum support price for farmers and the increase of the minimum wage for workers – which are effective tools to secure living income in the sector – by leaving a sufficient share of the value in the producing country so that the costs of sustainable production can be covered.

## **Shrimp**

### **Overview of the sector in United Kingdom**

In Europe, more and more consumers are buying shrimps at the supermarket for preparation at home, instead of eating them at restaurants, which benefits the White-leg shrimp which share on the retail market is on the rise as a result of price-oriented consumers. The general trend in Europe is to shorten the supply chain and retailers and food service companies are increasingly buying finished goods directly from the source country. Freight. Frozen mainly enter in Europe by ship through Rotterdam (the Netherlands), Antwerp (Belgium), Hamburg or Bremen (Germany), and Marseille (France). The top 7 importers, i.e. Spain, France, Italy, the UK, Belgium, Germany and the Netherlands, together account for nearly 90% of the total value of frozen shrimp and prawn import value in Europe (3.3 billion EUR per year).<sup>445</sup>

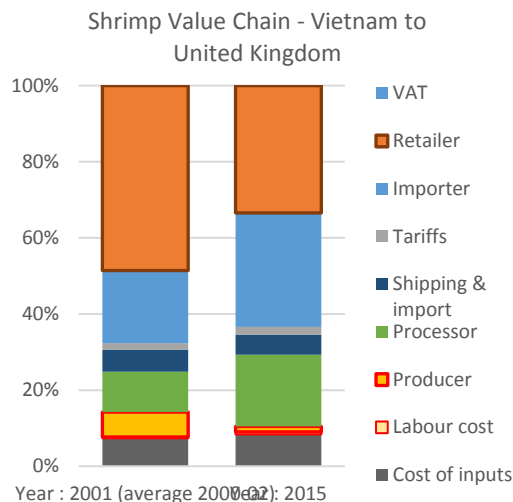
UK's most important suppliers of shrimps are Canada (36%), Viet Nam (15%), and Denmark (6%).

For an overview of the sector, the structure of the chain and its evolution, see section 3 on the shrimp global value chain.

### **Comparison of the value breakdown in the 1990's and in 2015**

Our estimations of value breakdown (expressed in nominal currency so as to avoid potential distortions linked to correction for inflation) are as follows:

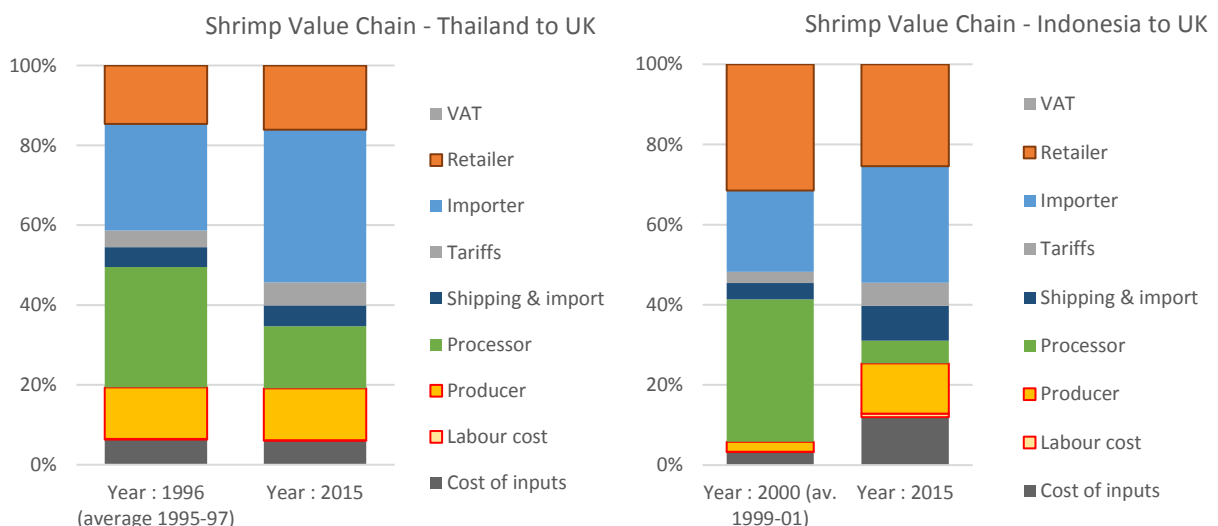
**Fig. 185 Value breakdown of shrimp produced in Viet Nam (average 2000-2002 & 2015)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

As illustrated above, the share of value retained by retailers is the largest and declined from 40% down to 33.5%, showing their decreasing influence over the chain. The share of the shrimp importers/wholesalers has slightly increased too from 27.5% down to 30% while the share of processors in Viet Nam has substantially increased from 10% to 18%. Most importantly, the share of shrimp farmers has shrunk from 6.5% to 1.5%, as they have had to face the rise of input costs without being able to pass on this increase onto processors, because of their weak bargaining position.

**Fig. 186 Value breakdown of shrimp produced in Thailand and Indonesia**



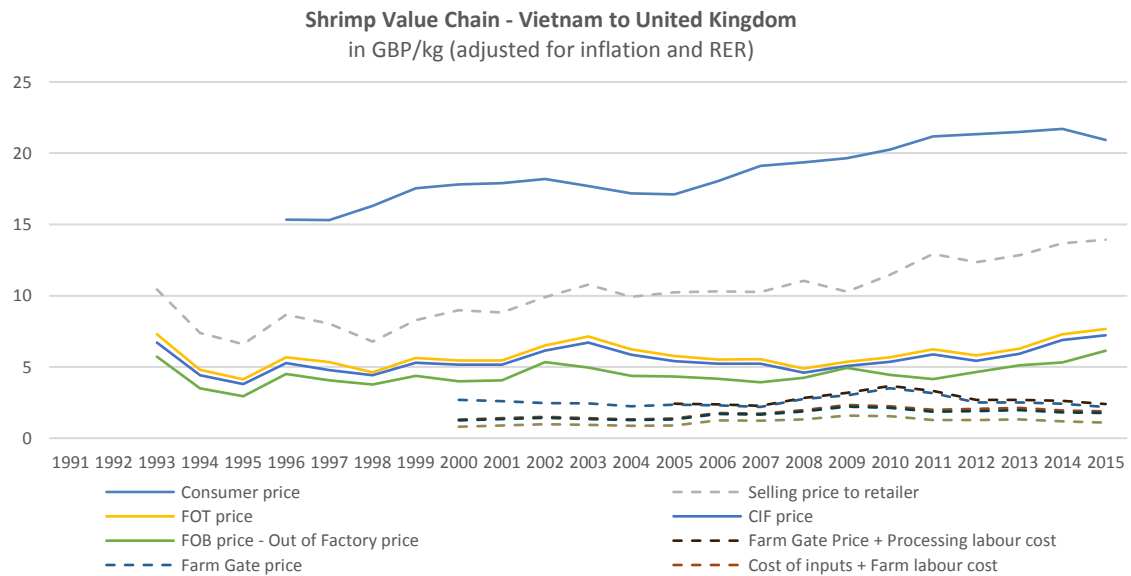
Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

Our estimates for shrimps from Thailand and Indonesia are partly distinct from the previous value breakdown: retailers appear to capture only 16% and 25% respectively of the total value (increasing in the case of Thailand, while decreasing in the case of Indonesia). Importers have also increased their share to approximately 38% and 29% respectively, and the processors have been apparently under pressure, reducing their share markedly from more than 30% and 20%, down to 15% and 6% respectively. Eventually, producers have apparently increased their share, but this is linked to the recent development of corporate intensive aquaculture at the

expense of small farmers (especially in the case of Indonesia). To investigate further this situation, we have analysed the value evolution of the shrimp production prices and wages, export FOB prices and costs of production since the early 1990s. The results for the Vietnamese, Thai and Indonesian shrimp value chains are provided below.

### Analysis of the value breakdown

**Fig. 187 Value breakdown of shrimp produced in Viet Nam (1991-2015)**



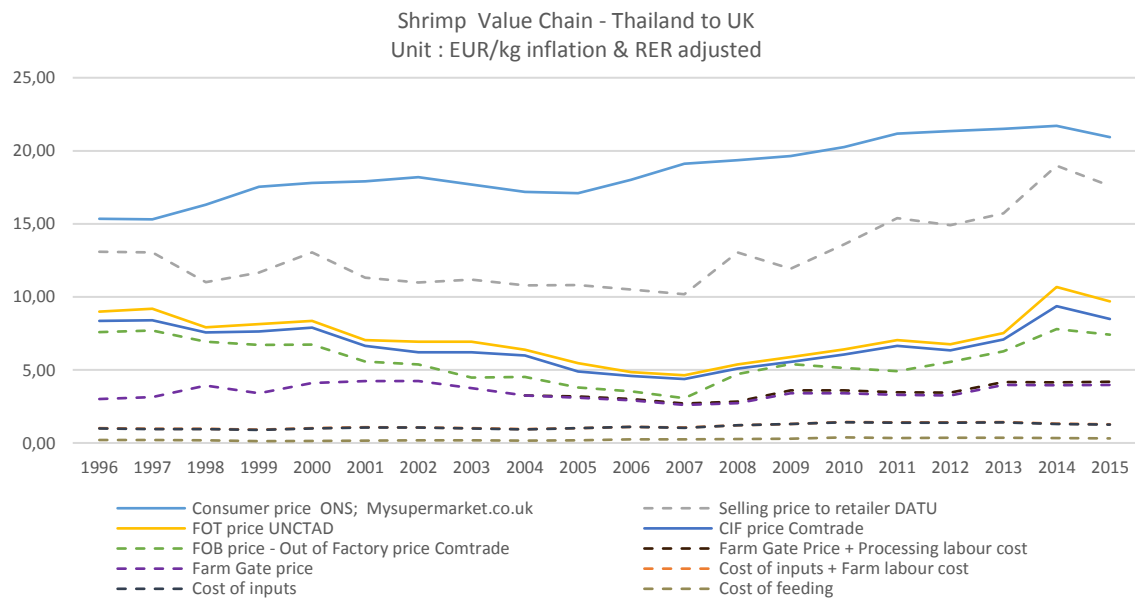
Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

On the consumer side, taking into account the evolution of costs of living in the UK, the diagram illustrates that the consumer prices have been quite volatile, retailers amplifying the evolution of shrimp prices further up in the chain and gradually losing their control over their share of value over the period.

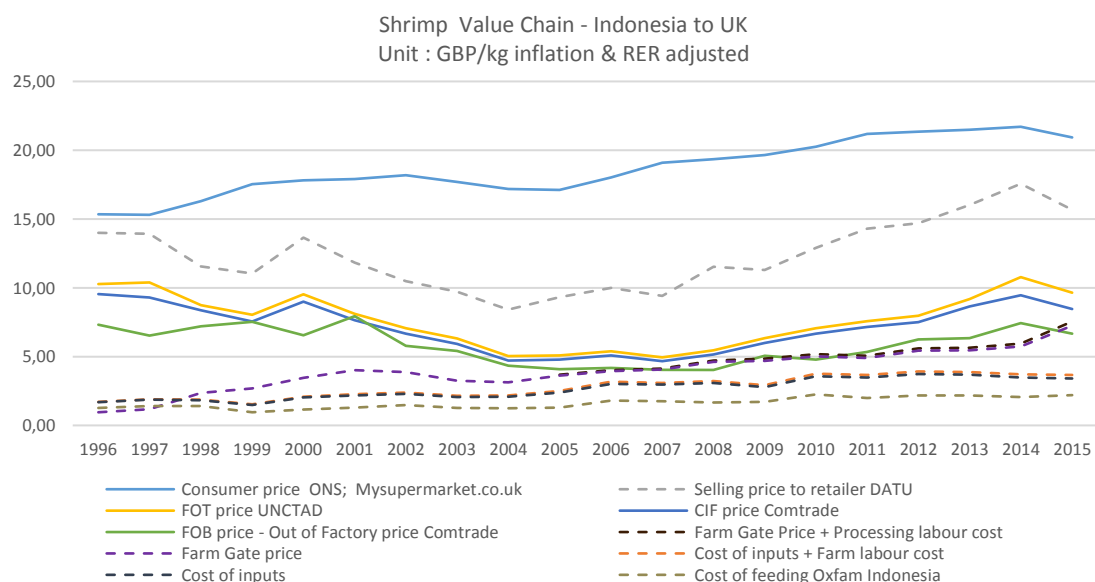
In the middle of the chain, the brands/wholesalers (selling price to retailers) have strongly competed with retailers and managed to significantly increase their share of the total value since 2004.

In Viet Nam, the processors (out of factory price) appear to have faced increasing costs (hence decreasing margins) up until 2011, then were apparently able to increase their share of value thanks to their vertically integrated systems. However, their slim margins most probably oblige them to boost production volumes in order to keep their profitability. Upstream, the small shrimp farmers are facing the largest pressure with a strong decrease of their share of value since 2000 because they got squeezed between the increase of input prices and the pressure from processors/manufacturers (see the section on shrimp global value chain for more details).

**Fig. 188 Value breakdown of shrimp produced in Thailand (1995-2015)**



**Fig. 189 Value breakdown of shrimp produced in Indonesia (1991-2015)**



As illustrated in the two diagrams above, the evolution of value breakdown for shrimps sourced from Thailand and Indonesia follow a similar pattern as for Viet Nam with an important share for retailers and importers, and an increasing pressure on workers in processing factories.

**Projections in 2030 of the value breakdown in a “Business as Usual” scenario**

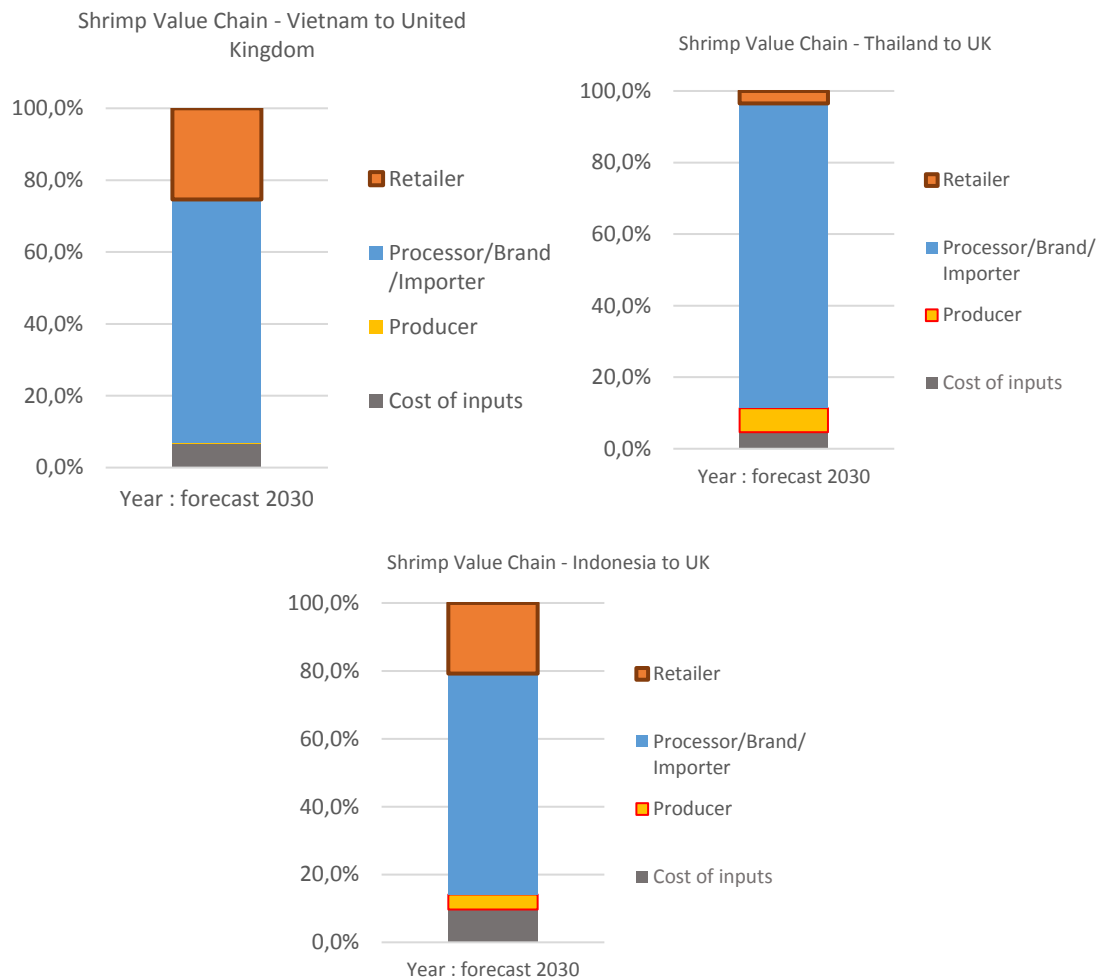
Based on the previous estimates, we performed a projection of the shrimp value breakdown in the year 2030 in a “Business as Usual” scenario:

- producer prices, wage levels and costs of inputs are based on the latest projections of the World Bank in 2030 (for shrimp FOB price, fuel and fertilisers’ prices)
- price trends at the supermarkets’, brands’ and processors’ levels have been extrapolated based on the last 15 years and using a linear regression (price trends seem to be closely

related to market concentration which has been continuously growing for the past 20 years with no sign of trend reversal).

The results are as follows:

**Fig. 190 Value breakdown of shrimp (forecast 2030)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

According to these estimates, the share of value captured by retailers could shrink to less than 25% because of the increasing competition with brands and processors whose share could substantially expand up to more than 65% of the total value. At the beginning of the chain, small farmers could be left with less than 6% of the total value. In a 'business as usual scenario', this pressure on prices is likely to continue affecting the difficult living conditions of shrimp farmers in Viet Nam as well as workers in the shrimp processing industry.

**Ability of small farmers and workers to earn a living income/wage and levers for change**

In order to cover the costs of sustainable production, the share of value for farmers in Viet Nam, Thailand and Indonesia should be increased at least by 0.28 USD/kg (see the section on shrimp global value chain for more details), which only represents 1% of the end consumer price of shrimp which is 28.84 GBP/kg (32.00 USD/kg).

This increase does not need to be passed on to consumers: according to our estimates, the brands/wholesalers have substantially increased their share of value from 8.30 USD per kg in 2002 to 15.10 USD per kg in 2014. This increase which happened over the last 15 years is



more than enough to cover the living income of farmers and the payment of a living wage for workers.

Retailers and brands appear to have the means to address the unsustainability of the Vietnamese shrimp chain, and have started to make some voluntary commitments in this direction. However, they would need to generalize their engagement and take on their responsibility to ensure that the shrimp they sell is not produced at the cost of the living conditions of small farmers and workers in the chain. In particular, this would require increasing the minimum wage for workers (on vessels, as well as in farming and processing) to the living wage level, and allocating enough resources for controls on the ground as it is one of the main ways to ensure that they can achieve a sustainable livelihood. In addition, they could support the establishment of a guaranteed price for the small shrimp farmers together with environmental and social conditions to ensure the sustainability of production.<sup>446</sup>

## Canned tuna

### Overview of the sector in United Kingdom

Yellowfin tuna is the most important tuna in terms of European consumption. In France and Spain, there is also a high preference for albacore tuna. Looking at consumption per capita in Europe, tuna only plays a small role, due to its relatively high price. From the overall per-capita fish and seafood consumption in Europe (22.6 kg), it is estimated that about 2.7 kg is tuna in various forms. Canned tuna represents the lion's share of that amount (2.2 kg), followed by fresh tuna (0.5 kg) and frozen tuna (0.10 kg).

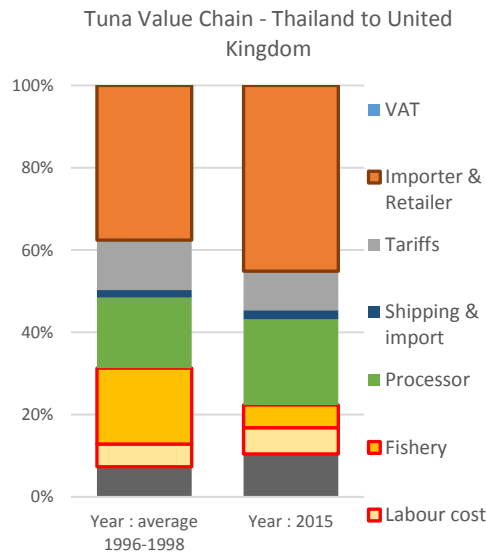
Most canned tuna is sold through retailers that control a large part of the market thanks to their private labels (up to 40% market share and more). Canned tuna enters Europe by ship through the ports of Rotterdam (the Netherlands), Antwerp (Belgium), Hamburg or Bremen (Germany), Vigo (Spain) and Marseille (France).<sup>447</sup>

For an overview of the sector, the structure of the chain and its evolution, see section 3 on the canned tuna global value chain.

### Comparison of the value breakdown in the 1990's and in 2015

Our estimations of value breakdown (expressed in nominal currency so as to avoid potential distortions linked to correction for inflation) are as follows:

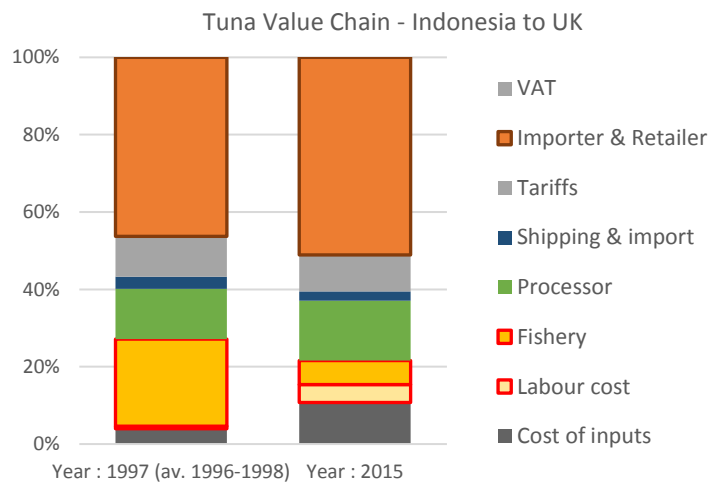
**Fig. 191 Value breakdown of canned tuna produced in Thailand (average 1996-1998 & 2015)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

As illustrated above, the share of value retained by retailers is the largest and has increased from 34% up to 45%, showing their large influence over the chain, especially through the dominance of their private labels. The share of the manufacturers of canned tuna has risen too from 17% up to 21%. Most importantly, the share of fisheries has shrunk from 20% to 6%, as they have had to face the sheer rise of fuel and operation costs without being able to pass on this increase onto processors, because of their weak bargaining position. This leaves only 2.5% on average for labour costs on vessels.

**Fig. 192 Value breakdown of canned tuna produced Indonesia**



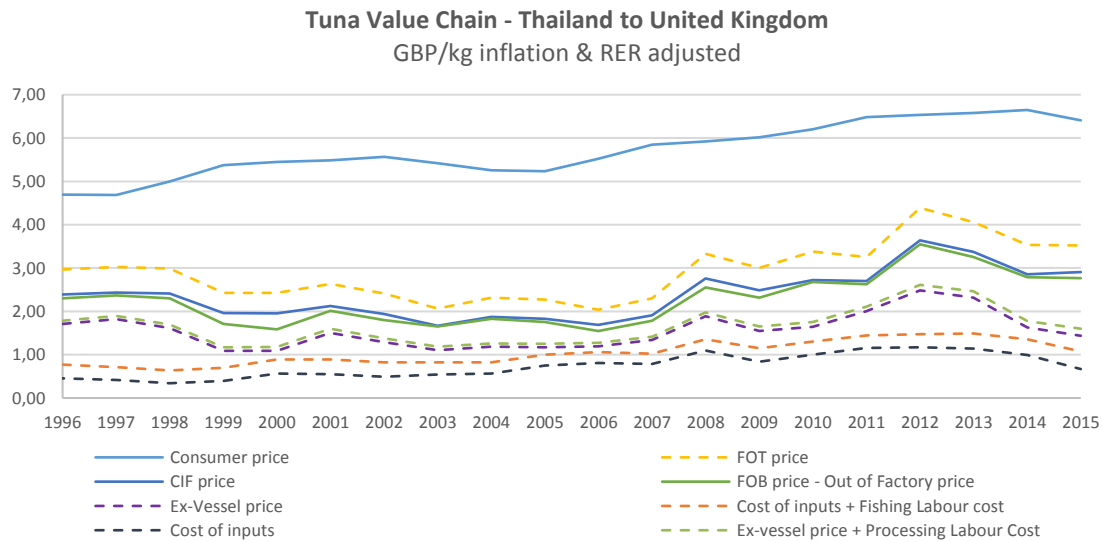
Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

Our estimates for canned tuna from Indonesia is quite similar from the previous value breakdown: retailers appear to have gained influence over the chain, their share increasing from 46% to 51% of the total value. Importers have slightly decreased their share from 10.5% to 9.5%, and the processors have apparently managed to increase theirs from 13% to 15.5%. Eventually, fisheries appear to be under strong pressure, their share declining sharply from 22% to 7% because of the combined pressure of buyers' price pressure and increasing internal costs.

To investigate further this situation, we have analysed the value evolution of the canned tuna production prices and wages, export FOB prices and costs of production since the early 1990s. The results for the main destinations of Thai and Indonesian canned tuna are provided below.

### Analysis of the value breakdown

**Fig. 193 Value breakdown of canned tuna produced in Thailand (1996-2015)**



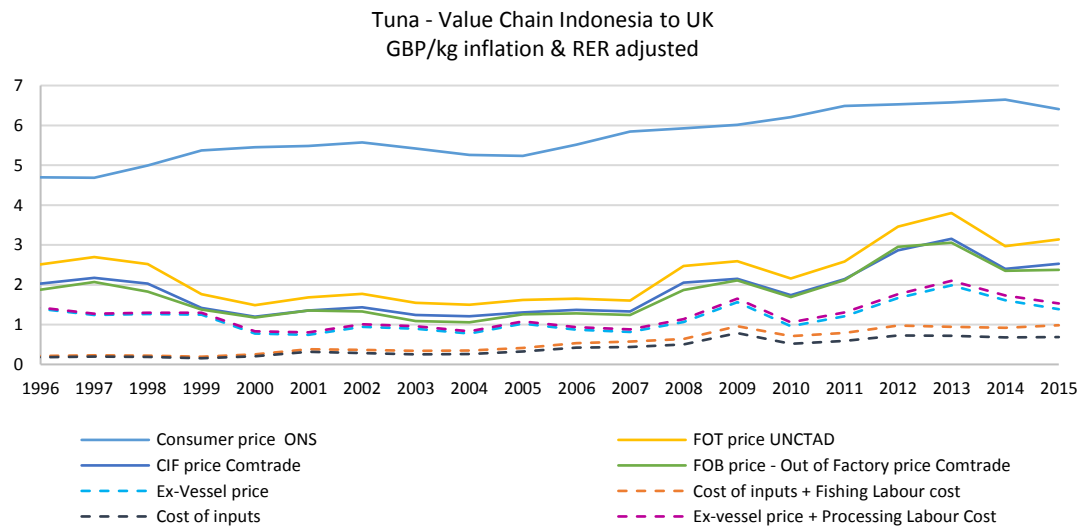
Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

On the consumer side, taking into account the evolution of costs of living in the UK, the diagram illustrates that the consumer prices have almost steadily increased from 1996 to 2015. Retailers appear to have kept their strong control over the total value for the past 2 decades, and even increased their margin since 2012.

In Thailand, the manufacturers (out of factory price) appear to have followed the trend of CIF import prices and were able to maintain their share thanks to their vertically integrated systems. However, their slim margins most probably oblige them to boost production volumes in order to keep their profitability.

Upstream, the fisheries are facing the largest pressure with a strong decrease of their share of value since 1998, albeit for a small and short recovery in 2013-2014 because they got squeezed between the strong increase of fuel prices and the pressure on price from processors/manufacturers. The pressure is passed onto the workers, the majority being migrant, and on the level of their wages (see the section on canned tuna global value chain for more details).

**Fig. 194 Value breakdown of canned tuna produced in Indonesia (1991-2015)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports

As illustrated in the diagram above, the evolution of value breakdown for canned tuna sourced from Indonesia follows a similar pattern as for Thailand with a dominant share for retailers, and an increasing pressure on fisheries, with significant potential impacts on the working conditions and wages of workers on tuna vessels.

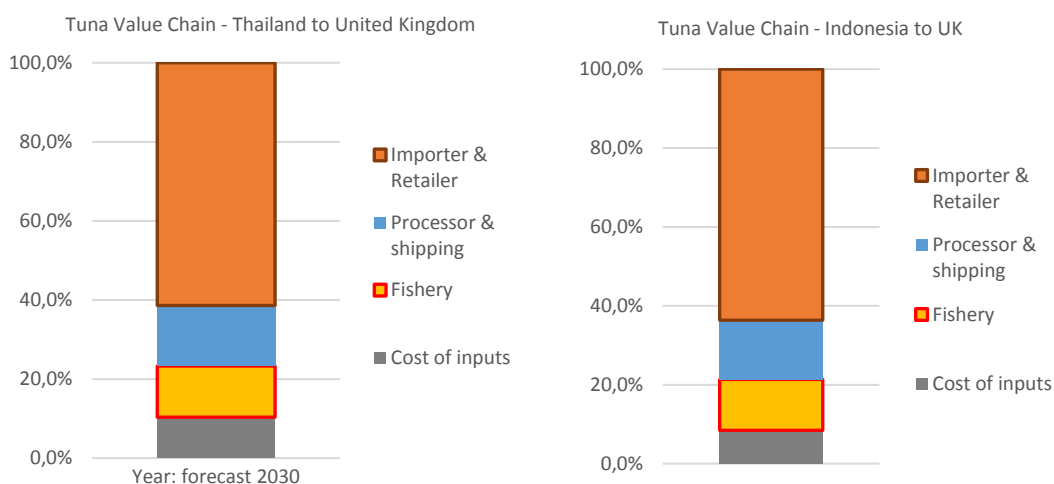
**Projections in 2030 of the value breakdown in a “Business as Usual” scenario**

Based on the previous estimates, we performed a projection of the canned tuna value breakdown in the year 2030 in a “Business as Usual” scenario:

- producer prices, wage levels and costs of inputs are based on the latest projections of the World Bank in 2030 (for grain, fuel and fertilisers’ prices)
- price trends at the supermarkets’, brands’ and fisheries’ levels have been extrapolated based on the last 15 years and using a linear regression (price trends seem to be closely related to market concentration which has been continuously growing for the past 20 years with no sign of trend reversal).

The results are as follows:

**Fig. 195 Value breakdown of canned tuna (forecast 2030)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

According to these estimates, the share of value captured by retailers could further increase to 61-63% because of their increasing influence on the chain due to their position of major selling channel and the development of private labels. As a result, the value accruing to brands, processors and traders could be reduced at 15.5%. At the beginning of the chain, fisheries could be left with less than 13% of the total value. In a 'business as usual scenario', this pressure on prices is likely to continue affecting the difficult living conditions of workers on Thai vessels as well as no Indonesian fleet.

### **Ability of workers to earn a living wage and levers for change**

In order to cover the costs of sustainable production, the share of value for workers in Thailand and Indonesia should be increased at least by 0.08 USD/kg (see the section on canned tuna global value chain for more details), which only represents 1% of the end consumer price of canned tuna which is 6.41 GBP/kg (9.79 USD/kg).

This increase does not need to be passed on to consumers: according to our estimates, the retailers have increased their share of value from 3.35 USD per kg in 2012 to 4.40 USD per kg in 2015. This increase which happened over the last 3 years is more than enough to cover the payment of a living wage for workers in Thai fisheries.

Retailers and brands appear to have the means to address the unsustainability of the Thai canned tuna chain, and have started to make some voluntary commitments in this direction. However, they would need to generalize their engagement and take on their responsibility to ensure that the canned tuna they sell is not produced at the cost of the living conditions of workers in the chain. In particular, this would require increasing the minimum wage for workers (on vessels, as well as in processing) to the living wage level, and allocating enough resources for controls on the ground as it is one of the main ways to ensure that both can achieve a sustainable livelihood.<sup>448</sup>

## **Orange juice**

### **Overview of the sector in United Kingdom**

Fruit juice is undermined by the sugar debate in the UK, consumers switching to perceived healthier drinks and sales of home juicers thrived. Private Label plays a very important role in fruit juice, representing over half of all category volumes, thanks to its low prices and commodity image. Whilst the fruit juice category is predicted to stay under pressure due to the level of media attention on sugar within fruit juice, more innovation in the premium segment is expected, centred on fruit/vegetable blends promoting the inherent nutritional values of the ingredients.<sup>449</sup>

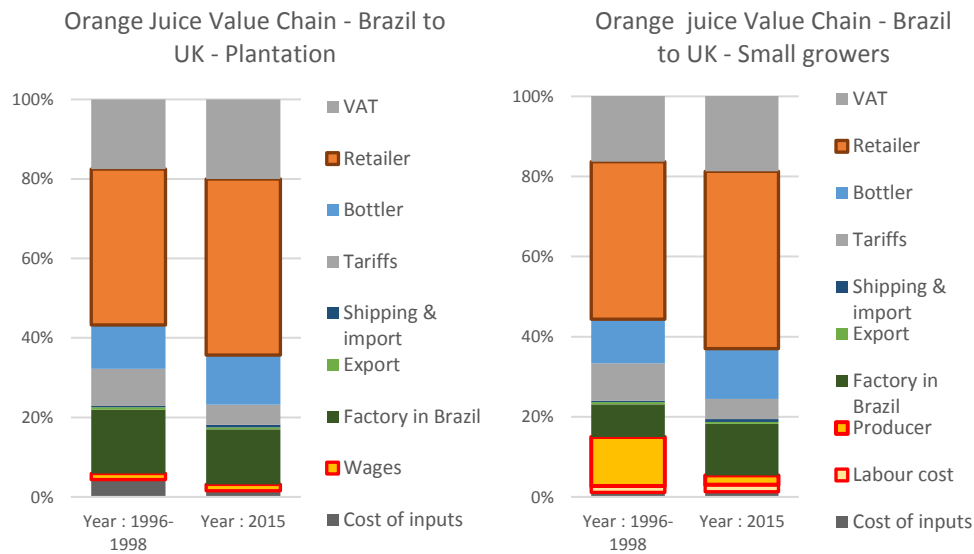
UK's most important suppliers of Frozen Concentrate Orange Juice (FCOJ) are Brazil (75%), Mexico (4%) and South Africa (2%).

For an overview of the sector, the structure of the chain and its evolution, see section 3 on the orange juice global value chain.

### **Comparison of the value breakdown in the 1990's and in 2015**

Our estimations of value breakdown (expressed in nominal currency so as to avoid potential distortions linked to correction for inflation) are as follows:

**Fig. 196 Value breakdown of orange juice made from FCOJ produced in Brazil, supplied by plantations, and by small orange farmers (average 1996-1998 & 2015)**



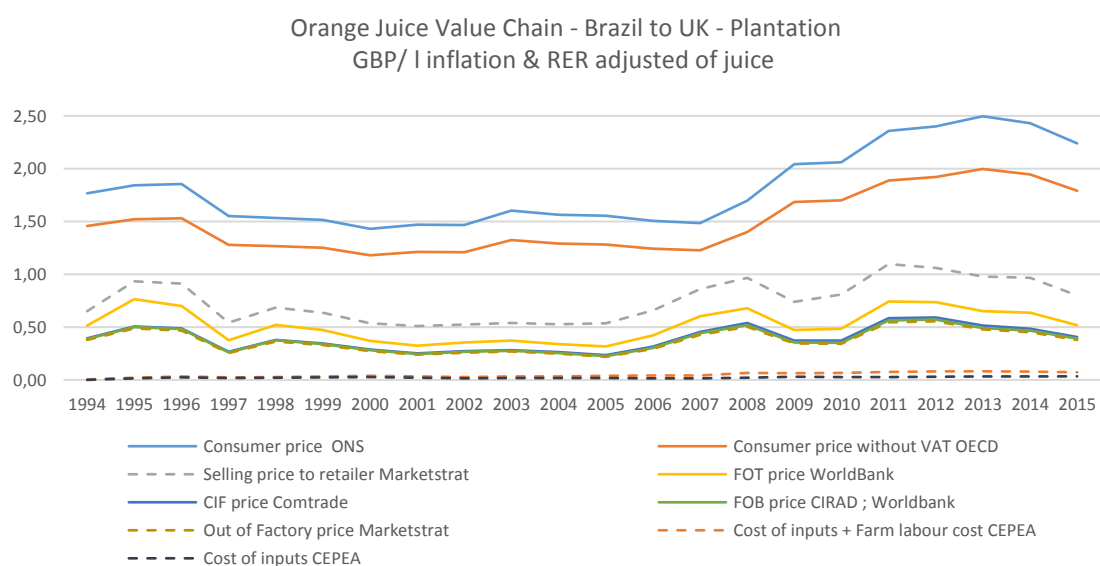
Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

As illustrated above, the share of value retained by retailers is by far the largest and has increased from 39.5% up to 44.5%, showing their strong influence over the chain. The share of the bottlers has slightly increased from 11% up to 12.5% whereas the share of factories in Brazil have dropped from 16% down to 14% for orange from their own plantations, but have significantly increased from 8% down to 13% when oranges are purchased to small farmers. Most importantly, the share of small farmers has shrunk from 12% to 2.5%, as they have had to face the rise of input and labour costs without being able to pass on this increase onto processors, because of their weak bargaining position.

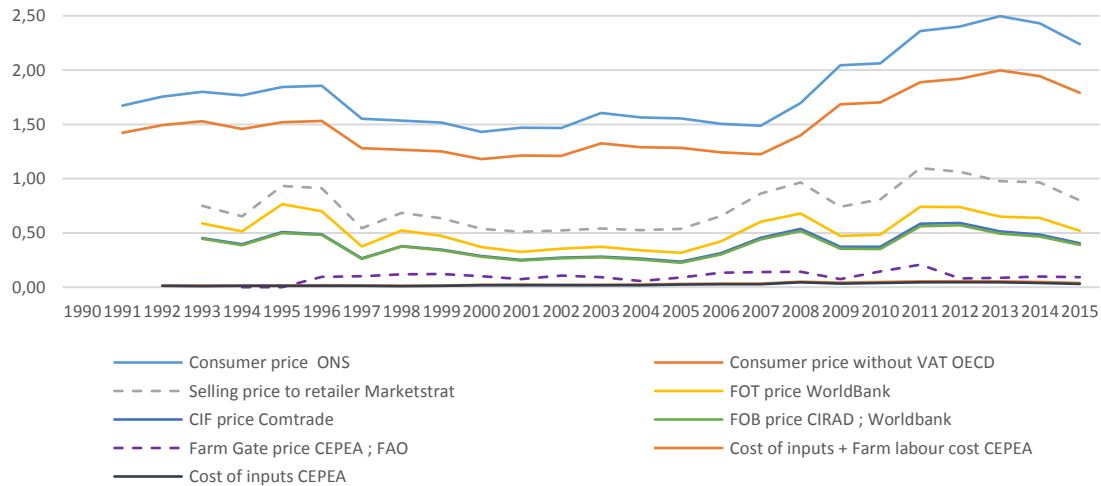
To investigate further this situation, we have analysed the value evolution of the orange producer prices and wages, export FOB prices and costs of production since the early 1990s. The results for the main destinations of Brazilian FCOJ are provided below.

### Analysis of the value breakdown

**Fig. 197 Value breakdown of orange juice made from FCOJ produced in Brazil, supplied by plantations, and by small orange farmers (1991-2015)**



Orange juice Value Chain - Brazil to UK - Small growers  
 GBP / I inflation & RER adjusted of juice



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

On the consumer side, taking into account the evolution of costs of living in the UK, the diagram illustrates that the consumer prices have slightly declined by approx. 10% between 1991 and 2007, before increasing significantly by 50% until 2015. Most importantly, retailers appear to have somehow “cushioned” the evolution of FCOJ prices further up in the chain until 2007 (i.e. limiting increases in case of peaks, but also remaining stable in case of drops), then have managed to substantially increase substantially their share of value.

In the middle of the chain, the brands/bottlers (selling price to retailers) have set their prices according to the CIF import price and have gradually increased their share of value by a small amount.

In Brazil, the processors (out of factory price) appear to have faced increasing costs when expressed in local currency, and managed to increase their share of value thanks to their vertically integrated systems, and when sourcing from small orange producers who got squeezed between the increase of input prices and the pressure from processors (see the section on orange juice global value chain for more details).

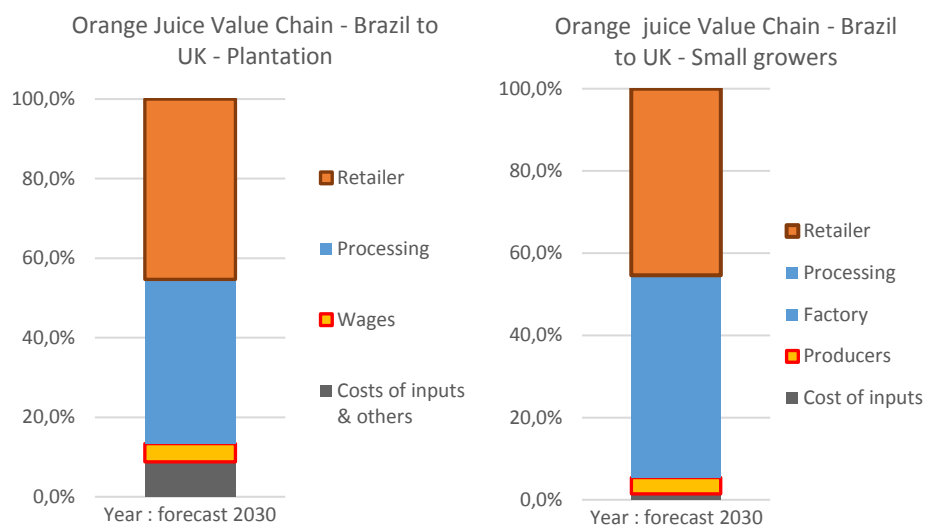
### Projections in 2030 of the value breakdown in a “Business as Usual” scenario

Based on the previous estimates, we performed a projection of the orange juice value breakdown in the year 2030 in a “Business as Usual” scenario:

- producer prices, wage levels and costs of inputs in Brazil are based on the latest projections of the World Bank in 2030 (for fuel and fertilisers’ prices)
- price trends at the supermarkets’, brands’ and processors’ levels have been extrapolated based on the last 15 years and using a linear regression (price trends seem to be closely related to market concentration which has been continuously growing for the past 20 years with no sign of trend reversal).

The results are as follows:

**Fig. 198 Value breakdown of orange juice made from FCOJ produced in Brazil, supplied by plantations, and by small orange farmers (forecast 2030)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

According to these estimates, the share of value captured by retailers could further increase up to 45% because of their position of major selling channel and the development of private labels. The share of value of brands/bottlers and importers could increase to 41% of the total value. At the beginning of the chain, small farmers and workers could be left with respectively less than 4% and 4.5% of the total value. In a 'business as usual scenario', this pressure on prices is likely to continue affecting the difficult living conditions of small orange growers and especially farm workers in Brazil.

### Ability of small farmers and workers to earn a living income/wage and levers for change

In order to cover the costs of orange juice from Brazil, the share of value for small farmers or workers should be increased at least from an estimated 0.08 USD/kg up to 0.14 USD/kg (see the section on orange juice global value chain for more details). This corresponds to very limited mark-up of 0.06 USD/kg, which only represents 6% of the end consumer price of orange juice which is 12.24 GBP/L (3.42 USD/L).

This increase does not need to be passed on to consumers: according to our estimates, the retailers have substantially increased their share of value from 0.74 USD per kg in 2008 to 1.52 USD per kg in 2015. This increase which happened over the last decade is enough to cover the living income of farmers and the payment of a living wage for workers.

Retailers and brands appear to have the means to address the unsustainability of the Brazilian orange juice chain. To do so, they would need to ensure that the orange juice they sell is not produced at the cost of the living conditions of small farmers and workers in the chain. In particular, this would require increasing the minimum wage for workers (in farming and processing) to the living wage level, and allocating enough resources for controls on the ground as it is one of the main ways to ensure that they can achieve a sustainable livelihood. In addition, they could support the establishment of a guaranteed price for the small orange growers enabling them to generate a living income, together with environmental and social conditions to ensure the sustainability of production. <sup>450</sup>



# Banana

## Overview of the sector in United Kingdom

The fresh fruit market in the UK is one of the biggest within the European Union, its total size being estimated at more than 1.1 million tonnes (or 60 million large case equivalent). The consumption per household is in a slight decline (like in several other member states), but the Government's '5 A DAY' scheme and the more general consumer desire to be healthy are important market trends.<sup>451</sup>

In terms of consumer prices, the UK banana market is totally different from the other European markets and is deeply marked by the price war initiated in 2002 by the retailers. As a result, average banana consumer prices fell sharply by more than 50 % in real terms since 2000.

In parallel, because of the strong demand from consumers for increased food safety, leading retailers have developed generic quality and safety standards for their suppliers, in particular EurepGAP (now called GlobalGAP). By 2013, no producer can supply the UK fresh produce market without GlobalGAP certification. A distinctive feature of the UK market is also the importance of Fair trade bananas which account for 27% of the market (in volume terms).<sup>452</sup>

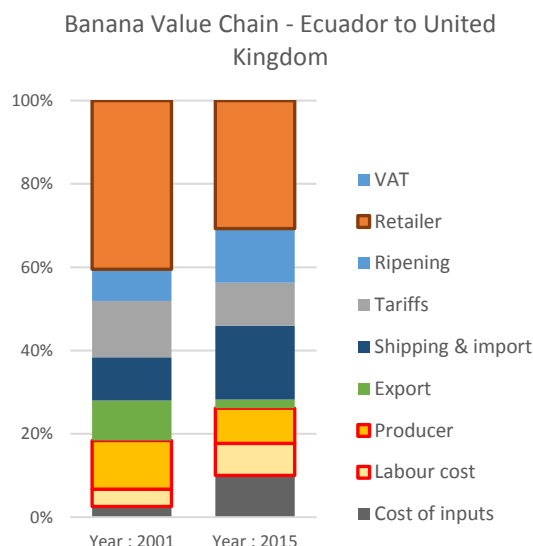
While major fruit brands such as Chiquita and Dole had previously served as purveyors of quality - because vertically integrated chains were the only way to ensure consistency and reliability of banana supply for urban consumers - the more liberal trading environment enabled supermarkets to question the leadership of historical banana companies and to trade bananas independently of the multinationals, often for the first time.<sup>453</sup>

This led to a profound change of the governance of UK banana chains, fruit companies increasingly competing to become the "preferred suppliers" of large supermarket chains who have become the leading actors. As a result, the UK banana market is characterized by a large number of competitors, and strong retailers' buying power who organize direct sourcing. In the UK, large banana companies are becoming service providers<sup>454</sup>. Tesco has become the second largest importer of bananas after Fyffes (it only purchased fruit from Chiquita, Fyffes and Del Monte until 2010). Similarly, Morrisons who used to purchase 100% of its need from Fyffes now sources 90% directly from banana producers (through its subsidiary Global Pacific). More recently, Asda also sources some of its bananas directly through its sourcing company IPL. However, not all UK retailers are investing in direct sourcing due to the perceived risks.<sup>455</sup>

The main banana producing countries supplying the British market are Colombia (28%), Dominican Republic (21%), Costa Rica (14%) and Ecuador (10%).

For an overview of the sector, the structure of the chain and its evolution, see section 3 on the banana global value chain.

**Fig. 199 Value breakdown of banana produced in Ecuador (average 2000-2002 and 2015)**

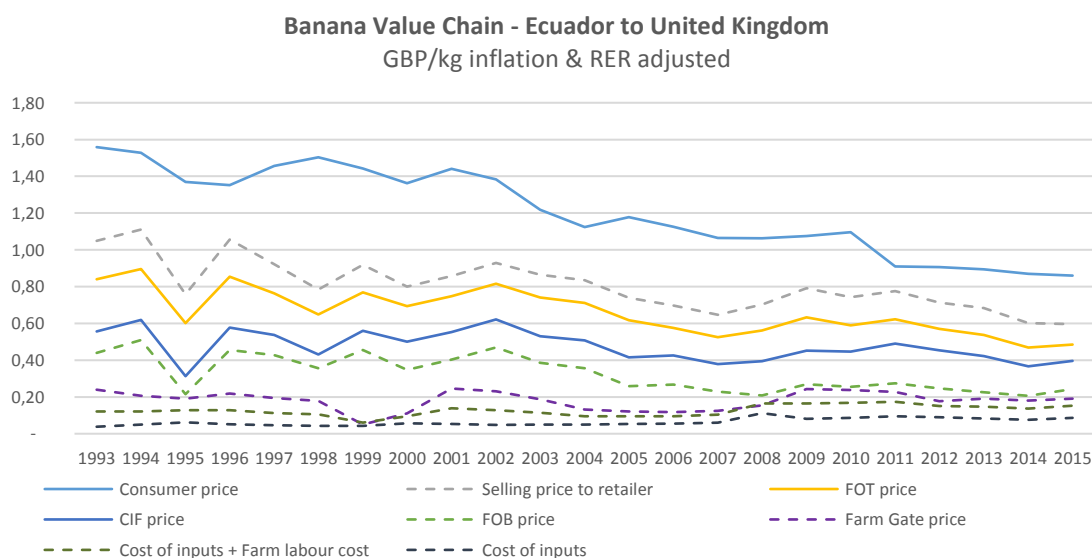


Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

These estimates show that the retail share has slightly decreased from 40.5% down to 30.5% over the past 15 years whilst the share of traders (shipping to ripening) has increased from 31% up to 41%. At the other side of the chain in Ecuador, the value left for banana producers by sales to buyers has decreased from 11.5% down to 8.5%. In the case of workers, although the share has apparently increased since 2001, the situation is not better as the costs of living have increased more rapidly than wages.

**Analysis of the value breakdown**

**Fig. 200 Value breakdown of banana produced in Ecuador (1993-2015)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

On the consumer side, taking into account the evolution of costs of living in the UK, the diagram illustrates the dramatic downfall of the banana consumer price since 1993 which have decreased by more than 45% in real terms.

In 2002, Asda, probably under pressure from its new owner Walmart, decided to implement a strategy of “international price flexing<sup>456</sup>” in the whole UK market on bananas (as well as a few other key consumer products), reducing its prices to undermine the profitability of its competitors. Until mid-2002, loose bananas in the UK had been priced at £1.08 per kilo for around six years. In August that year, Asda cut their retail price to £0.94, thanks to huge volume discounts negotiated on the back of a 100% exclusive deal with Del Monte at a reportedly low price<sup>457</sup>. Tesco, Sainsbury's and Safeway felt compelled to follow. In 2003 the price fell further to £0.79/kg<sup>458</sup>. This was the beginning of a price war between retailers to retain and attract consumers into their outlets.

In the middle of the chain, the CIF import price of bananas has followed a similar tendency, but the wholesale price has reduced much more significantly, due to the significant decrease of banana tariffs in Europe since the agreement in the WTO. As a result, the diagram illustrates that all actors in the chain from retailers down to fruit companies have reduced their margins very significantly since 1994, using their increased bargaining power to pressure the rest of the banana chain.

In Ecuador, the value left for banana growers as well as workers has decreased strongly since the early 1990's and does not enable them to cover their costs of production and the livelihoods of their families (see the section on [banana's global value chain](#) for more details).

As illustrated in our diagram, the estimated export price of bananas appears to have decreased to such a point that it is only slightly above the average producer price in Ecuador, suggesting that a strong pressure is put on producers. As a result, the income earned by small banana growers in Ecuador appears to be only half the living wage in 2015 according to the government estimates. Whilst the situation of workers seems more favourable thanks to the enforcement of the minimum wage law, recent studies have shown that a significant proportion of workers' households didn't achieve a living income<sup>459</sup>.

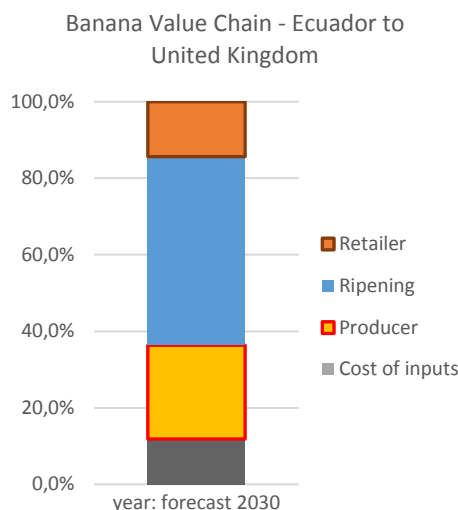
### **Projections in 2030 of the value breakdown in a “Business as Usual” scenario**

Based on the previous estimates, we performed a projection of the banana value breakdown in the year 2030 in a “Business as Usual” scenario:

- producer prices, wage levels and costs of inputs in Ecuador are based on the latest projections of the World Bank in 2030 (for banana FOB prices, fuel and fertilisers' prices)
- price trends at the supermarkets' and fruit companies' levels have been extrapolated based on the last 15 years and using a projection model similar to the one used by the World Bank (price trends seem to be closely related to retailers' market concentration which has been continuously growing for the past 20 years with no sign of trend reversal).

The results are as follows:

**Fig. 201 Value breakdown of banana produced in Ecuador (forecast 2030)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

According to these estimates, the share of value captured by retailers could fall down to 14% of the total value of fresh bananas, while the share of fruit companies would amount to 49% and producers and workers would be sharing 24.5% of the end value of bananas, a high percentage but a very low value given the fall in consumer price fuelled by the supermarkets' price wars. It would be insufficient to enable them making a decent living.

In a 'business as usual scenario', this pressure on prices is likely to accelerate further the disappearance of small growers in the world banana trade, a continuous trend that has been taking place over the past decades; it is also likely to increase further the 'flexibilisation' of working conditions which is already affecting many workers, in order to address the retailers' demand for cheap imported bananas.

The result may well be highly concentrated banana chains, from retailers down to producers, which will most probably lack resilience and increase further the social and environmental impacts in producing countries.

### **Ability of small farmers and workers to earn a living income/wage and levers for change**

In order to cover the costs of production and ensure that both workers and small farmers can earn a living wage, the export price of bananas from Ecuador should be increased by 0.03 USD/kg (see the section on [banana's global value chain](#) for more details). This corresponds to limited mark-up compared to the end consumer price of bananas which is 0.86 GBP/kg (1.36 USD/kg).

This increase apparently has to be passed on to the final client given the decrease in consumer price as a result on the price war on bananas, in order to cover the payment of a living wage to banana farmers and workers in Ecuador. Direct sourcing has been used by retailers to keep low costs in the middle stages of the chain (although the important role of traders who take most of the logistics and financial risks should be kept in mind, as demonstrated by the experience of UK retailers).

Retailers have started to address the sustainability issues of the banana chain selling Fair trade and organic bananas. However, they would need to generalize their commitments and take on their responsibility to ensure that the banana they sell is not produced at the cost of the living conditions of producers and workers, as well as the environment. In the case of Ecuador, they could promote the minimum support price for farmers and the minimum wage for workers – which are effective tools to secure living income in the banana sector – by leaving a sufficient

share of the banana value in the producing country so that the costs of sustainable production can be covered, potentially through a small increase of the consumer price, and more importantly the end of price wars on bananas.

Given the concentration of market power in the hands of retailers who currently exert economic pressure down the chain while imposing strong conditions on suppliers (in terms of quality, health security, consistency...), this is likely to require stricter public regulations to be enforced, in consumer countries as well as producer countries.<sup>460</sup>

## Table grape

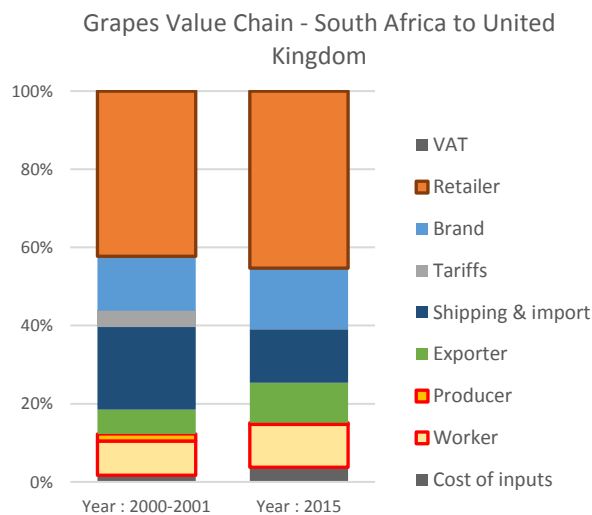
### Overview of the sector in United Kingdom

For an overview of the sector, the structure of the chain and its evolution, see section 3 on the grape global value chain.

### Comparison of the value breakdown in the 1990's and in 2015

Our estimations of value breakdown (expressed in nominal currency so as to avoid potential distortions linked to correction for inflation) are as follows:

**Fig. 202 Value breakdown grape produced in South Africa (average 2000-2001 and 2015)**



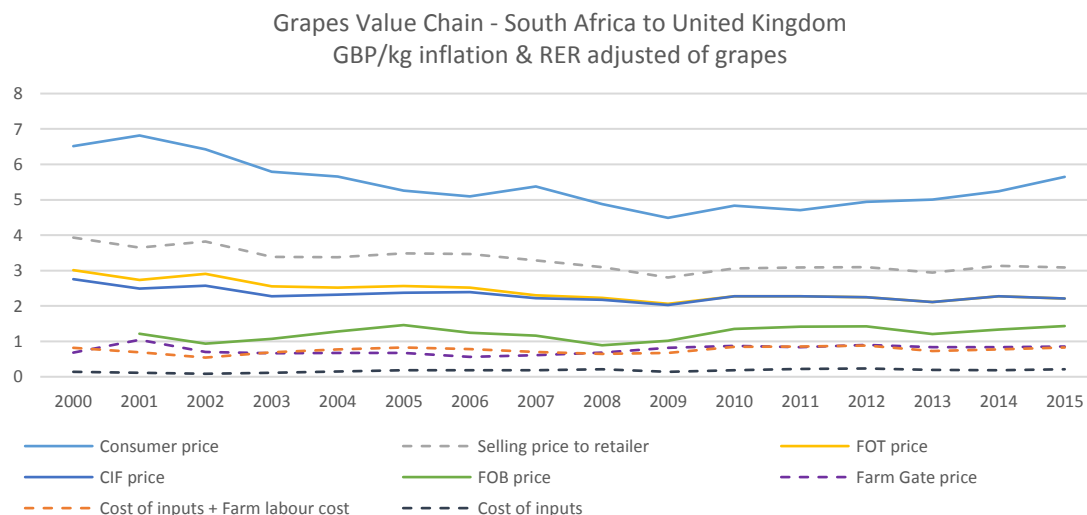
Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

As illustrated above, the share of value retained by retailers is the largest and has increased since 2000 from 42% up to 45%, so as the share of value of wholesalers which has risen from 14% up to 16%. The value remaining in South Africa has significantly increased from 19% to 25% over the same period.

To investigate further this situation, we have analysed the value evolution of the table grape producer prices and wages, export FOB prices and costs of production since the early 1990s. The results for the main destinations of South African grape are provided below.

### Analysis of the value breakdown

**Fig. 203 Value breakdown of grape produced in South Africa (2000-2015)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

On the consumer side, taking into account the evolution of costs of living in the UK, the diagram illustrates that the consumer prices have steadily decreased by 33% until 2009, then have recovered and increased by 25% since then. Retailers appear to have managed to increase their share of value, especially since 2009.

In the middle of the chain, the wholesalers (retail price to retailer) appear to have globally followed the trend of CIF import prices..

In South Africa, the plantations have been facing a sharp increase in farm inputs since the end of the 1990s which has squeezed their share of value. In order to maintain their failing margin, a general trend of casualization of labour has been observed among South African plantations, and a move of the vineyard towards regions where grape can be produced and sold more profitably in early December (see the section on grape global value chain for more details).

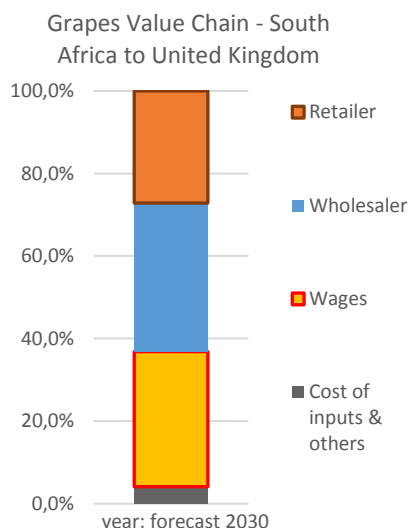
### Projections in 2030 of the value breakdown in a “Business as Usual” scenario

Based on the previous estimates, we performed a projection of the grape value breakdown in the year 2030 in a “Business as Usual” scenario:

- producer prices, wage levels and costs of inputs in South Africa are based on the latest projections of the World Bank in 2030 (for fuel and fertilisers’ prices)
- price trends at the supermarkets’, wholesalers’ and producers’ levels have been extrapolated based on the last 15 years and using a linear regression (price trends seem to be closely related to market concentration which has been continuously growing for the past 20 years with no sign of trend reversal).

The results are as follows:

**Fig. 204 Value breakdown of grape (forecast 2030)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

According to these estimates, the share of value captured by retailers could decrease and stabilize at 27% because of the competition for value with wholesalers/exporters/plantations whose share could reach 36% of the total value. At the beginning of the chain, workers could be accounting for 30% of the total value in 2030.

### Ability of workers to earn a living wage and levers for change

In order to cover the costs of production and ensure that workers can earn a living wage, the share of value for workers in South Africa should be increased from 0.69 USD/kg currently to 0.89 USD/kg (see the section on the grape global value chain for more details). This corresponds to a mark-up of 0.20 USD/kg, which represents 3% of the end consumer price of table grape which is 5.65 GBP/kg (6,26 USD/kg).

This increase does not need to be passed on to consumers: according to our estimates, the retailers have increased their share of value from 2.20 USD per kg in 2011 to 2.80 USD per kg in 2015. This increase which happened in the last 3 years is more than enough to cover the payment of a living wage for table grape workers in South Africa.

Retailers appear to have the means to address the unsustainability of the South African grape chain, and have started to do so through selling Fair trade, sustainable and organic grapes. However, they would need to generalize their commitments and take on their responsibility to ensure that the grape they sell is not produced at the cost of the living conditions of workers, as well as the environment. In the case of South Africa, they could promote the rise of the minimum wage for workers to ensure it covers the costs basic needs of their families – which is an effective tool to secure living income in the sector – by leaving a sufficient share of the value in the producing country so that the costs of sustainable production can be covered.<sup>461</sup>

## Green bean

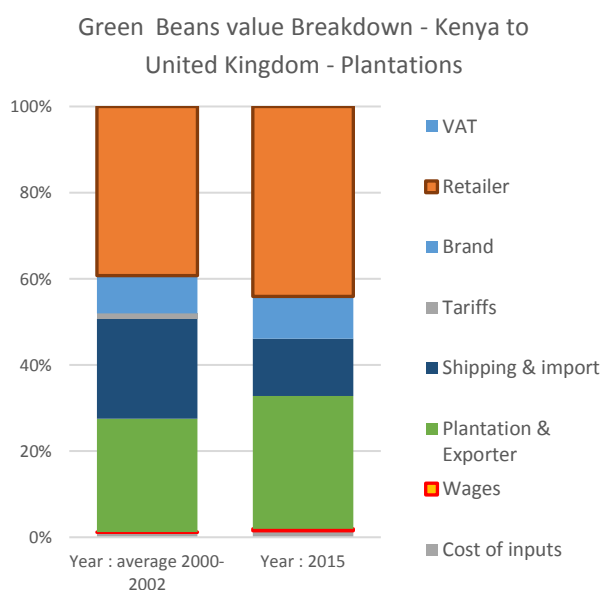
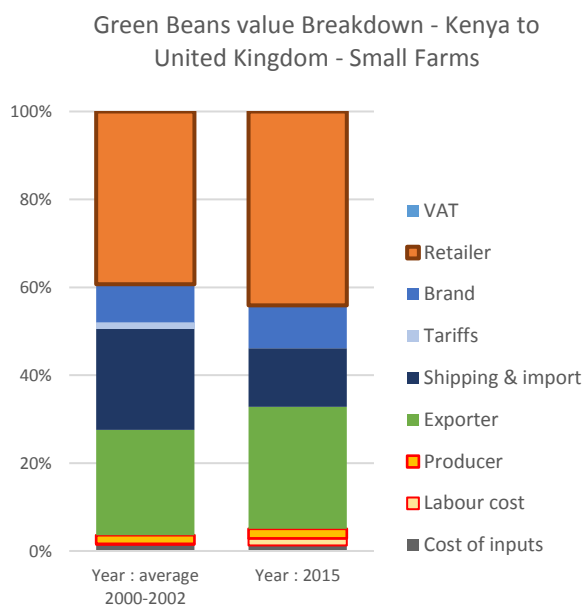
### Overview of the sector in United Kingdom

For an overview of the sector, the structure of the chain and its evolution, see section 3 on the green bean global value chain.

## Comparison of the value breakdown in the 1990's and in 2015

Our estimations of value breakdown (expressed in nominal currency so as to avoid potential distortions linked to correction for inflation) are as follows:

**Fig. 205 Value breakdown of green bean produced in Kenya, supplied by plantations, and by small farmers (average 2000-2002 & 2015)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

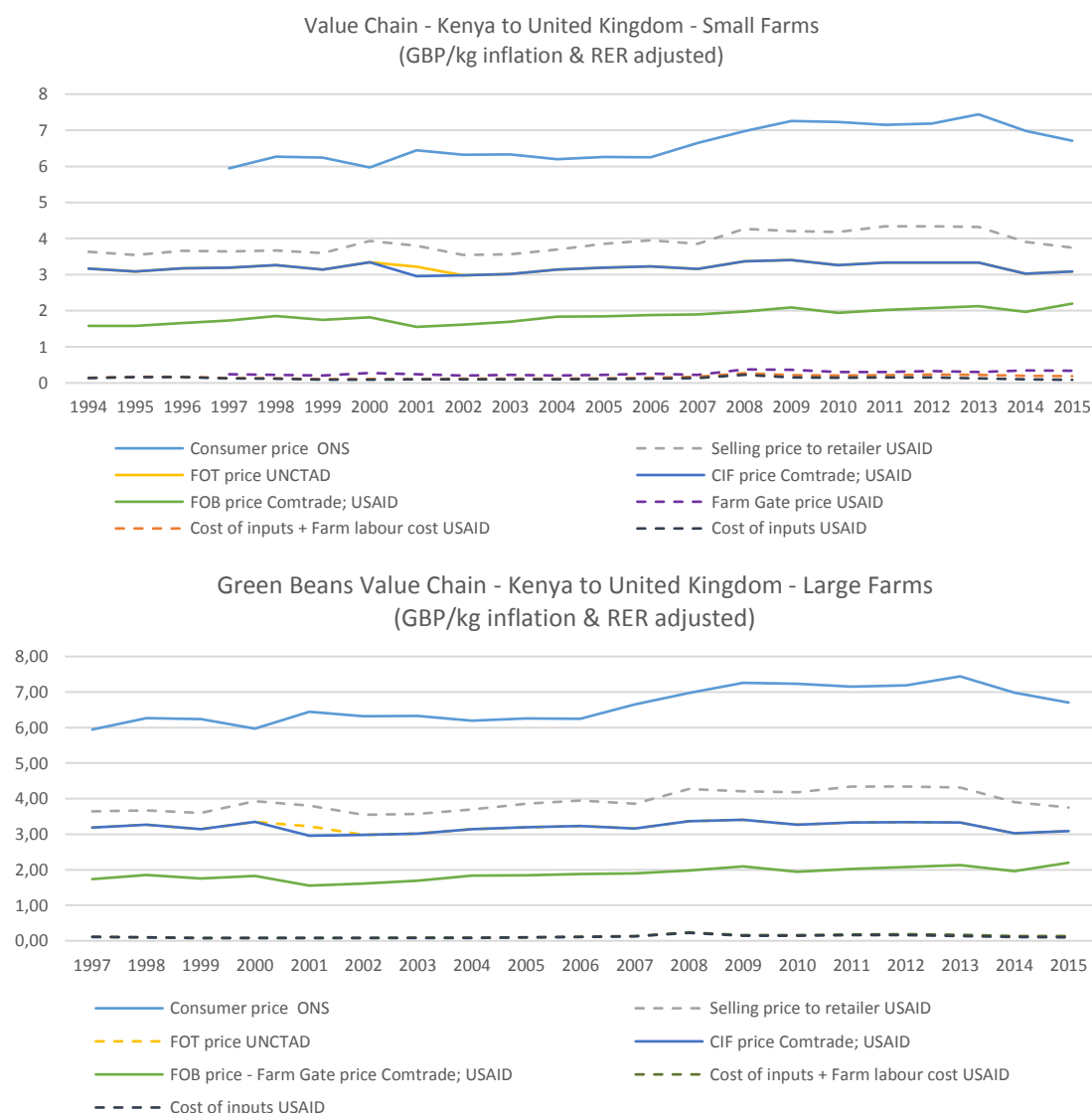
As illustrated above, the share of value retained by retailers is the largest and has substantially increased from 39% up to 44%, showing their growing influence over the chain. The share of the brands/wholesalers has remained stable at around 10%, whereas the share of the plantations/exporters in Kenya have strongly increased from 16% up to 31% when they source beans from their own farms (and from 16.5% up to 27.5% when beans are purchased to small farmers). Finally, the share of small farmers and workers' wages amount to 2% and 0.5% respectively.



To investigate further this situation, we have analysed the value evolution of the green bean producer prices and wages, export FOB prices and costs of production since the early 1990s. The results for the main destinations of Kenyan beans are provided below.

### Analysis of the value breakdown

**Fig. 206 Value breakdown of green bean produced in Kenya, supplied by plantations, and by small farmers (1991-2015)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

On the consumer side, taking into account the evolution of costs of living in the UK, the diagram illustrates that the consumer prices have steadily increased by approx. 12% between 1997 and 2015. Retailers appear to have managed to increase significantly their share since 2008.

In the middle of the chain, the brands/wholesalers (selling price to retailers) have mainly followed the trends in CIF import prices and slightly increased their value share too.

In Kenya, the processors (out of factory price) appear to have managed to maintain and sometimes increase their share of value over the whole period thanks to their vertically integrated systems, especially when sourcing from small farmers who got squeezed by

plantations which are in a strong bargaining position and able to impose decreasing producer prices, as well as casualisation of labour for workers (see the section on green bean global value chain for more details).

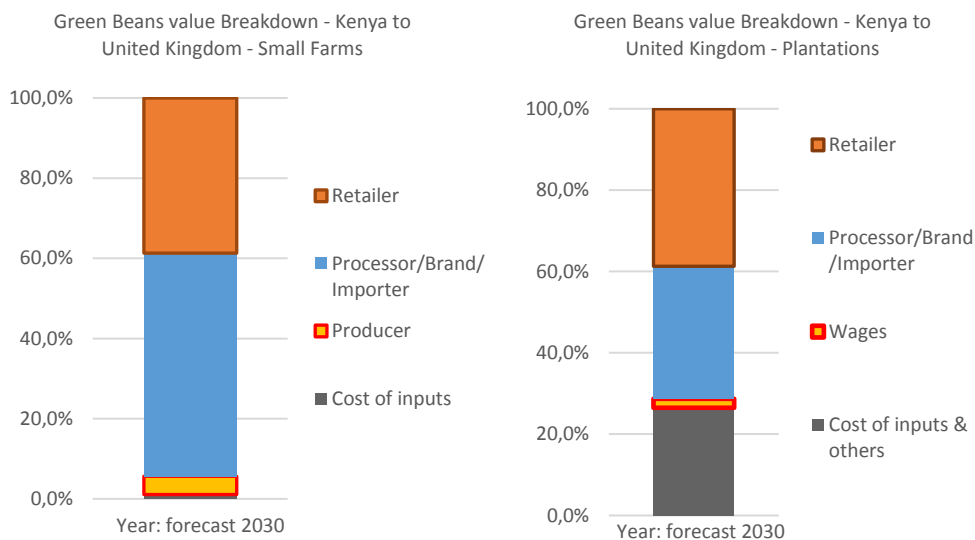
### Projections in 2030 of the value breakdown in a “Business as Usual” scenario

Based on the previous estimates, we performed a projection of the green bean value breakdown in the year 2030 in a “Business as Usual” scenario:

- producer prices, wage levels and costs of inputs in Kenya are based on the latest projections of the World Bank in 2030 (for fuel and fertilisers’ prices)
- price trends at the supermarkets’, brands’ and processors’ levels have been extrapolated based on the last 15 years and using a linear regression (price trends seem to be closely related to market concentration which has been continuously growing for the past 20 years with no sign of trend reversal).

The results are as follows:

**Fig. 207 Value breakdown of green bean produced in Kenya, supplied by plantations, and by small farmers (forecast 2030)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

According to these estimates, the share of value captured by retailers could decrease and stabilize at 39% because of the competition for value with brands/exporters/plantations who could increase up to 58% of the total value. At the beginning of the chain, small farmers and workers could be left with respectively less than 4.5% and 2.2% of the total value. In a ‘business as usual scenario’, this pressure on prices is likely to continue affecting the difficult living conditions of small growers and farm workers in Kenya.

### Ability of small farmers and workers to earn a living income/wage and levers for change

In order to cover the costs of green beans from Kenya, the share of value allocated for small farmers or workers should be increased at least from an estimated 0.23 USD/kg to 0.46 USD/kg (see the section on green bean global value chain for more details). This corresponds to limited mark-up of 0.23 USD/kg, which only represents 2.5% of the end consumer price of green beans which is 6.71 GBP/kg (10.25 USD/kg).

This increase does not need to be passed on to consumers: according to our estimates, the brands/wholesalers have increased their share of value from 3.10 USD per kg in 2000 to 4.50 USD per kg in 2015. This increase which happened over the last 15 years is enough to cover the living income of farmers and the payment of a living wage for workers.

Retailers and brands appear to have the means to address the unsustainability of the Kenyan green bean chain. To do so, they would need to ensure that the green bean they sell is not produced at the cost of the living conditions of small farmers and workers in the chain. In particular, this would require increasing the minimum wage for workers (in farming and processing) to the living wage level, and allocating enough resources for controls on the ground as it is one of the main ways to ensure that they can achieve a sustainable livelihood. In addition, they could support the establishment of a guaranteed price for smallholders enabling them to generate a living income, together with environmental and social conditions to ensure the sustainability of production.<sup>462</sup>

## Avocado

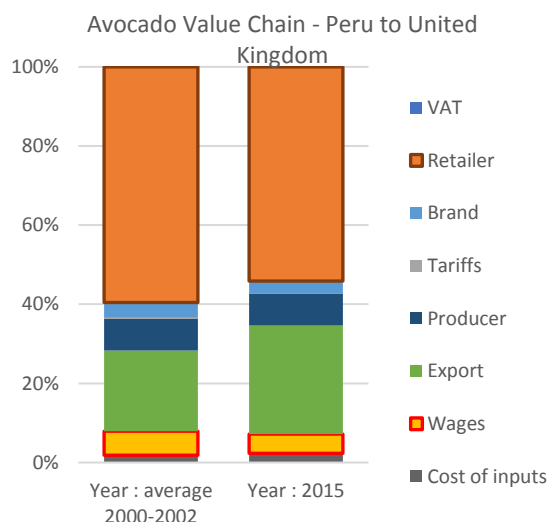
### Overview of the sector in United Kingdom

For an overview of the sector, the structure of the chain and its evolution, see section 3 on the avocado global value chain.

### Comparison of the value breakdown in the 1990's and in 2015

Our estimations of value breakdown (expressed in nominal currency so as to avoid potential distortions linked to correction for inflation) are as follows:

**Fig. 208 Value breakdown avocado produced in Peru (average 2000-2001 and 2015)**



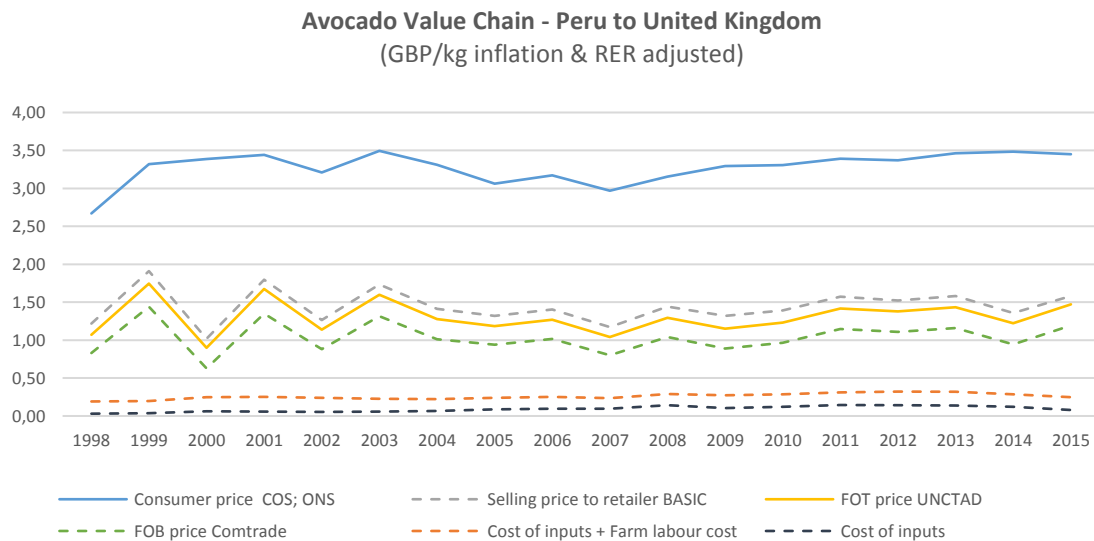
Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

As illustrated above, the share of value retained by retailers is the largest and has decreased substantially since 2000 from 59.5% down to 54%. The value remaining in Peru has increased from 36.5% up to 42.5%, essentially captured by plantations, while the share of the total value for workers has decreased from 6% down to 5%.

To investigate further this situation, we have analysed the value evolution of the avocado producer prices and wages, export FOB prices and costs of production since the early 1990s. The results for the main destinations of Peruvian avocado are provided below.

### Analysis of the value breakdown

**Fig. 209 Value breakdown of avocado produced in Peru (2000-2015)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

On the consumer side, taking into account the evolution of costs of living in the UK, the diagram illustrates that the consumer prices have globally declined by 15% between 1999 and 2007, then steadily increased by 15% until 2015. Retailers appear to have followed the evolution of CIF import prices and managed to increase slightly their share of value in recent years

In Peru, the plantations have managed to maintain or increase their share of value especially since 2007 (see the section on avocado global value chain for more details).

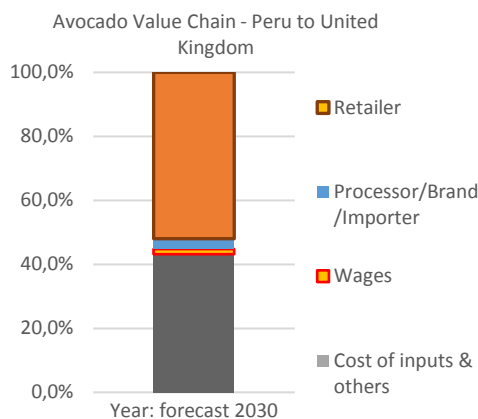
### Projections in 2030 of the value breakdown in a “Business as Usual” scenario

Based on the previous estimates, we performed a projection of the avocado value breakdown in the year 2030 in a “Business as Usual” scenario:

- producer prices, wage levels and costs of inputs in Peru are based on the latest projections of the World Bank in 2030 (for fuel and fertilisers’ prices)
- price trends at the supermarkets’ and producers’ levels have been extrapolated based on the last 15 years and using a linear regression (price trends seem to be closely related to market concentration which has been continuously growing for the past 20 years with no sign of trend reversal).

The results are as follows:

**Fig. 210 Value breakdown of avocado (forecast 2030)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

According to these estimates, the share of value captured by retailers could stabilize at 52% because of their position of major selling channel. In contrast, the share of value of plantations could decrease because of the rise in input costs. At the beginning of the chain, workers could be left with 1.5% of the total value. In a ‘business as usual scenario’, this pressure on prices is likely to continue affecting the wages and labour conditions of the avocado workers.

### Ability of workers to earn a living wage and levers for change

In order to cover the costs of production and ensure that workers can earn a living wage, the share of value for workers in Peru should be increased from 0.26 USD/kg currently to 0.29 USD/kg (see the section on the avocado global value chain for more details). This corresponds to a mark-up of 0.03 USD/kg, which represents less than 1% of the end consumer price of avocado which is 3.45 GBP/kg (5.27 USD/kg).

This increase does not need to be passed on to consumers: according to our estimates, the retailers have increased their share of value from 2.30 USD per kg in 2001 to 2.85 USD per kg in 2015. This increase which happened in the last 15 years is more than enough to cover the payment of a living wage for avocado workers in Peru.

Retailers appear to have the means to address the unsustainability of the Peruvian avocado chain. To do so, they would need to ensure that the avocado they sell is not produced at the cost of the living conditions of workers, as well as the environment. In the case of Peru, they could promote the rise of the minimum wage for workers to ensure it covers the costs basic needs of their families – which is an effective tool to secure living income in the sector – by leaving a sufficient share of the value in the producing country so that the costs of sustainable production can be covered.<sup>463</sup>

## Tomato

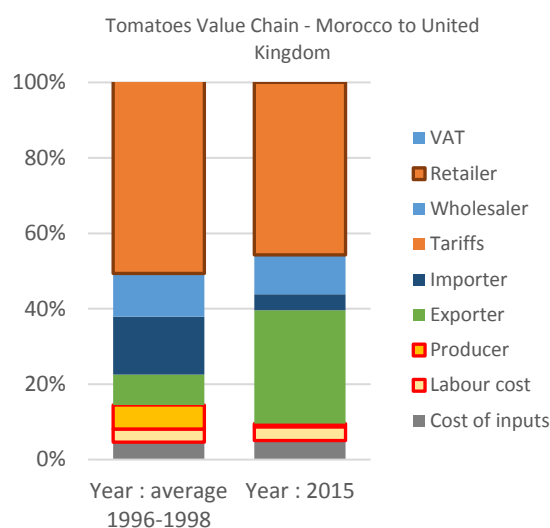
### Overview of the sector in United Kingdom

For an overview of the sector, the structure of the chain and its evolution, see section 3 on the tomato global value chain.

## Comparison of the value breakdown in the 1990's and in 2015

Our estimations of value breakdown (expressed in nominal currency so as to avoid potential distortions linked to correction for inflation) are as follows:

**Fig. 211 Value breakdown tomato produced in Morocco (average 2000-2001 and 2015)**



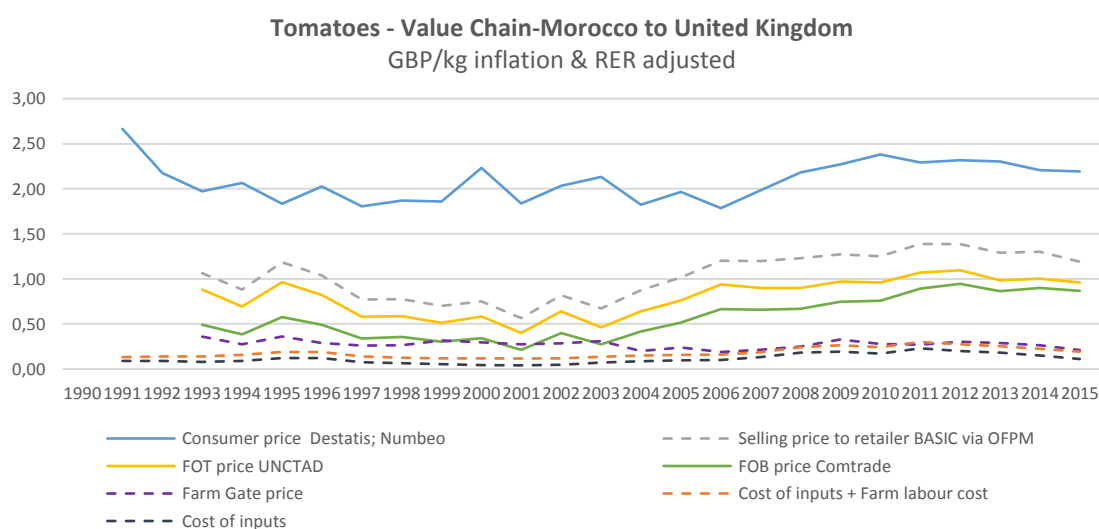
Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

As illustrated above, the share of value retained by retailers is the largest and has decreased substantially since 2000 from 59.5% down to 45.5%. The value remaining in Morocco has increased from 22.5% up to 39.5%, essentially captured by large producers and exporters, while the share of the total value for workers has remained stable at around 3.5%.

To investigate further this situation, we have analysed the value evolution of the tomato producer prices and wages, export FOB prices and costs of production since the early 1990s. The results for the main destinations of Moroccan tomato are provided below.

### Analysis of the value breakdown

**Fig. 212 Value breakdown of tomato produced in Morocco (2000-2015)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports

On the consumer side, taking into account the evolution of costs of living in the UK, the diagram illustrates that the consumer prices have significantly declined by 25% between 1991 and 1995, then remained stable although partially volatile until 2007, and finally increased by 15% since then. Retailers appear to have globally followed the CIF import prices and slightly increased their share of value since 2007.

In Morocco, the exporters and large farms have managed to increase substantially their share of value since 2006, and subsequently the FOB export price which has increased by 30% since then (see the section on tomato global value chain for more details).

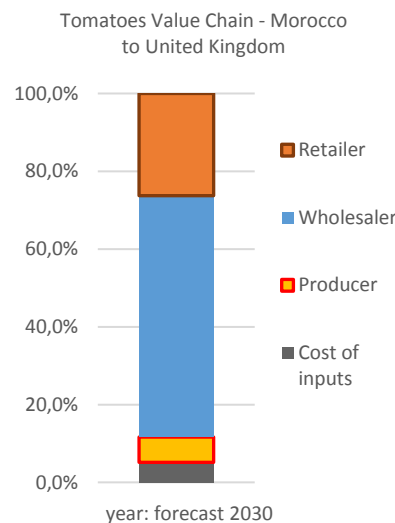
### Projections in 2030 of the value breakdown in a “Business as Usual” scenario

Based on the previous estimates, we performed a projection of the tomato value breakdown in the year 2030 in a “Business as Usual” scenario:

- producer prices, wage levels and costs of inputs in Morocco are based on the latest projections of the World Bank in 2030 (for fuel and fertilisers’ prices)
- price trends at the supermarkets’ and producers’ levels have been extrapolated based on the last 15 years and using a linear regression (price trends seem to be closely related to market concentration which has been continuously growing for the past 20 years with no sign of trend reversal).

The results are as follows:

**Fig. 213 Value breakdown of tomato (forecast 2030)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

According to these estimates, the share of value captured by retailers could decrease further and reach 26.5% because of the competition for value with wholesalers/exporters whose share could reach 62%. At the beginning of the chain, workers could be left with 6.5% of the total value. In a ‘business as usual scenario’, this pressure on prices is likely to continue affecting the wages and labour conditions of the tomato workers.

### Ability of workers to earn a living wage and levers for change

In order to cover the costs of production and ensure that workers can earn a living wage, the share of value for workers in Morocco should be increased from 0.32 USD/kg currently to 0.69 USD/kg (see the section on the tomato global value chain for more details). This corresponds to

a mark-up of 0.39 USD/kg, which represents 12% of the end consumer price of tomato which is 2.19 EUR/kg (3.35 USD/kg).

This increase does not need to be passed on to consumers: according to our estimates, the retailers have increased their share of value from 1.00 USD per kg in 2006 to 1.50 USD per kg in 2015. This increase which happened in the last 10 years is enough to cover the payment of a living wage for tomato workers in Morocco.

Retailers appear to have the means to address the unsustainability of the Moroccan tomato chain. To do so, they would need to ensure that the tomato they sell is not produced at the cost of the living conditions of workers, as well as the environment. In the case of Morocco, they could promote the rise of the minimum wage for workers to ensure it covers the costs basic needs of their families – which is an effective tool to secure living income in the sector – by leaving a sufficient share of the value in the producing country so that the costs of sustainable production can be covered.<sup>464</sup>



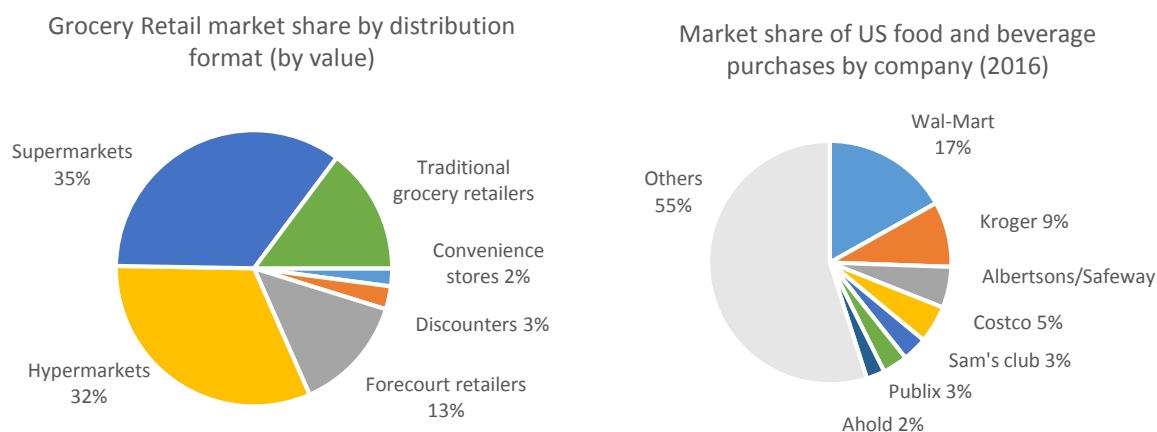
# UNITED STATES OF AMERICA

## Overview of the food retail sector in the country

With a large population and diverse ethnic groups, food preferences in the USA are significantly determined by consumers' socio-economic profiles, household budgets, but also regions and ethnic groups. Modern grocery retailers - which include hypermarkets, supermarkets and discounters - are the top distribution channel for grocery products in the country. Supermarkets lead sales with approx. 330 billion USD per year, offering a large variety of food and drink close to where people live and work in urban, suburban and rural area, in contrast to hypermarkets. The latter are in second position with almost 300 billion USD sales and use their scale effect and bargaining power to offer prices lower than supermarkets. Discounters, which offer minimal customer service in no-frills stores and a limited selection of products, are the fastest-growing category, but only account for 25 billion USD. Among all three retail formats, the market share of private label is growing, although it remains twice less than in Europe (22% of US grocery retail sales compared to more than 40% on average in the EU).<sup>465</sup>

Smaller grocery formats include convenience stores, forecourt retailers, cash and carry warehouse clubs and drug stores and pharmacies. Convenience stores and forecourt retailers are the 3<sup>rd</sup> biggest food channel in the USA, accounting for almost 150 billion USD per year. Best known for quick shopping trips, convenience stores such as 7-Eleven, Circle K and Pantry are located in high traffic areas and offer limited selections of food. Drugstores are now becoming an increasingly important channel in the US grocery market, with large chains such as Walgreens, CVS and Rite Aid offering sophisticated ranges of products in their stores (with a focus on snack foods and drinks, but also more and more fresh and frozen foods). In contrast, traditional grocery stores are losing ground, only accounting for approx. 150 billion USD.<sup>466</sup>

**Fig. 214 Main retail outlets and retailers' market shares in the USA**



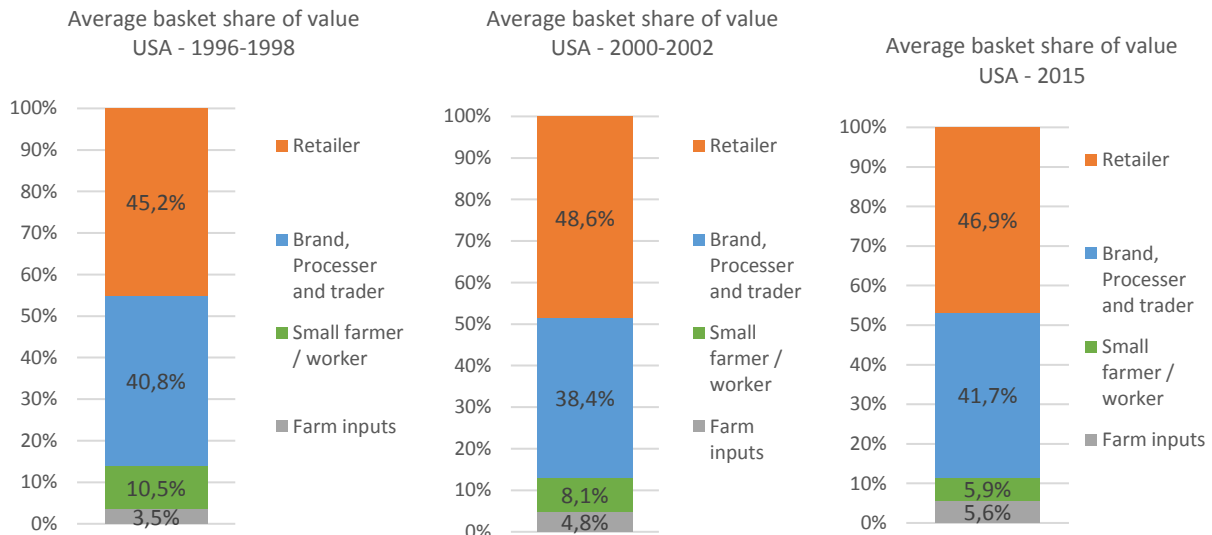
Source: BASIC, based on Euromonitor, Agrifood Canada, CSG and Statista data (2015)

With many domestic and international companies in the US grocery industry, the market is relatively fragmented in comparison with Europe (the top 5 grocery retailers being all domestic). With its strong national presence and low prices, Walmart dominates with approx. 17% value share of all food and grocery products sold in the country, followed by Kroger at 9% and Safeway at 6%. Some internationally owned retailers are also successful in the United States, such as Ahold (Netherlands) and Delhaize (Belgium) which have merged in 2016 (and were already part of the top 10 largest grocery retailers prior to this concentration).<sup>467</sup>

# Overview of the food basket value breakdown

The evolution of the value breakdown of the basket of goods for the USA is detailed below for 1996-1998, 2000-2002 and 2015:

**Fig. 215 Value breakdown of the US basket of goods**



Source: BASIC

As illustrated above, the share of value retained by retailers appears to have only slightly increased since 1996, whereas the share of small farmers and workers have decreased substantially. The detailed analysis of each product in the basket is provided in the following sub-sections.

## Coffee

### Overview of the sector in the USA

USA is the world's largest coffee consumption market with a growth rate of 3.25% in 2013 and 2.1% in 2014. According to the National Coffee Association, 59% of U.S. adults drink coffee daily, which makes it the country's favourite beverage, beating soda by 20 percentage points. Brewed coffee is the most popular type of coffee consumed in the country, accounting for 92% of consumption, due to the surge in the adoption of home-use single-cup filter brewing systems by consumers (while soluble coffee is in decline).<sup>468</sup>

Much of the US coffee consumption increase owes to consumers' growing appetite for specialty coffee (i.e. differentiated and less commoditized coffee such as pure origin, organic or fair trade): one of every two cups of coffee is considered specialty in 2015, according to the Specialty Coffee Association of America (SCAA), a threefold increase since 2000. This evolution is also significant in the out-of-home segment as specialty coffee retailers increased more than tenfold in 20 years, from 2,850 in 1993 to 29,300 in 2013. Of this total, 45% are chains or franchises (e.g. Starbucks and Dunkin' Donut), while 55% are independent.<sup>469</sup>

The coffee sector in the USA has undergone radical change in the last decade: following the acquisition of Folgers and a sizable portion of Sara Lee/DE (now Jacobs Douwe Egberts), J.M.

Smucker has become the largest coffee roasted and manufacturer in America with 28.5% market share followed by Kraft (owned by Mondelez) with 14% market share, Starbucks (11.4%) and Green Mountain (9.9%).<sup>470</sup>

The USA is the world's largest importer of green coffee beans. Rather surprisingly given the growth in specialty coffee consumption in the United States, the import pattern has tended to shift momentarily away from washed arabicas towards Natural arabicas and robustas, mainly because of supply problems in Colombia and Central America.<sup>471</sup>

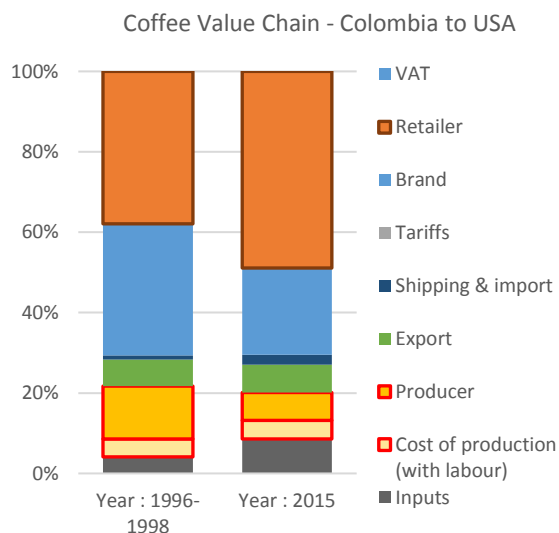
US most important suppliers of conventional green coffee are Brazil (27%), Colombia (25%), Viet Nam (6%) and Indonesia (5%).

For an overview of the sector, the structure of the chain and its evolution, see section 3 on the coffee global value chain.

### Comparison of the value breakdown in the 1990's and in 2015

Our estimations of value breakdown (expressed in nominal currency so as to avoid potential distortions linked to correction for inflation) are as follows:

**Fig. 216 Value breakdown of coffee produced in Colombia (average 1996-1998 and 2015)**



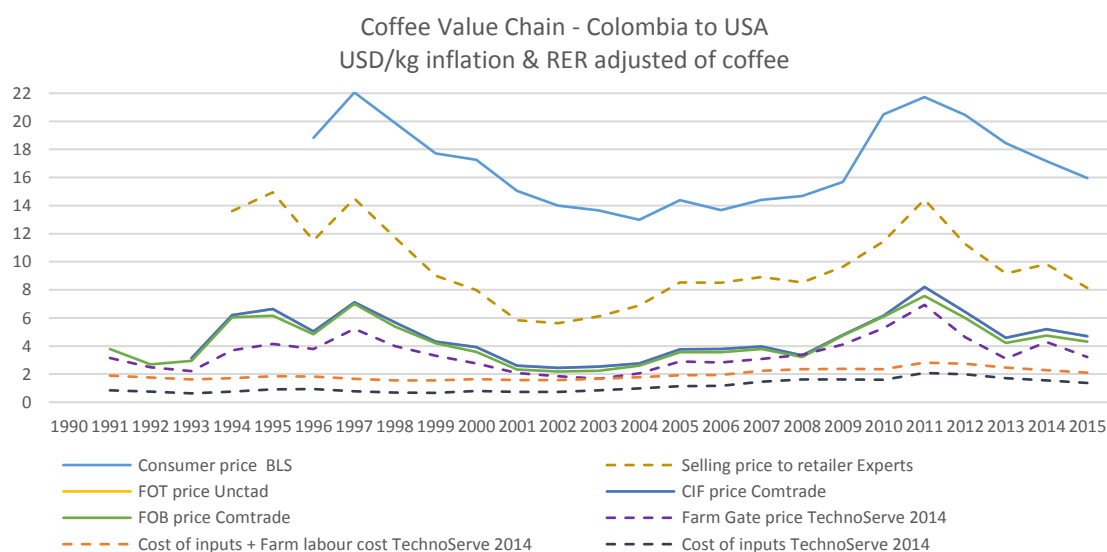
Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

As illustrated above, the value breakdown mirrors the evolution of the coffee chain where supermarket chains have a growing influence (through the development of private label) as well as coffee brands and roasters. The share of value retained by retailers is the largest and has tended to increase significantly since 1996 (from 38% in 1996-98 to 49% in 2015). In comparison, the share of value of brands/roasters is the 2<sup>nd</sup> largest but has apparently strongly declined from 33% to 22% and the value remaining in Colombia has stagnated at approx. 27%. This is not taking into account the costs of inputs (fertilizers and pesticides) which has more than doubled in proportion, generating strong economic pressure on both coffee growers and workers.

To investigate further this situation, we have analysed the value evolution of the coffee producer prices, export FOB prices and costs of production since the early 1990s. The results for the main destinations of Colombian coffee are provided below.

### Analysis of the value breakdown

**Fig. 217 Value breakdown of coffee produced in Colombia (1991-2015)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

On the consumer side, taking into account the evolution of costs of living in the USA, the diagram illustrates that the consumer prices have globally followed the trends of the coffee CIF import prices since 1991. Retailers appear to have passed on the evolution of the coffee price on world markets (prices increase as well as prices fall). Their share of value seems to have gradually increased over the years.

In the middle of the chain, the selling price (of roasters) to retailers seem to be also quite aligned with the evolution of the coffee CIF import price, and even slightly amplifies peaks such as in 1994, 1997 and more recently 2010-2011 during the rust epidemic.

In Colombia, the value left for small coffee growers as well as workers has undergone two spikes in 1994-98 because of the end of the international coffee agreement and in 2010-12 because of the ravages of rust combined with El Niño/La Niña effects. In 2015, producers only sell their coffee to the same unit price than in 1991 – one corrected for inflation – but production costs have sharply risen, thereby squeezing what is left for them to live on (see the section on coffee global value chain for more details).

As pointed out by Daviron and Ponte (2005) a “coffee paradox” emerges, characterized by decreasing and unstable prices to farmers on the one side and increasing consumer prices on the other side: the value of coffee for consumers over the last 3 years is not so much linked to the green coffee price, but to the ways of combining different coffees in blends, roasting and marketing, and selling them in bars and coffee shops.<sup>472</sup>

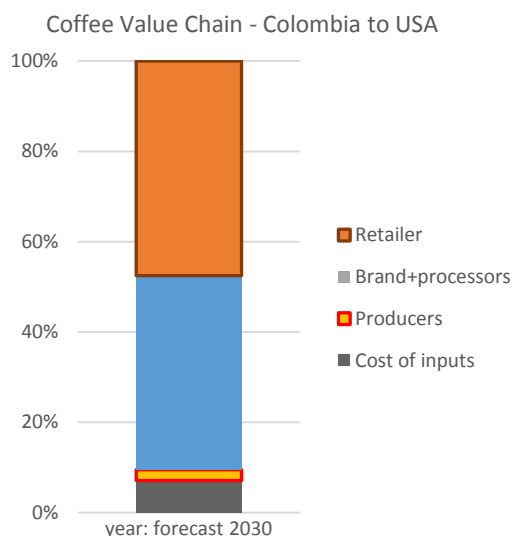
### Projections in 2030 of the value breakdown in a “Business as Usual” scenario

Based on the previous estimates, we performed a projection of the coffee value breakdown in the year 2030 in a “Business as Usual” scenario:

- producer prices, wage levels and costs of inputs in Colombia are based on the latest projections of the World Bank in 2030 (for coffee FOB prices, fuel and fertilisers’ prices)
- price trends at the supermarkets’ and roasters’ levels have been extrapolated based on the last 15 years and using a linear regression (price trends seem to be closely related to market concentration which has been continuously growing for the past 20 years with no sign of trend reversal).

The results are as follows:

**Fig. 218 Value breakdown of coffee (forecast 2030)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

According to these estimates, the share of value captured by retailers would remain at 48% and brands, roasters and traders at 43%. At the beginning of the chain, producers could be left with 2% of the total value instead of 7% today. In a 'business as usual scenario', this pressure on prices is likely to accelerate further the difficulties of small coffee growers and the disappearance of the smallest ones.

#### **Ability of small farmers to earn a living income and levers for change**

In order to cover the costs of production and ensure that both workers and small farmers can earn a living wage, the share of value for farmers in Colombia should be increased from 0.9 USD/kg currently to 1.27 USD/kg (see the section on coffee global value chain for more details). This corresponds to a mark-up of less than 0.37 euros/kg, which only represents 2.5% of the end consumer price of coffee which is 15.96 USD/kg.

This increase does not need to be passed on to consumers: according to our estimates, the retailers have increased their share of value from 7.30 USD per kg in 2011 to 7.85 USD per kg in 2015. This increase which happened over the last 5 years is more than enough to cover the payment of a living wage to coffee farmers and workers in Colombia.

Retailers appear to have the means to address the unsustainability of the Colombian coffee chain and have started to do so through selling Fair trade and organic coffee. However, they would need to generalize their commitments and take on their responsibility to ensure that the coffee they sell is not produced at the cost of the living conditions of producers and workers, as well as the environment. In the case of Colombia, they could promote the establishment of a minimum support price for farmers and the increase of the minimum wage for workers – which are effective tools to secure living income in the sector – by leaving a sufficient share of the value in the producing country so that the costs of sustainable production can be covered. <sup>473</sup>

# Tea

## Overview of the sector in the USA

USA is one of the world's largest tea markets: Over 22% of Americans drink tea regularly, a typical U.S. consumer drinking tea three times a week (highest in the Mid-Atlantic and New England regions). Black tea and fruit/herbal tea lead the market in value, while green tea is the fastest growing segment. Tea has benefited from the recent health and wellness trend. As for coffee, the rising demand for premium and specialty tea and single-serve pod brewing are strongly increasing.<sup>474</sup>

The U.S. tea market is quite concentrated: Unilever (owner of the brands Lipton and PG Tips) is the leading tea blender in the USA with 24.1% market share followed by RC Bigelow (owner of Bigelow brand) with 14% market share, Hain Celestial Group (11.4%) and Twinings (7.1%).<sup>475</sup>

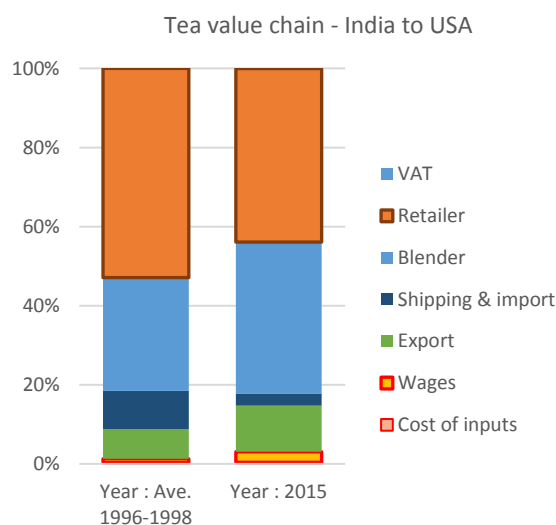
US most important suppliers of bulk tea are China (22%), Argentina (18%), and India (8%).

For an overview of the sector, the structure of the chain and its evolution, see section 3 on the tea global value chain.

## Comparison of the value breakdown in the 1990's and in 2015

Our estimations of value breakdown (expressed in nominal currency so as to avoid potential distortions linked to correction for inflation) are as follows:

**Fig. 219 Value breakdown of tea produced in India (average 1996-1998 and 2015)**



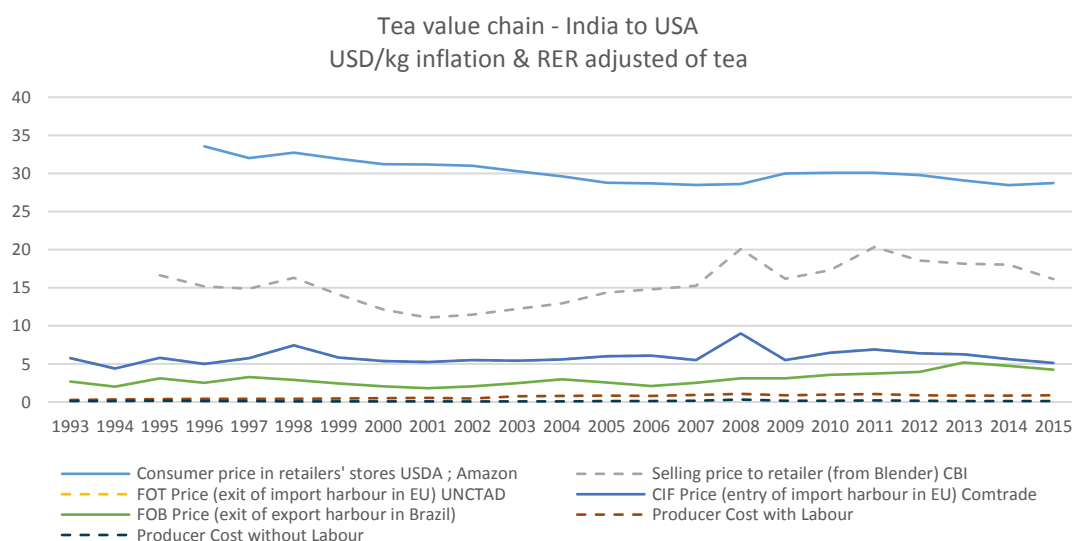
Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

As illustrated above, the share of value retained by retailers is the largest and has dropped significantly since 1996 from 53% down to 44%. In comparison, the share of value of brands/blenders is the 2<sup>nd</sup> largest and has increased significantly from 29% up to 38%, showing their growing influence over the chain. The value remaining in India has also increased from 9% to 14.7%.

To investigate further this situation, we have analysed the value evolution of the tea producer prices and wages, export FOB prices and costs of production since the early 1990s. The results for the main destinations of Indian tea are provided below.

## Analysis of the value breakdown

**Fig. 220 Value breakdown of tea produced in India (1991-2015)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

On the consumer side, taking into account the evolution of costs of living in the USA, the diagram illustrates that the consumer prices have steadily decreased by more than 14% since 1991. Retailers appear to have “cushioned” the evolution of the selling price of tea by brands and blenders.

In the middle of the chain, the tea blenders appear to have followed the trend of CIF import prices until 2009 and increased their share of value significantly since then.

In India, the export prices have declined between 1995 and 2002. They increased in USD over the past 15 years, but dropped when expressed in local currency over the same period, generating pressure on plantations with low productivity and consequently on the workers’ wages. The relative disconnection between export FOB prices and CIF import prices seem to reflect the power concentration in the hands of brokers and traders who capture most of the value in India (see the section on tea global value chain for more details).

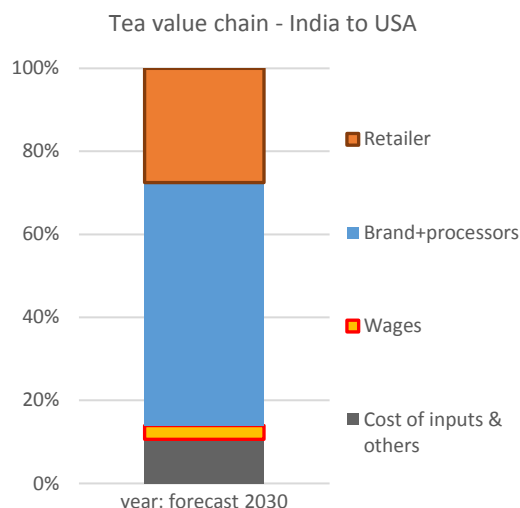
### Projections in 2030 of the value breakdown in a “Business as Usual” scenario

Based on the previous estimates, we performed a projection of the tea value breakdown in the year 2030 in a “Business as Usual” scenario:

- producer prices, wage levels and costs of inputs in India are based on the latest projections of the World Bank in 2030 (for tea FOB prices, fuel and fertilisers’ prices)
- price trends at the supermarkets’ and blenders’ levels have been extrapolated based on the last 15 years and using a linear regression (price trends seem to be closely related to market concentration which has been continuously growing for the past 20 years with no sign of trend reversal).

The results are as follows:

**Fig. 221 Value breakdown of tea (forecast 2030)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

According to these estimates, the share of value captured by retailers could be reduced to 28% because of the increasing share of value accruing to brands, blenders and traders which could become the largest at 59%. At the beginning of the chain, workers could be left with only 3% of the total value. In a ‘business as usual scenario’, this pressure on prices is likely to continue affecting the wages and labour conditions of the tea workers, as well as the disappearance of the lowest productive plantations.

### Ability of workers to earn a living wage and levers for change

In order to cover the costs of production and ensure that workers can earn a living wage, the share of value for workers in India should be increased from 0.78 USD/kg currently to 2.29 USD/kg (see the section on tea global value chain for more details). This corresponds to a mark-up of 1.51 USD/kg, which only represents 5% of the end consumer price of tea which is 28.70 USD/kg.

This increase does not need to be passed on to consumers: according to our estimates, the blenders have increased their share of value from 7.35 USD per kg in 2003 to 11.00 USD per kg in 2015. This increase which happened over the last 10 years is more than enough to cover the payment of a living wage for tea workers in India.

Retailers appear to have the means to address the unsustainability of the Indian tea chain, and have started to do so through selling Fair trade and organic tea. However, they would need to generalize their commitments and take on their responsibility to ensure that the tea they sell is not produced at the cost of the living conditions of workers, as well as the environment. In the case of India, they could promote the rise of the minimum wage for workers to ensure it covers the costs basic needs of their families – which is an effective tool to secure living income in the sector – by leaving a sufficient share of the value in the producing country so that the costs of sustainable production can be covered.<sup>476</sup>



# Cocoa

## Overview of the sector in the USA

USA is the world's largest consumption market of chocolate products, the average U.S. citizen consuming 5.5 kg of chocolate per year in 2015 (to be compared with 8.8 kg and 6.8 kg respectively in Switzerland and the UK). U.S. confectionery generated 34.5 billion USD in retail sales in 2015, chocolate remaining the largest sub-category with an estimated 21.1 billion USD sales (with an annual growth rate of 2.9 %). Milk chocolate is the biggest product segment and dark chocolate is the fastest-growing, with an annual rate of 8%.<sup>477</sup>

The U.S. chocolate market is quite concentrated: Hershey (owner of brands such as Reese, KitKat, York, Almond Joy...) is the leading manufacturer in the USA with 40.9% market share in retail stores, followed by Mars (owner of brands such as M&M's, Snickers, Twix, Three Musketeers, Milky Way, Dove...) with 27.6% market share, Russell Stover (6.4%) and Nestlé (5.9%) which owns brands such as Butterfinger, Baby Ruth or Crunch. Another leading company in the USA, Mondelez, predominantly sells cookies and snacks (under brands such as Oreo, Newtons, SnackWell's, Teddy Grahams, Barnum's Animals, Nilla, Nutter Butter...).<sup>478</sup>

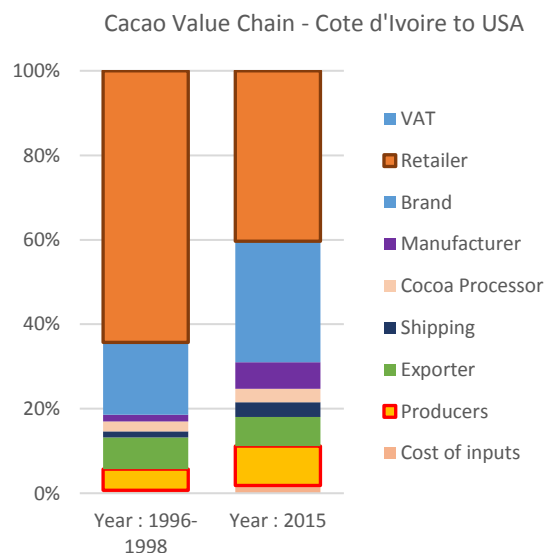
US most important suppliers of cocoa beans are Cote d'Ivoire (54%), Ecuador (21%), and Ghana (14%).

For an overview of the sector, the structure of the chain and its evolution, see section 3 on the cocoa global value chain.

## Comparison of the value breakdown in the 1990's and in 2015

Our estimations of value breakdown (expressed in nominal currency so as to avoid potential distortions linked to correction for inflation) are as follows:

**Fig. 222 Value breakdown of a 70% dark chocolate bar made from cocoa produced in Cote d'Ivoire (average 1996-1998 & 2015)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

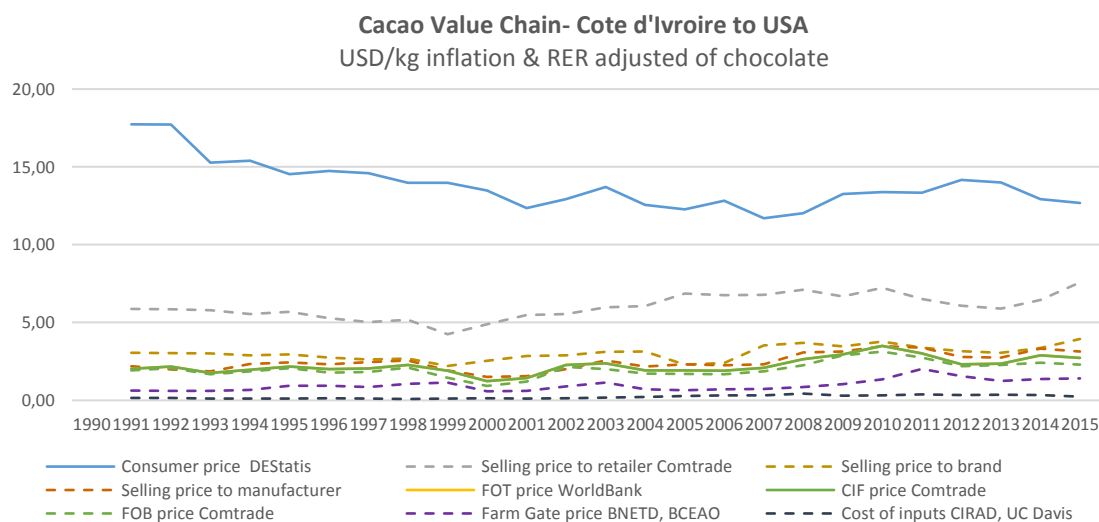
As illustrated above, the share of value retained by retailers is the largest and has sharply declined from 64% up down to 40%, while the share of the chocolate brands, the 2<sup>nd</sup> largest,

has slightly increased from 17% down to 28.5%, showing their growing influence on the market. The value remaining in Cote d'Ivoire has increased from 13% up to 18%.

To investigate further this situation, we have analysed the value evolution of the cocoa producer prices and wages, export FOB prices and costs of production since the early 1990s. The results for the main destinations of Ivorian cocoa are provided below.

### Analysis of the value breakdown

**Fig. 223 Value breakdown of a 70% dark chocolate bar made from cocoa produced in Cote d'Ivoire (1991-2015)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

On the consumer side, taking into account the evolution of costs of living in the USA, the diagram illustrates that the consumer prices have steadily declined by 25% since 1991. Retailers appear to have eroded their share of the value and “cushioned” the evolution of cocoa prices further up in the chain (i.e. limiting increases in case of peaks, but also remaining stable in case of drops).

In the middle of the chain, the chocolate brands (selling price to retailer) appear to have followed and amplified the trends of CIF import prices until recently and gradually increased their share of value. Upstream, the selling price to brands and manufacturers demonstrates that margins remain slim for chocolate makers and cocoa grinders, obliging them to boost volumes of cocoa in order to keep their profitability (see section 3 on the cocoa global value chain for more details).

In Cote d'Ivoire, the producer prices have dropped significantly in the beginning of the 1990s, and during the period 2003-2009, strongly affecting the small cocoa growers which couldn't make ends meet. Prices recovered slowly until 2016 thanks to the re-establishment of a minimum support price for cocoa and its significant increase year after year. However, this price was cut by more than 30% early 2017 because of the sharp fall of cocoa price on world's markets, plunging farmers again far below the poverty line (see the section on cocoa global value chain for more details).

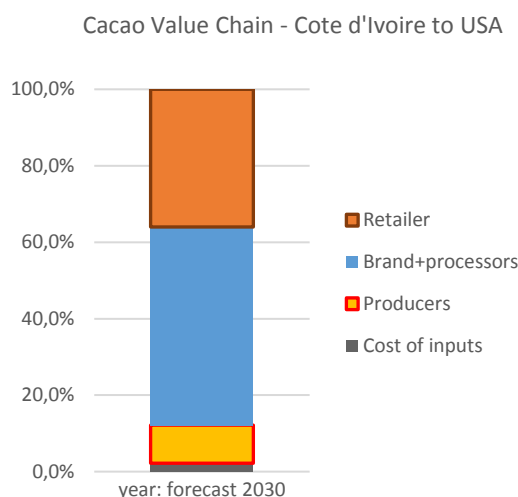
### Projections in 2030 of the value breakdown in a “Business as Usual” scenario

Based on the previous estimates, we performed a projection of the cocoa value breakdown in the year 2030 in a “Business as Usual” scenario:

- producer prices, wage levels and costs of inputs in Cote d'Ivoire are based on the latest projections of the World Bank in 2030 (for cocoa FOB prices, fuel and fertilisers' prices)
- price trends at the supermarkets' and brands' levels have been extrapolated based on the last 15 years and using a linear regression (price trends seem to be closely related to market concentration which has been continuously growing for the past 20 years with no sign of trend reversal).

The results are as follows:

**Fig. 224 Value breakdown of cocoa (forecast 2030)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

According to these estimates, the share of value captured by retailers could be further decreased to 36%. In contrast, the value accruing to brands, processors and traders could reach 52%, the largest share in the chain. At the beginning of the chain, small cocoa growers could be left with less than 10% of the total value. In a 'business as usual scenario', this pressure on prices is likely to continue affecting the difficult living conditions of cocoa smallholders and encourage deforestation, one of the main ways for producers to maintain productivity and profitability.

#### **Ability of small farmers to earn a living income and levers for change**

In order to cover the costs of production and ensure that cocoa farmers can earn a living income, the share of value for farmers in Cote d'Ivoire should be increased from 1.18 USD/kg to 1.60 USD/kg (see the section on cocoa global value chain for more details). This corresponds to very limited mark-up of 0.42 USD/kg, which only represents 3% of the end consumer price of chocolate which is 12.69 USD/kg.

This increase does not need to be passed on to consumers: according to our estimates, the retailers have increased their share of value from 4.90 USD per kg in 2007 to 6.46 USD per kg in 2014. This increase which happened over the last 10 years is more than enough to cover the payment of a living wage for cocoa farmers in Cote d'Ivoire.

Retailers appear to have the means to address the unsustainability of the Ivorian cocoa chain, and have started to do so through selling Fair trade, sustainable and organic cocoa. However, they would need to generalize their commitments and take on their responsibility to ensure that the chocolate they sell is not produced at the cost of the living conditions of cocoa farmers, as well as the environment. In particular, this would require a stronger commitment of chocolate

brands to offer less confectionery products where cocoa is just a commoditized ingredient, and more chocolate products that value the origin and quality of cocoa, hence the work of farmers paid at a fair price, enabling them to cover their costs of production and the living needs of their families.<sup>479</sup>

## Rice

### Overview of the sector in the USA

The United States is a surplus rice producer, and U.S. rice consumption is largely supplied by domestic production. U.S. per capita consumption of rice is low, averaging only 12 kg a year, compared to 107 kg in China and 77 kg in India, as rice competes with other staple in the American diet. Hispanic and Asian American communities consume more rice than the average, and this market segment is growing rapidly in the USA. Rice consumers in these segments are also more discerning, with established preferences for rice types. U.S. long grain white rice is sold mainly through retail grocery stores (including warehouse clubs) and to industrial food processors while aromatic rice is more likely to be sold through ethnic food distributors.<sup>480</sup>

U.S. imports of rice have represented a small but growing share of consumption in recent decades (up to 1/4 of total U.S. domestic long grain rice consumption by volume). U.S. imports are largely driven by demand for aromatic varieties, primarily jasmine and basmati rice, traditionally imported from Thailand, India, and Pakistan, as well as more recently from Vietnam. Medium grain is the next largest category, although imports declined over the last decade.<sup>481</sup>

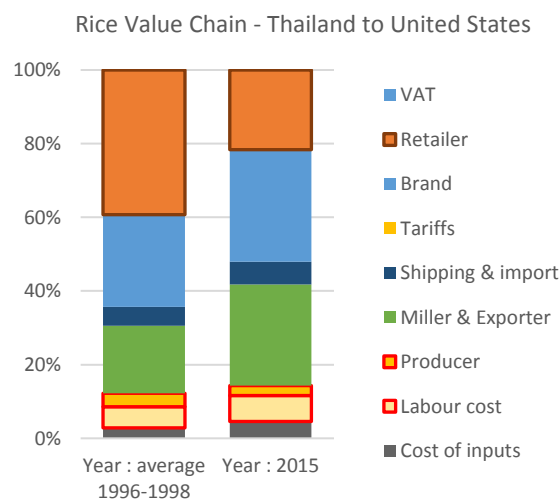
The U.S. rice market is quite concentrated: Ebro Food (owner brands such as Mahatma, Minute Rice, Success Rice, Carolina Rice) is the leading brand in the USA with 24.1% market share followed by PepsiCo (owner of Rice-A-Roni brand) with 11.8% market share, Mars (owner of Uncle Ben's) with 9.8% and Unilever (owner of Knorr Lipton Rice Sides) with 7.1%.<sup>482</sup>

USA's most important suppliers of conventional rice are Thailand (59%), India (22%), and Pakistan (5%). For an overview of the sector, the structure of the chain and its evolution, see section 3 on the rice global value chain.

### Comparison of the value breakdown in the 1990's and in 2015

Our estimations of value breakdown (expressed in nominal currency so as to avoid potential distortions linked to correction for inflation) are as follows:

**Fig. 225 Value breakdown of rice produced in Thailand (average 1996-1998 & 2015)**



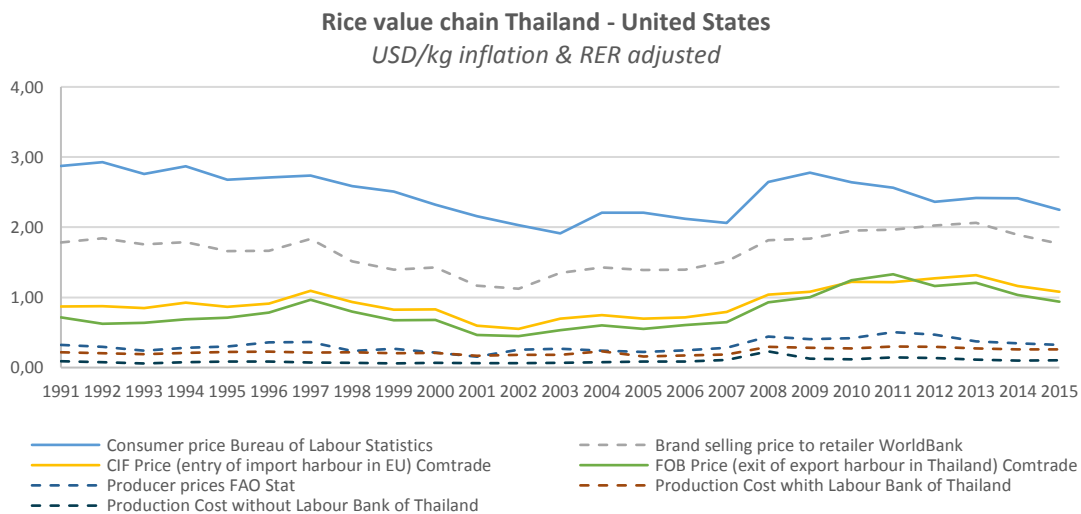
Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

As illustrated above, the share of value retained by retailers is only the 2<sup>nd</sup> largest and has shrunk substantially from 39.5% down to 21.5%, showing their loss of influence in comparison with packers and brands which now capture the largest share of the value (from 25% in 1996-98 up to 30.5% in 2015). The value remaining in Thailand has increased to 42%, mainly captured by millers and exporters which share of value has grown from 18.5% to 27.5%, the 2<sup>nd</sup> largest in the chain.

To investigate further this situation, we have analysed the value evolution of the rice producer prices and wages, export FOB prices and costs of production since the early 1990s. The results for the main destinations of Thai rice are provided below.

### Analysis of the value breakdown

**Fig. 226 Value breakdown of rice produced in Thailand (1991-2015)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

The US market is very specific due to the importance of its domestic production which supplies the majority of its consumption. On the consumer side, taking into account the evolution of costs of living in the USA, the diagram illustrates that the consumer prices have steadily declined by almost 30% until 2007, then rose until 2009 (most probably because of the food price crisis) and declined again by 18% since then. Retailers appear to have “cushioned” the evolution of rice prices further up in the chain (i.e. limiting increases in case of peaks, but also remaining stable in case of drops), and globally decreased their share of the total value since 1991.

In the middle of the chain, the packers and brands (selling price to retailer) seem to have followed the trend of CIF import prices over the same period, and progressively increased their share of value too.

In Thailand, the share of value of millers and exporters has grown very significantly since 2008, demonstrating their growing influence on the chain at the detriment of small rice growers. The situation is all the more difficult for producers than the costs of farm inputs have doubled since the early 1990s and the support price system managed by the government has been suspended in 2014, triggering a decline in producer prices since then (see section 3 on the rice global value chain for more details).

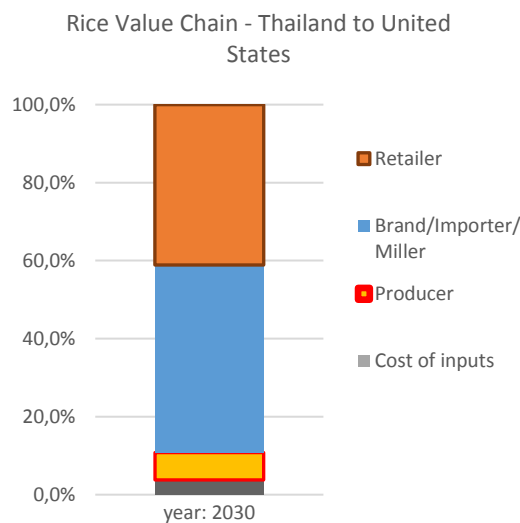
### Projections in 2030 of the value breakdown in a “Business as Usual” scenario

Based on the previous estimates, we performed a projection of the rice value breakdown in the year 2030 in a “Business as Usual” scenario:

- producer prices, wage levels and costs of inputs in Thailand are based on the latest projections of the World Bank in 2030 (for rice FOB prices, fuel and fertilisers’ prices)
- price trends at the supermarkets’ and brands’ levels have been extrapolated based on the last 15 years and using a linear regression (price trends seem to be closely related to market concentration which has been continuously growing for the past 20 years with no sign of trend reversal).

The results are as follows:

**Fig. 227 Value breakdown of rice (forecast 2030)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

According to these estimates, the share of value captured by retailers could restore back to 41% because of their position of major selling channel and the development of private labels. As a result, the value accruing to brands, processors and traders could be reduced at 48%. At the beginning of the chain, small rice growers could be left with less than 7% of the total value. In a ‘business as usual scenario’, this pressure on prices is likely to continue affecting the difficult living conditions of rice smallholders and accelerate the disappearance of the smallest ones.

### Ability of small farmers to earn a living income and levers for change

In order to cover the costs of production and ensure that workers can earn a living wage, the share of value for farmers in Thailand should be increased from 0.22 USD/kg to 0.31 USD/kg (see the section on rice global value chain for more details). This corresponds to very limited mark-up of 0.09 USD/kg, which only represents 4% of the end consumer price of rice which is 2.25 USD/kg.

This increase does not need to be passed on to consumers: according to our estimates, the brands/packers have increased their share of value from 0.57 USD per kg in 2005 to 0.68 USD per kg in 2015. This increase which happened over the last 10 years is enough to cover the payment of a living wage for rice farmers in Thailand.

Retailers appear to have the means to address the unsustainability of the Thai rice chain, and have started to do so through selling Fair trade and organic rice. However, they would need to

generalize their commitments and take on their responsibility to ensure that the rice they sell is not produced at the cost of the living conditions of rice farmers and workers. In Thailand, they could promote the re-establishment of a minimum support price for farmers and the increase of the minimum wage for workers – which are effective tools to secure living income in the sector – by leaving a sufficient share of the value in the producing country so that the costs of sustainable production can be covered.

## Shrimp

### Overview of the sector in the USA

Over the past two decades per capita consumption of seafood products in the U.S. has ranged from a low of 14.6 pounds per person in 1997 to a record high of 16.6 pounds in 2004. Since 2004, U.S. annual consumption of fish and shellfish has gradually decreased to 14.6 pounds per person in 2014. A wide variety of fish and shellfish products are available in the marketplace (between 300 and 500 different species are sold annually). However, about 55% of all seafood consumed in the USA is limited to 3 types of seafood: shrimp, canned tuna and salmon. About 3/4 of the seafood products consumed in the U.S. are fresh or frozen, and consumption of these products has reached a plateau.<sup>483</sup>

Over 90% of the seafood consumed in the U.S. is imported from other countries around the world. This number continues to rise in order to meet consumer demand. Shrimp is the leading fresh or frozen product imported into the U.S. accounting for about 33% of all imports by weight followed by freshwater fillets and steaks, salmon and tuna. Government estimate that there were 3,137 seafood processing and wholesale plants in the U.S. that employ almost 61,000 people and generate sales over 10 billion USD per year.<sup>484</sup>

The U.S. frozen seafood market is relatively concentrated: Nippon Suisan Kaisha (owner of Gorton's brand) is the leading actor in the USA with 10.5% market share followed by Pinnacle Foods (owner of Van de Kamp's, Mrs. Paul's brand) with 4.7% market share, Great American Seafood with 3.2% and Beaver Street Fisheries with 3%. It is estimated that retailers' private labels account for 44.5% of the market, illustrating the strong influence of supermarkets in this segment.<sup>485</sup>

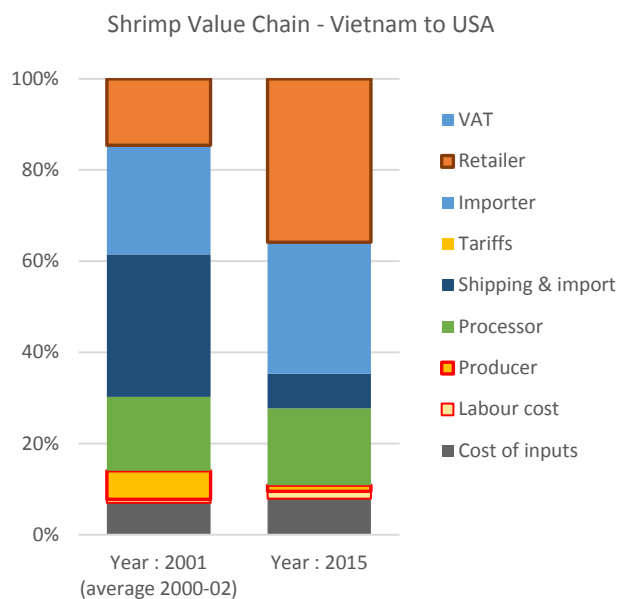
USA's most important suppliers of shrimps are Thailand (37%), Viet Nam (22%), and Indonesia (15%).

For an overview of the sector, the structure of the chain and its evolution, see section 3 on the shrimp global value chain.

### Comparison of the value breakdown in the 1990's and in 2015

Our estimations of value breakdown (expressed in nominal currency so as to avoid potential distortions linked to correction for inflation) are as follows:

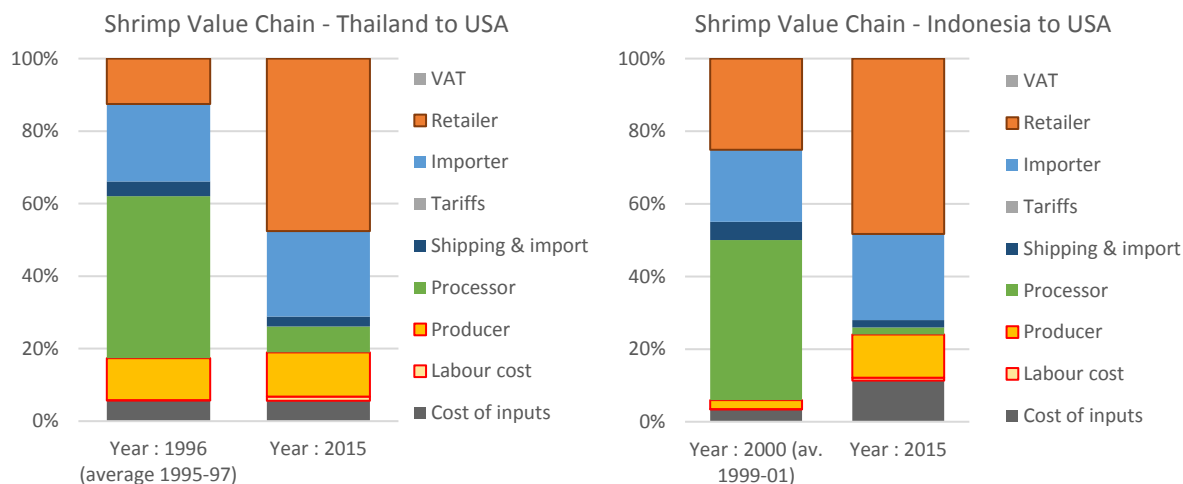
**Fig. 228 Value breakdown of shrimp produced in Viet Nam (average 2000-2002 & 2015)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

As illustrated above, the share of value retained by retailers is the largest and has strongly increased from 21% up to 46%, showing their influence over the chain. The share of the shrimp importers/wholesalers have slightly increased their share from 24% down to 29% while the share of processors in Viet Nam has increased from 16.5% to 17%. Most importantly, the share of shrimp farmers has shrunk from 6% to 1%, as they have had to face the rise of input costs without being able to pass on this increase onto processors, because of their weak bargaining position.

**Fig. 229 Value breakdown of shrimp produced in Thailand and Indonesia**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

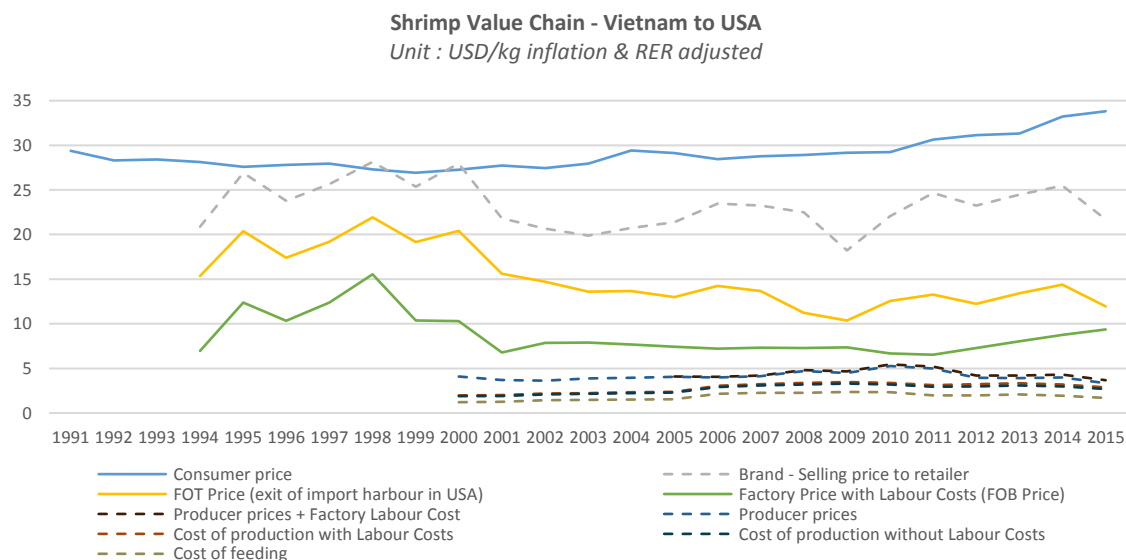
Our estimates for shrimps from Thailand and Indonesia follow a trend similar to the previous value breakdown: retailers appear to capture have significantly increased their share to more than 47% of the total value, while importers have maintained their share at roughly 23.5%. In contrast, processors have been apparently under pressure, reducing their share markedly from more than 44%, down to less than 7%. Eventually, producers have apparently increased their share, but this is linked to the recent development of corporate intensive aquaculture at the expense of small farmers (especially in the case of Indonesia). To investigate further this



situation, we have analysed the value evolution of the shrimp production prices and wages, export FOB prices and costs of production since the early 1990s. The results for the Vietnamese, Thai and Indonesian shrimp value chains are provided below.

### Analysis of the value breakdown

**Fig. 230 Value breakdown of shrimp produced in Viet Nam (1991-2015)**



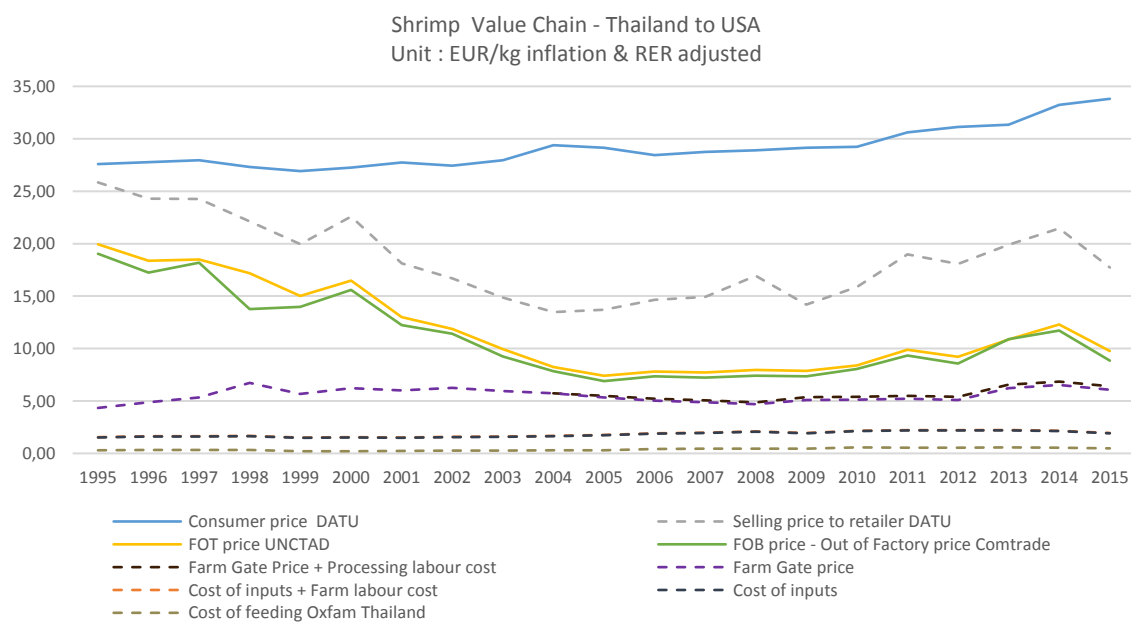
Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

On the consumer side, taking into account the evolution of costs of living in the USA, the diagram illustrates that the consumer prices have very slightly declined by approx. 8% between 1991 and 2000, before steadily increasing by 25% until 2015. Most importantly, retailers appear to have “cushioned” the evolution of shrimp prices further up in the chain (i.e. limiting increases in case of peaks, but also remaining stable in case of drops).

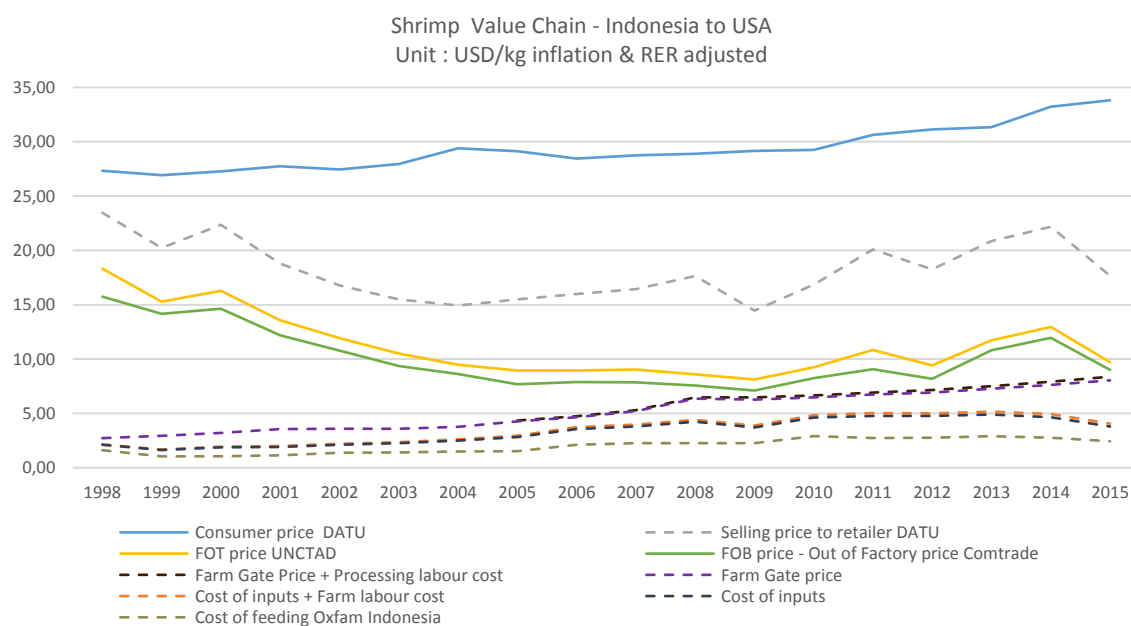
In the middle of the chain, the brands/wholesalers (selling price to retailers) have amplified the trends in CIF import prices and competed with retailers to increase their share of value, especially since 2003.

In Viet Nam, the processors (out of factory price) appear to have faced increasing costs (hence decreasing margins) up until 2011, then were apparently able to increase their share of value thanks to their vertically integrated systems. However, their slim margins most probably oblige them to boost production volumes in order to keep their profitability. Upstream, the small shrimp farmers are facing the largest pressure with a strong decrease of their share of value since 2000 because they got squeezed between the increase of input prices and the pressure from processors/manufacturers (see the section on shrimp global value chain for more details).

**Fig. 231 Value breakdown of shrimp produced in Thailand (1995-2015)**



**Fig. 232 Value breakdown of shrimp produced in Indonesia (1991-2015)**



As illustrated in the two diagrams above, the evolution of value breakdown for shrimps sourced from Thailand and Indonesia follow a similar pattern as for Viet Nam with an important share for retailers and importers, and an increasing pressure on workers in processing factories.

**Projections in 2030 of the value breakdown in a “Business as Usual” scenario**

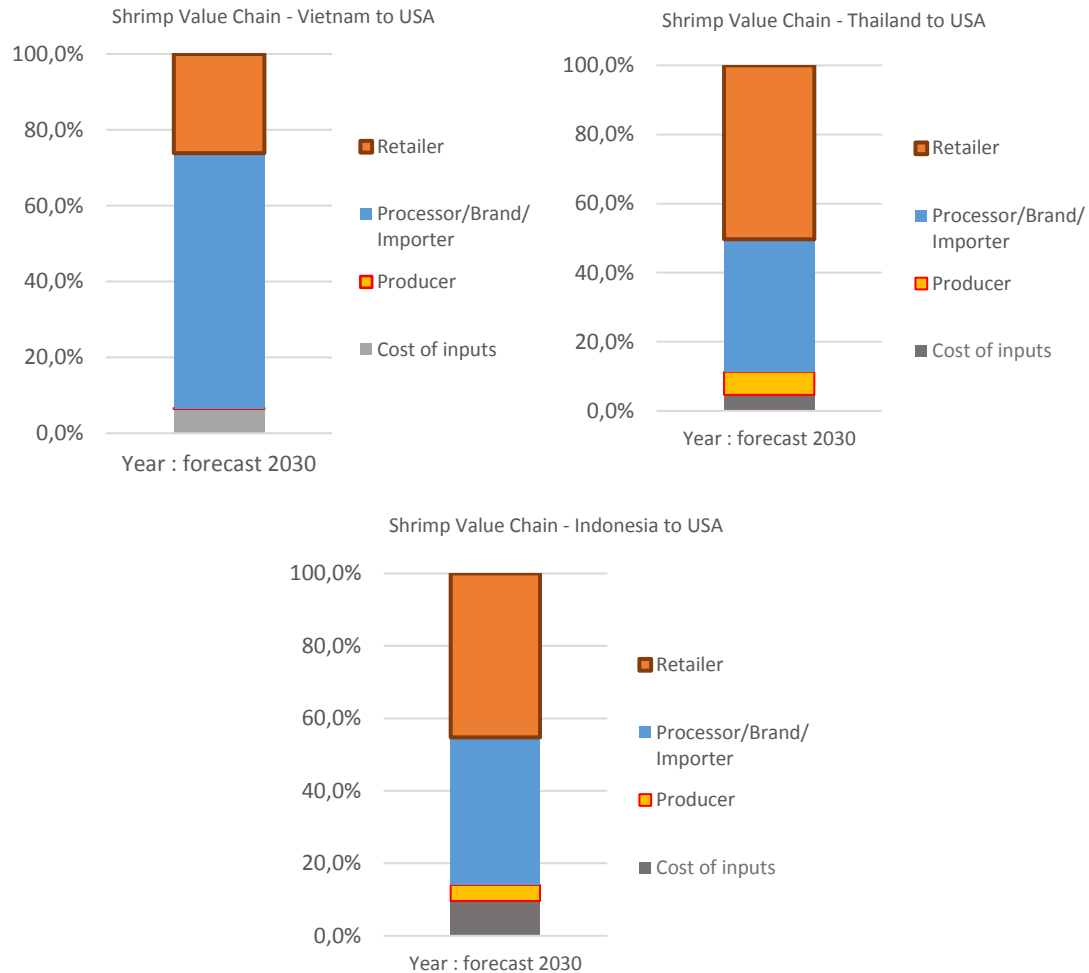
Based on the previous estimates, we performed a projection of the shrimp value breakdown in the year 2030 in a “Business as Usual” scenario:

- producer prices, wage levels and costs of inputs are based on the latest projections of the World Bank in 2030 (for shrimp FOB price, fuel and fertilisers’ prices)
- price trends at the supermarkets’, brands’ and processors’ levels have been extrapolated based on the last 15 years and using a linear regression (price trends seem to be closely

related to market concentration which has been continuously growing for the past 20 years with no sign of trend reversal).

The results are as follows:

**Fig. 233 Value breakdown of shrimp (forecast 2030)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

According to these estimates, the share of value captured by retailers could reach 45-50% in the case of shrimps from Thailand and Indonesia (but only 26% in the case of Viet Nam), reflecting the increasing competition with brands and processors whose share could substantially reach 38%, 41% and 67% of the total value respectively. At the beginning of the chain, small farmers could be left with less than 6% of the total value. In a 'business as usual scenario', this pressure on prices is likely to continue affecting the difficult living conditions of shrimp farmers in Viet Nam as well as workers in the shrimp processing industry.

**Ability of small farmers and workers to earn a living income/wage and levers for change**

In order to cover the costs of sustainable production, the share of value for farmers in Viet Nam, Thailand and Indonesia should be increased at least by 0.16 USD/kg (see the section on shrimp global value chain for more details), which only represents 1% of the end consumer price of shrimp which is 40.15 USD/kg.

This increase does not need to be passed on to consumers: according to our estimates, the brands/wholesalers have substantially increased their share of value from 8.10 USD per kg in 2002 to 15.80 USD per kg in 2014. This increase which happened over the last 15 years is more than enough to cover the living income of farmers and the payment of a living wage for workers.

Retailers and brands appear to have the means to address the unsustainability of the Vietnamese shrimp chain, and have started to make some voluntary commitments in this direction. However, they would need to generalize their engagement and take on their responsibility to ensure that the shrimp they sell is not produced at the cost of the living conditions of small farmers and workers in the chain. In particular, this would require increasing the minimum wage for workers (on vessels, as well as in farming and processing) to the living wage level, and allocating enough resources for controls on the ground as it is one of the main ways to ensure that they can achieve a sustainable livelihood. In addition, they could support the establishment of a guaranteed price for the small shrimp farmers together with environmental and social conditions to ensure the sustainability of production.<sup>486</sup>

## Canned tuna

### Overview of the sector in the USA

Over the past two decades per capita consumption of seafood products in the U.S. has ranged from a low of 14.6 pounds per person in 1997 to a record high of 16.6 pounds in 2004. Since 2004, U.S. annual consumption of fish and shellfish has gradually decreased to 14.6 pounds per person in 2014. A wide variety of fish and shellfish products are available in the marketplace (between 300 and 500 different species are sold annually). However, about 55% of all seafood consumed in the USA is limited to 3 types of seafood: shrimp, canned tuna and salmon. Canned seafood products account for slightly less than 1/4, an amount which has decreased steadily over the past two decades.<sup>487</sup>

Over 90% of the seafood consumed in the U.S. is imported from other countries around the world. This number continues to rise in order to meet consumer demand. Canned seafood products represent about 12% of all imported seafood, and canned tuna was over half of all canned imports. Government estimate that there were 3,137 seafood processing and wholesale plants in the U.S. that employ almost 61,000 people and generate sales over 10 billion USD per year.<sup>488</sup>

The U.S. canned seafood market is quite concentrated: Lion Capital (owner of brands such as Bumble Bee, Snow's Clams, King Oscar) is the market leader in the USA with 30.8% market share followed by Dongwon Industries (owner of Starkist brand) with 26.6% market share and Chicken of the sea with 15.9%. It is estimated that retailers' private labels account for 11.7% of the market.<sup>489</sup>

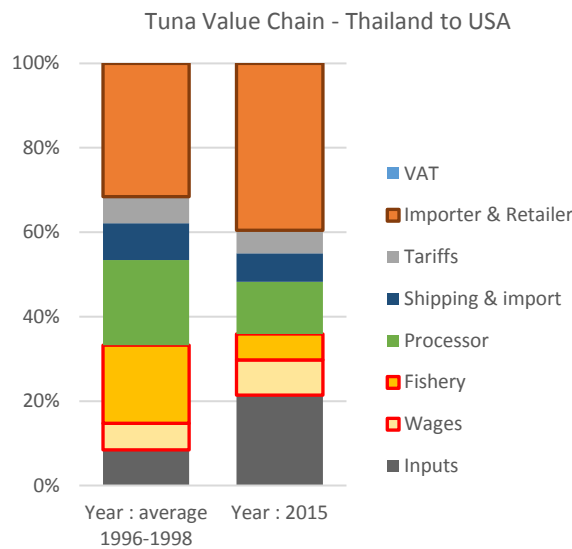
USA's most important suppliers of canned tuna are Thailand (40%), Ecuador (12%), and China (11%).

For an overview of the sector, the structure of the chain and its evolution, see section 3 on the canned tuna global value chain.

### Comparison of the value breakdown in the 1990's and in 2015

Our estimations of value breakdown (expressed in nominal currency so as to avoid potential distortions linked to correction for inflation) are as follows:

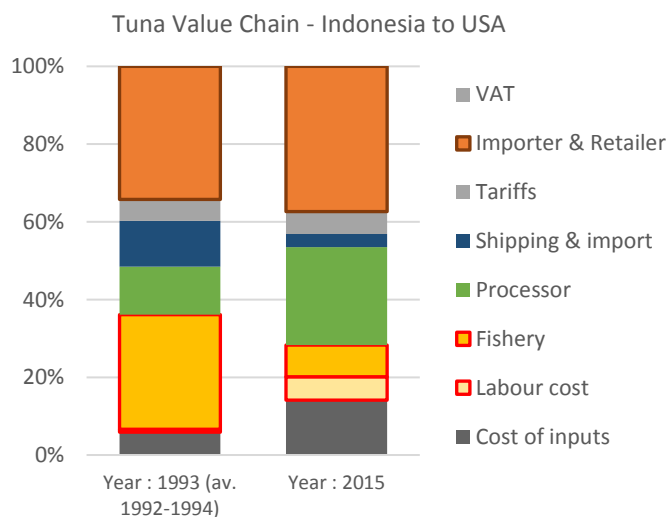
**Fig. 234 Value breakdown of canned tuna produced in Thailand (average 1996-1998 & 2015)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

As illustrated above, the share of value retained by retailers is the largest and has increased from 31.5% up to 39.5%, showing their large influence over the chain, especially through the dominance of their private labels. In contrast, the share of the manufacturers of canned tuna has decreased from 20% down to 12.5%. Most importantly, the share of fisheries has shrunk from 20% to 2.7%, as they have had to face the sheer rise of fuel and operation costs without being able to pass on this increase onto processors, because of their weak bargaining position. This leaves only 3% on average for labour costs on vessels.

**Fig. 235 Value breakdown of canned tuna produced Indonesia**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

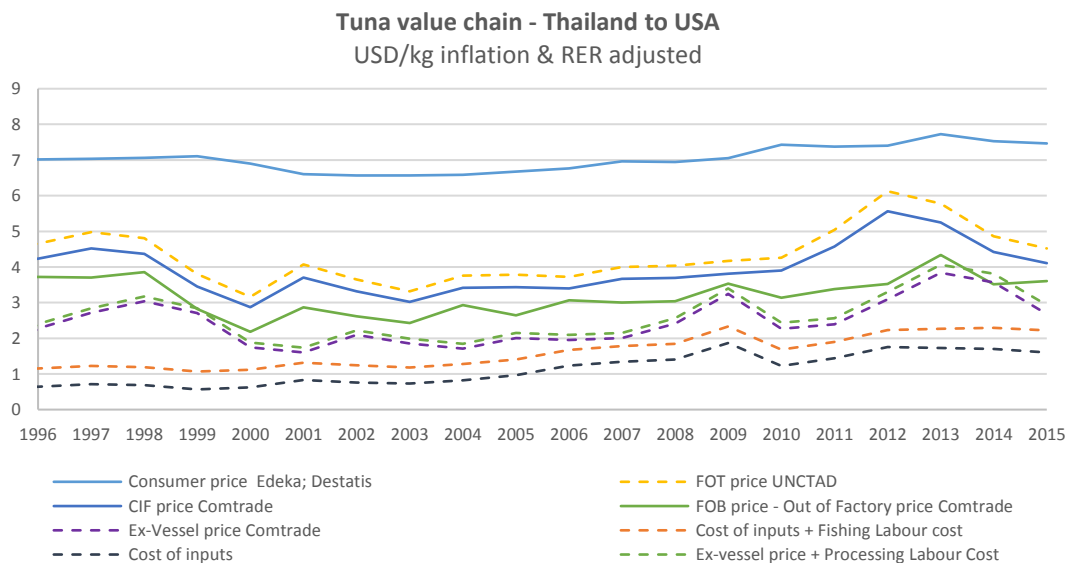
Our estimates for canned tuna from Indonesia is quite similar from the previous value breakdown: retailers appear to have gained influence over the chain, their share increasing from 34% to 37% of the total value. Importers have maintained their share at 5.5%, and the

processors have apparently managed to increase theirs from 13% to 25%. Eventually, fisheries appear to be under strong pressure, their share declining sharply from 29.5% to 8% because of the combined pressure of buyers' price pressure and increasing internal costs.

To investigate further this situation, we have analysed the value evolution of the canned tuna production prices and wages, export FOB prices and costs of production since the early 1990s. The results for the main destinations of Thai and Indonesian canned tuna are provided below.

### Analysis of the value breakdown

**Fig. 236 Value breakdown of canned tuna produced in Thailand (1996-2015)**

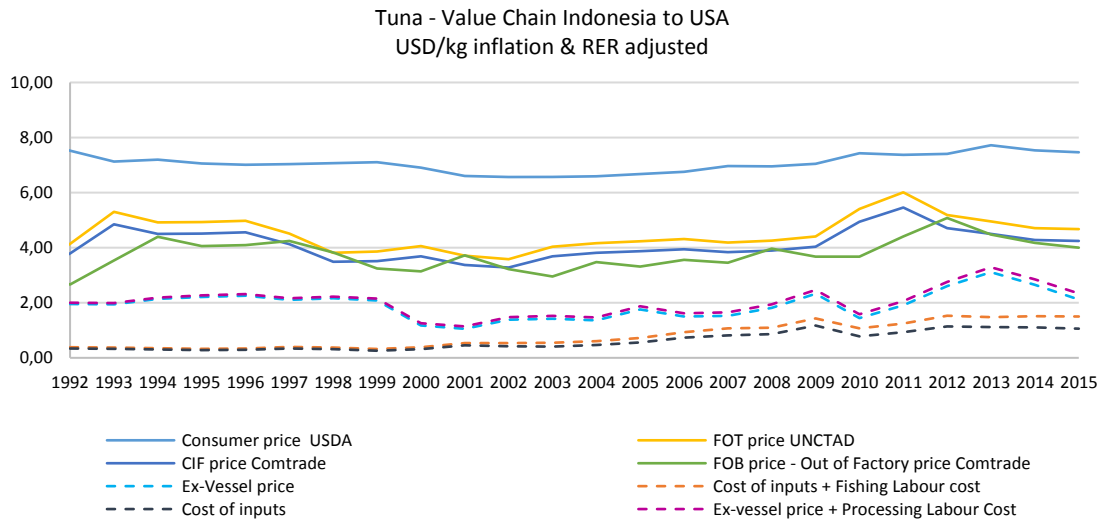


Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

On the consumer side, taking into account the evolution of costs of living in the USA, the diagram illustrates that the consumer prices have remained globally constant until 2005 and then steadily increased by 8% until 2015. Retailers appear to have “cushioned” the evolution of canned tuna prices further up in the chain (i.e. limiting increases in case of peaks, but also remaining stable in case of drops).

In Thailand, the manufacturers (out of factory price) appear to have followed the trend of CIF import prices and were unable to maintain their share despite their vertically integrated systems. Their slim margins most probably oblige them to boost production volumes in order to keep their profitability. Upstream, the fisheries are facing the largest pressure with a strong decrease of their share of value since 1998, albeit for a small and short recovery in 2013-2014 because they got squeezed between the strong increase of fuel prices and the pressure on price from processors/manufacturers. The pressure is passed onto the workers, the majority being migrant, and on the level of their wages (see the section on canned tuna global value chain for more details).

**Fig. 237 Value breakdown of canned tuna produced in Indonesia (1991-2015)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports

As illustrated in the diagram above, the evolution of value breakdown for canned tuna sourced from Indonesia follows a similar pattern as for Thailand with a dominant share for retailers, and an increasing pressure on fisheries, with significant potential impacts on the working conditions and wages of workers on tuna vessels.

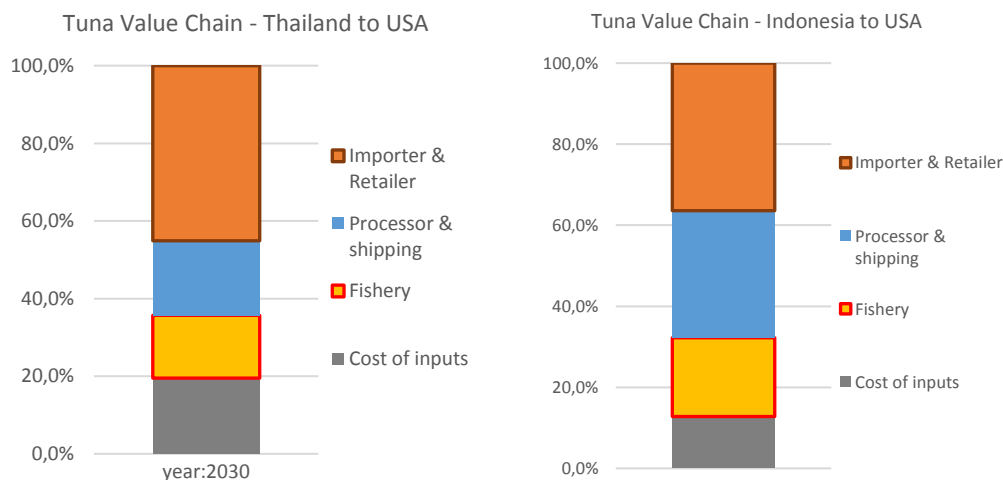
**Projections in 2030 of the value breakdown in a “Business as Usual” scenario**

Based on the previous estimates, we performed a projection of the canned tuna value breakdown in the year 2030 in a “Business as Usual” scenario:

- producer prices, wage levels and costs of inputs are based on the latest projections of the World Bank in 2030 (for grain, fuel and fertilisers’ prices)
- price trends at the supermarkets’, brands’ and fisheries’ levels have been extrapolated based on the last 15 years and using a linear regression (price trends seem to be closely related to market concentration which has been continuously growing for the past 20 years with no sign of trend reversal).

The results are as follows:

**Fig. 238 Value breakdown of canned tuna (forecast 2030)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports

According to these estimates, the share of value captured by retailers could reach respectively 36% and 45% reflecting the competition with brands, processors and traders could be reach respectively 19% and 31%. At the beginning of the chain, fisheries could be left with 16% and 19% respectively of the total value.

### **Ability of workers to earn a living wage and levers for change**

In order to cover the costs of sustainable production, the share of value for workers in Thailand and Indonesia should be increased at least by 0.08 USD/kg (see the section on canned tuna global value chain for more details), which only represents 1% of the end consumer price of canned tuna which is 7.47 USD/kg.

This increase does not need to be passed on to consumers: according to our estimates, the retailers have increased their share of value from 1.30 USD per kg in 2012 to 2.95 USD per kg in 2015. This increase which happened over the last 3 years is more than enough to cover the payment of a living wage for workers in Thai fisheries.

Retailers and brands appear to have the means to address the unsustainability of the Thai canned tuna chain, and have started to make some voluntary commitments in this direction. However, they would need to generalize their engagement and take on their responsibility to ensure that the canned tuna they sell is not produced at the cost of the living conditions of workers in the chain. In particular, this would require increasing the minimum wage for workers (on vessels, as well as in processing) to the living wage level, and allocating enough resources for controls on the ground as it is one of the main ways to ensure that both can achieve a sustainable livelihood.<sup>490</sup>

## **Orange juice**

### **Overview of the sector in the USA**

US retail sales of orange juice have been in decline for more than a decade, as people are drinking other beverages (energy drinks and bottled water, mainly). In 1997, annual consumption was around 5.8 gallons (about 23 litres) per head, whereas it is now down to 2.6 gallons/head. The trend of decreasing demand for orange juice is mainly driven by a drastic decline in demand for frozen orange juice (FCOJ) while not-from-concentrate (NFC) orange juice is being resilient<sup>491</sup>

USA's most important suppliers of Frozen Concentrate Orange Juice (FCOJ) are Brazil (45%), Mexico (41%) and Costa Rica (7%).

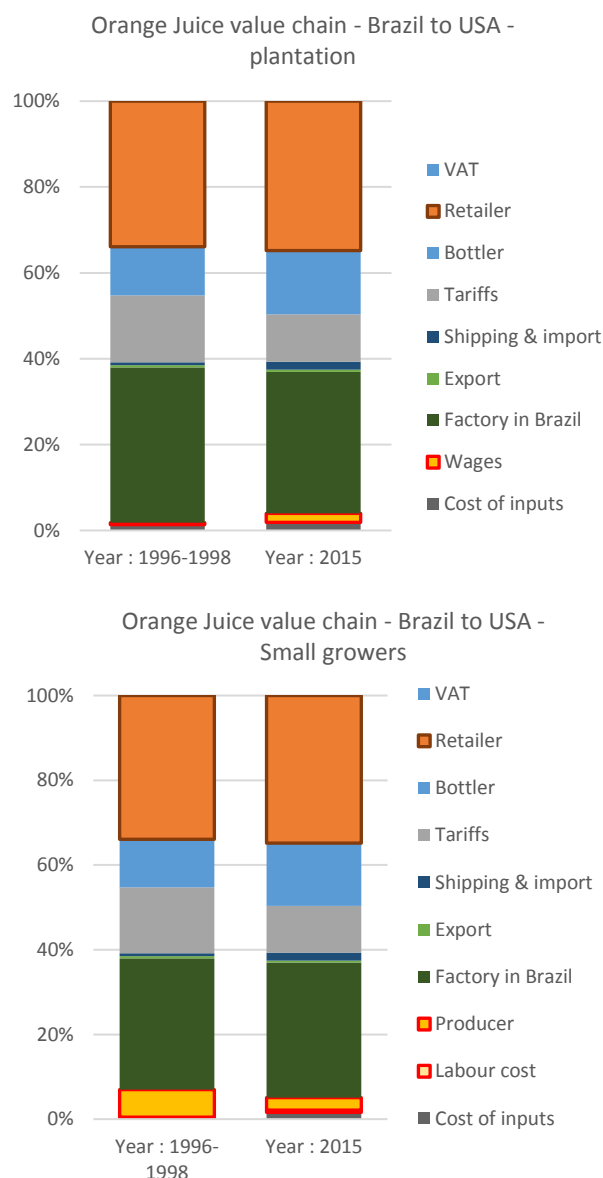
For an overview of the sector, the structure of the chain and its evolution, see section 3 on the orange juice global value chain.

### **Comparison of the value breakdown in the 1990's and in 2015**

Our estimations of value breakdown (expressed in nominal currency so as to avoid potential distortions linked to correction for inflation) are as follows:



**Fig. 239 Value breakdown of orange juice made from FCOJ produced in Brazil, supplied by plantations, and by small orange farmers (average 1996-1998 & 2015)**



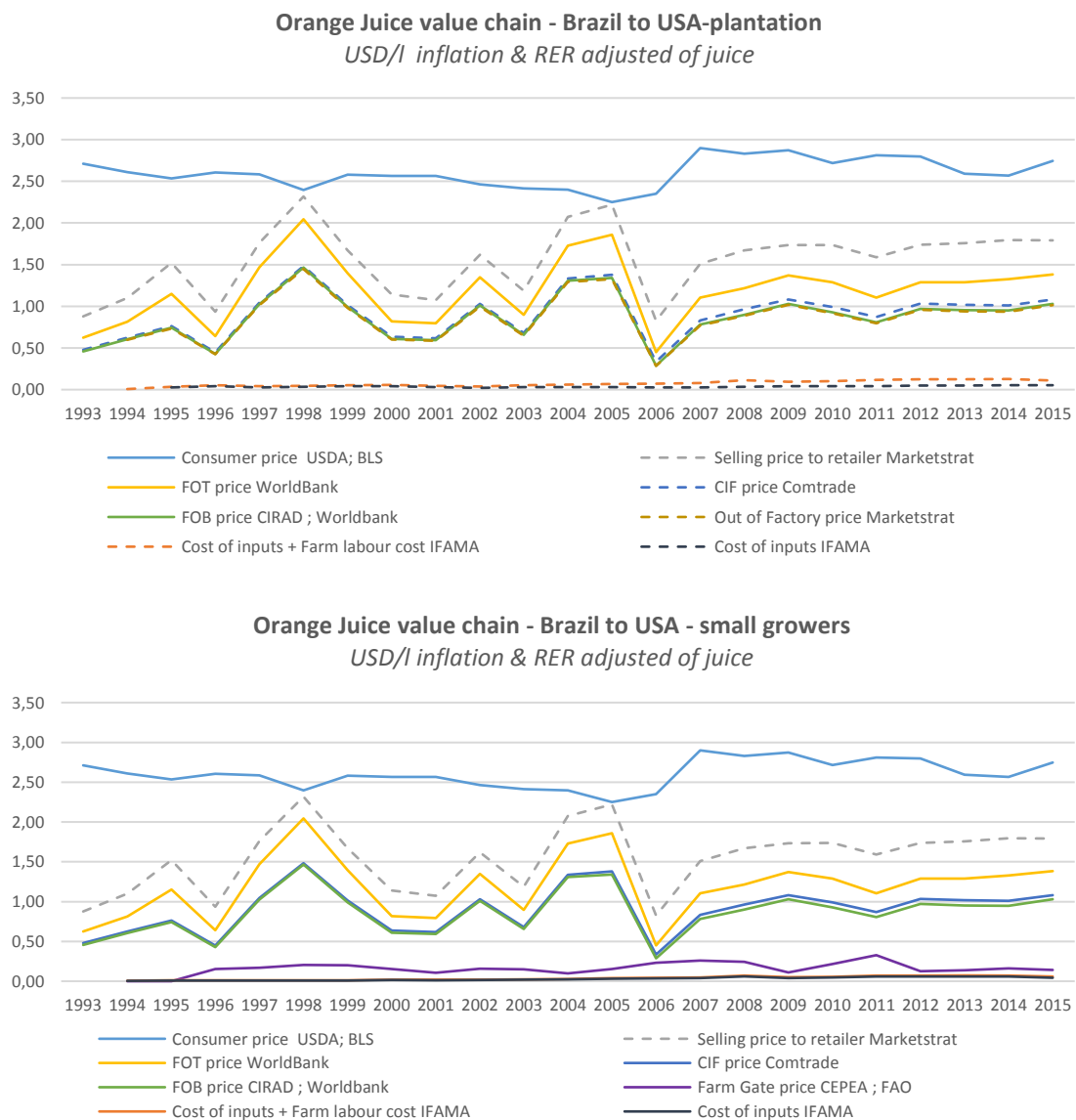
Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

As illustrated above, the share of value retained by retailers is the largest and has slightly increased from 34% up to 35%, showing their strong influence over the chain. The share of the bottlers has increased too from 11.5% up to 15% whereas the share of factories in Brazil have dropped from 36% down to 33% for orange from their own plantations, but have increased from 31% up to 32% when oranges are purchased to small farmers. Most importantly, the share of small farmers has shrunk from 6.5% to 3%, as they have had to face the rise of input and labour costs without being able to pass on this increase onto processors, because of their weak bargaining position.

To investigate further this situation, we have analysed the value evolution of the orange producer prices and wages, export FOB prices and costs of production since the early 1990s. The results for the main destinations of Brazilian FCOJ are provided below.

## Analysis of the value breakdown

**Fig. 240 Value breakdown of orange juice made from FCOJ produced in Brazil, supplied by plantations, and by small orange farmers (1991-2015)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

On the consumer side, taking into account the evolution of costs of living in the USA, the diagram illustrates that the consumer prices have steadily declined by approx. 18% between 1991 and 2005, before increasing by 30% in two years and remaining quite stable until 2015. Most importantly, retailers appear to have “cushioned” the evolution of FCOJ prices further up in the chain (i.e. limiting increases in case of peaks, but also remaining stable in case of drops).

In the middle of the chain, the brands/bottlers (selling price to retailers) have amplified the trends in CIF import prices and managed to gradually increase their share of value by a small amount.

In Brazil, the processors (out of factory price) appear to have faced increasing costs when expressed in local currency and managed to increase their share of value thanks to their vertically integrated systems, and when sourcing from small orange producers who got

squeezed between the increase of input prices and the pressure from processors (see the section on orange juice global value chain for more details).

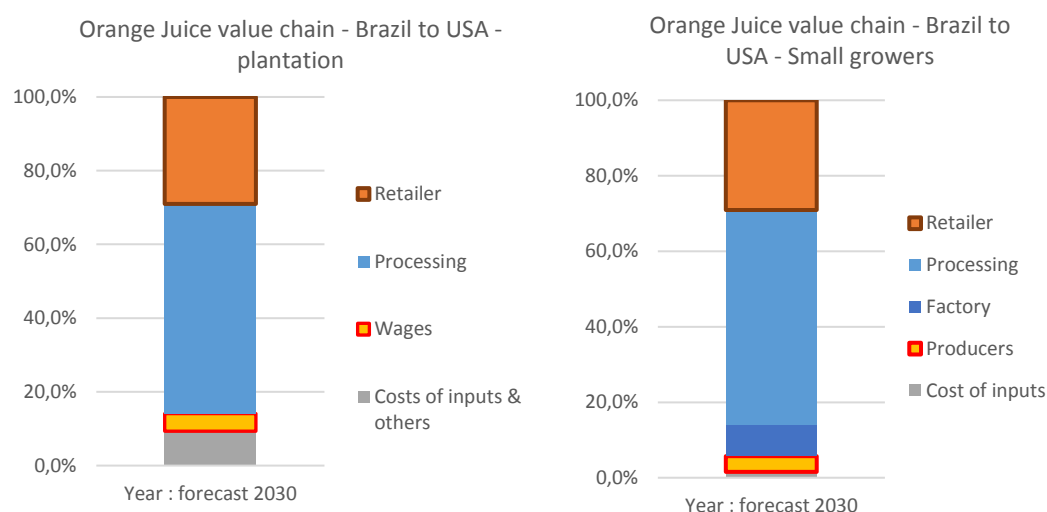
### Projections in 2030 of the value breakdown in a “Business as Usual” scenario

Based on the previous estimates, we performed a projection of the orange juice value breakdown in the year 2030 in a “Business as Usual” scenario:

- producer prices, wage levels and costs of inputs in Brazil are based on the latest projections of the World Bank in 2030 (for fuel and fertilisers’ prices)
- price trends at the supermarkets’, brands’ and processors’ levels have been extrapolated based on the last 15 years and using a linear regression (price trends seem to be closely related to market concentration which has been continuously growing for the past 20 years with no sign of trend reversal).

The results are as follows:

**Fig. 241 Value breakdown of orange juice made from FCOJ produced in Brazil, supplied by plantations, and by small orange farmers (forecast 2030)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

According to these estimates, the share of value captured by retailers could decrease to 29% because of their competition for value with brands/bottlers and importers who could in turn increase their share up to 56.5% of the total value. At the beginning of the chain, small farmers and workers could be left with respectively less than 5% and 8% of the total value. In a ‘business as usual scenario’, this pressure on prices is likely to continue affecting the difficult living conditions of small orange growers and especially farm workers in Brazil.

### Ability of small farmers and workers to earn a living income/wage and levers for change

In order to cover the costs of orange juice from Brazil, the share of value for small farmers or workers should be increased at least from an estimated 0.08 USD/kg up to 0.14 USD/kg (see the section on orange juice global value chain for more details). This corresponds to very limited mark-up of 0.06 USD/kg, which only represents 6% of the end consumer price of orange juice which is 2.75 USD/L.

This increase does not need to be passed on to consumers: according to our estimates, the retailers have substantially increased their share of value from 0.77 USD per kg in 2014 to 0.96

USD per kg in 2015. This increase which happened in 2 years is enough to cover the living income of farmers and the payment of a living wage for workers.

Retailers and brands appear to have the means to address the unsustainability of the Brazilian orange juice chain. To do so, they would need to ensure that the orange juice they sell is not produced at the cost of the living conditions of small farmers and workers in the chain. In particular, this would require increasing the minimum wage for workers (in farming and processing) to the living wage level, and allocating enough resources for controls on the ground as it is one of the main ways to ensure that they can achieve a sustainable livelihood. In addition, they could support the establishment of a guaranteed price for the small orange growers enabling them to generate a living income, together with environmental and social conditions to ensure the sustainability of production.<sup>492</sup>

## Banana

### Overview of the sector in the USA

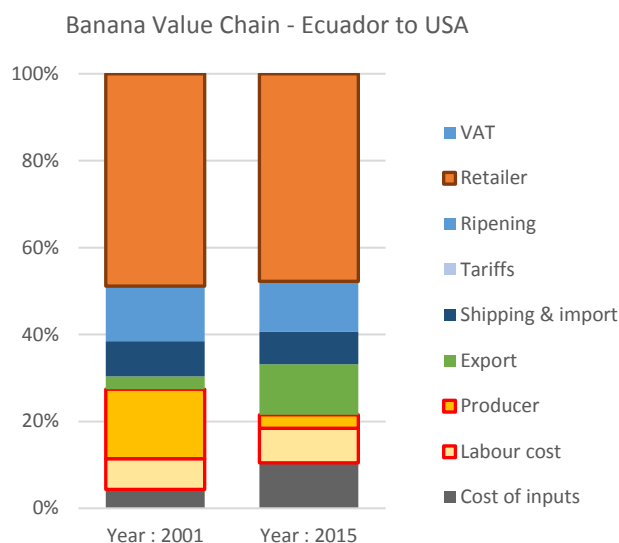
The US banana market is free of tariffs or quantitative import restrictions, making it very competitive. Until the end of the last decade consumption was pretty much static, with a slight decline in per capita consumption, down from 12.9 kilograms in 2000 to 11.2 kilograms per capita today<sup>493</sup>. In this context, the real price of loose bananas to consumers globally declined from 2000 onwards. Following a significant fall until 2007, prices have partially recovered and stabilised.

However, fruit companies succeeded in working with North American retailers to ensure that the purchase price should cover the costs of production and now mainly have annual contracts based on an agreed FOB price<sup>494</sup>. As a result, the CIF import price has increased since 2008 to cover the growing costs of inputs, transports, etc. The most astonishing feature is that consumption of bananas has increased over the period, even in this context<sup>495</sup>.

The main banana producing countries supplying the US market are Guatemala (36%), Ecuador (19%) and Costa Rica (14%).

For an overview of the sector, the structure of the chain and its evolution, see section 3 on the banana global value chain.

**Fig. 242 Value breakdown of banana produced in Ecuador (average 2000-2002 and 2015)**

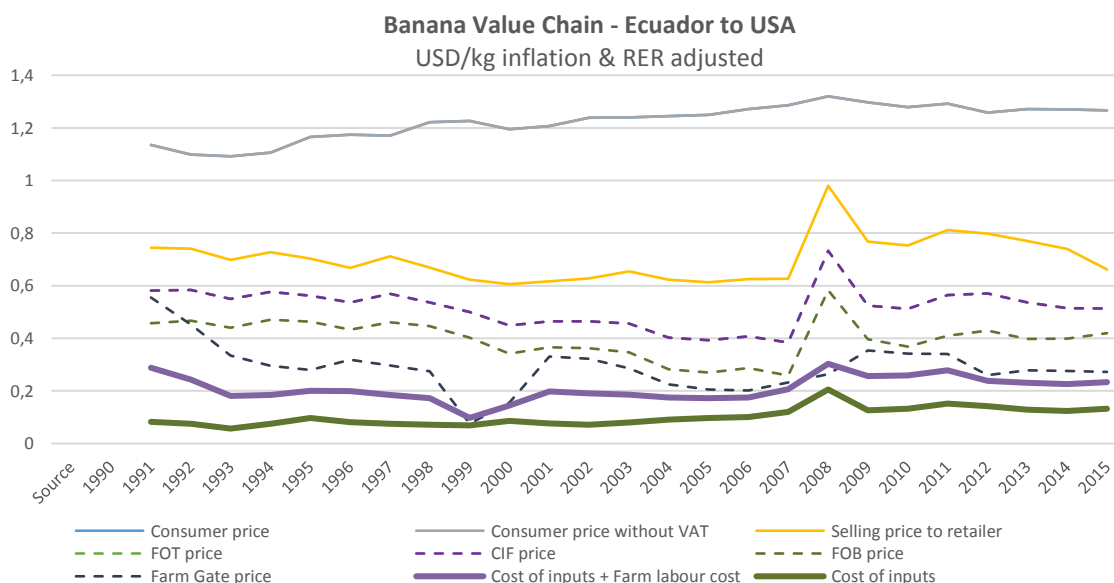


Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

These estimates show that the retail share has slightly decreased from 49% down to 48% over the past 15 years whilst the share of traders (shipping to ripening) has also slightly decreased from 21% up to 19%. At the other side of the chain in Ecuador, the value left for banana producers by sales to buyers has decreased from 16% down to 3%, farmers being squeezed between the pressure of buyers and the rising costs of inputs and labour. In the case of workers, although the share has apparently increased since 2001, the situation is not better as the costs of living have increased more rapidly than wages.

### Analysis of the value breakdown

**Fig. 243 Value breakdown of banana produced in Ecuador (1993-2015)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

On the consumer side, taking into account the evolution of costs of living in the USA, the diagram illustrates the upward trend of the banana price since 1994 which has increased by more than 13% in real terms.

In the middle of the chain, the CIF import price of bananas has followed a similar tendency (albeit for the spike in 2008 which is due to the end of EU quota system since the agreement in the WTO), but the wholesale price has reduced less significantly. As a result, the graph illustrates that retailers have managed to maintain their share of value in real terms since 1994, using their increased bargaining power to pressure the rest of the banana chain.

In Ecuador, the value left for banana growers as well as workers has decreased significantly since the early 1990's and does not enable them to cover their costs of production and the livelihoods of their families (see the section on [banana's global value chain](#) for more details).

As illustrated in our diagram, the estimated export price of bananas appears to have decreased to such a point that it is only slightly above the average producer price in Ecuador, suggesting that a strong pressure is put on producers. As a result, the income earned by small banana growers in Ecuador appears to be only half the living wage in 2015 according to the government estimates. Whilst the situation of workers seems more favourable thanks to the enforcement of the minimum wage law, recent studies have shown that a significant proportion of workers' households didn't achieve a living income<sup>496</sup>.

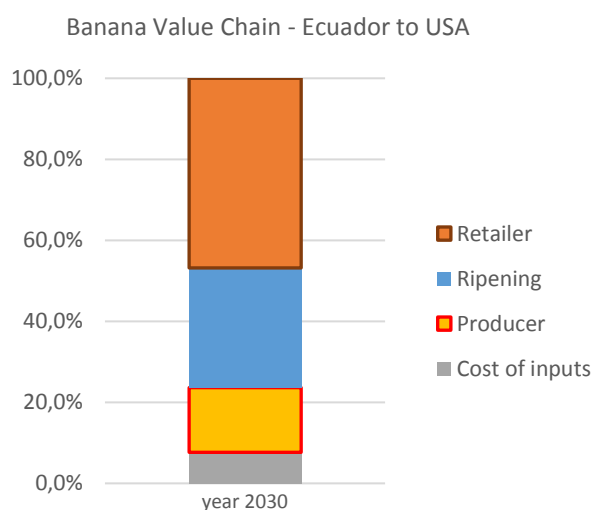
### Projections in 2030 of the value breakdown in a “Business as Usual” scenario

Based on the previous estimates, we performed a projection of the banana value breakdown in the year 2030 in a “Business as Usual” scenario:

- producer prices, wage levels and costs of inputs in Ecuador are based on the latest projections of the World Bank in 2030 (for banana FOB prices, fuel and fertilisers' prices)
- price trends at the supermarkets' and fruit companies' levels have been extrapolated based on the last 15 years and using a projection model similar to the one used by the World Bank (price trends seem to be closely related to retailers' market concentration which has been continuously growing for the past 20 years with no sign of trend reversal).

The results are as follows:

**Fig. 244 Value breakdown of banana produced in Ecuador (forecast 2030)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

According to these estimates, the share of value captured by retailers could stabilize at 47% of the total value of fresh bananas, while the share of fruit companies would be reduced to 29.5% and producers and workers would be sharing 16% of the end value of bananas, which would be hardly sufficient to enable them making end meet given the rising costs of living and production.

In a 'business as usual scenario', this pressure on prices is likely to accelerate further the disappearance of small growers in the world banana trade, a continuous trend that has been taking place over the past decades; it is also likely to increase further the 'flexibilisation' of working conditions which is already affecting many workers, in order to address the retailers' demand for cheap imported bananas.

The result may well be highly concentrated banana chains, from retailers down to producers, which will most probably lack resilience and increase further the social and environmental impacts in producing countries.

### **Ability of small farmers and workers to earn a living income/wage and levers for change**

In order to cover the costs of production and ensure that both workers and small farmers can earn a living wage, the export price of bananas from Ecuador should be increased by 0.03 USD/kg (see the section on [banana's global value chain](#) for more details). This corresponds to limited mark-up compared to the end consumer price of bananas which is 1.27 USD/kg.

This increase does not need to be passed on to consumers: according to our estimates, the retailers have increased their share of value from 0.34 USD/kg in 2009 to 0.61 USD per kg in 2015. This increase which happened recently is more than enough to cover the payment of a living wage to banana farmers and workers in Ecuador. In addition, direct sourcing could be a way for retailers to keep low costs in the middle stages of the chain (although the important role of traders who take most of the logistics and financial risks should be kept in mind, as demonstrated by the experience of UK retailers).

Retailers appear to have the means to address the unsustainability of the Ecuadorian banana chain, and have started to do so through selling Fair trade and organic bananas. However, they would need to generalize their commitments and take on their responsibility to ensure that the banana they sell is not produced at the cost of the living conditions of producers and workers, as well as the environment. In the case of Ecuador, they could promote the minimum support price for farmers and the minimum wage for workers – which are effective tools to secure living income in the banana sector – by leaving a sufficient share of the banana value in the producing country so that the costs of sustainable production can be covered.

Given the concentration of market power in the hands of retailers who currently exert economic pressure down the chain while imposing strong conditions on suppliers (in terms of quality, health security, consistency...), this is likely to require stricter public regulations to be enforced, in consumer countries as well as producer countries.<sup>497</sup>

## **Avocado**

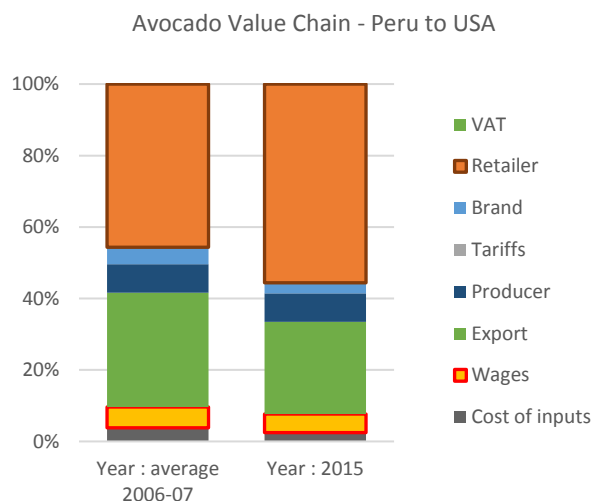
### **Overview of the sector in the USA**

For an overview of the sector, the structure of the chain and its evolution, see section 3 on the avocado global value chain.

### **Comparison of the value breakdown in the 1990's and in 2015**

Our estimations of value breakdown (expressed in nominal currency so as to avoid potential distortions linked to correction for inflation) are as follows:

**Fig. 245 Value breakdown avocado produced in Peru (average 2000-2001 and 2015)**



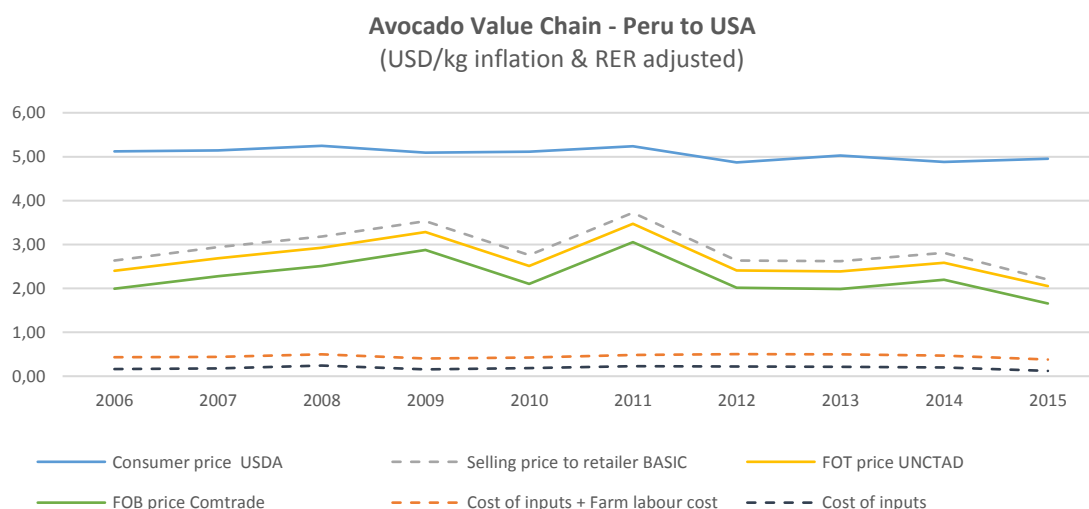
Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

As illustrated above, the share of value retained by retailers is the largest and has increased substantially since 2000 from 45.5% up to 55.5%. The value remaining in Peru has decreased sharply from 49.5% down to 41.5%, essentially captured by plantations, while the share of the total value for workers has decreased from 6% down to 5%.

To investigate further this situation, we have analysed the value evolution of the avocado producer prices and wages, export FOB prices and costs of production since the early 1990s. The results for the main destinations of Peruvian avocado are provided below.

### Analysis of the value breakdown

**Fig. 246 Value breakdown of avocado produced in Peru (2006-2015)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

On the consumer side, taking into account the evolution of costs of living in the USA, the diagram illustrates that the consumer prices have remained globally stable between 2006 and 2015. Retailers appear to have “cushioned” the evolution of avocado prices further up in the chain (i.e. limiting increases in case of peaks, but also remaining stable in case of drops).



In Peru, the plantations have only managed to maintain their share of value over most of the period, and a decline in 2015 (see the section on avocado global value chain for more details).

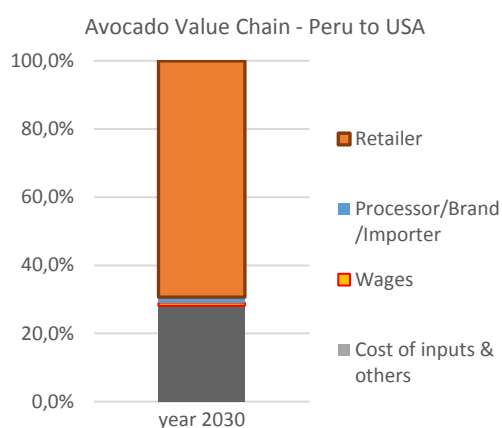
### Projections in 2030 of the value breakdown in a “Business as Usual” scenario

Based on the previous estimates, we performed a projection of the avocado value breakdown in the year 2030 in a “Business as Usual” scenario:

- producer prices, wage levels and costs of inputs in Peru are based on the latest projections of the World Bank in 2030 (for fuel and fertilisers’ prices)
- price trends at the supermarkets’ and producers’ levels have been extrapolated based on the last 15 years and using a linear regression (price trends seem to be closely related to market concentration which has been continuously growing for the past 20 years with no sign of trend reversal).

The results are as follows:

**Fig. 247 Value breakdown of avocado (forecast 2030)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

According to these estimates, the share of value captured by retailers could further increase up to 69.5% because of their position of major selling channel. In contrast, the share of value of plantations could decrease because of the rise in input costs. At the beginning of the chain, workers could be left with less than 1% of the total value. In a ‘business as usual scenario’, this pressure on prices is likely to continue affecting the wages and labour conditions of the avocado workers.

### Ability of workers to earn a living wage and levers for change

In order to cover the costs of production and ensure that workers can earn a living wage, the share of value for workers in Peru should be increased from 0.26 USD/kg currently to 0.29 USD/kg (see the section on the avocado global value chain for more details). This corresponds to a mark-up of 0.03 USD/kg, which represents less than 1% of the end consumer price of avocado which is 4.95 USD/kg.

This increase does not need to be passed on to consumers: according to our estimates, the retailers have strongly increased their share of value from 1.50 USD per kg in 2011 to 2.75 USD per kg in 2015. This increase which happened in the last 5 years is more than enough to cover the payment of a living wage for avocado workers in Peru.

Retailers appear to have the means to address the unsustainability of the Peruvian avocado chain. To do so, they would need to ensure that the avocado they sell is not produced at the cost of the living conditions of workers, as well as the environment. In the case of Peru, they could promote the rise of the minimum wage for workers to ensure it covers the costs basic needs of their families – which is an effective tool to secure living income in the sector – by leaving a sufficient share of the value in the producing country so that the costs of sustainable production can be covered.

# SOUTH AFRICA

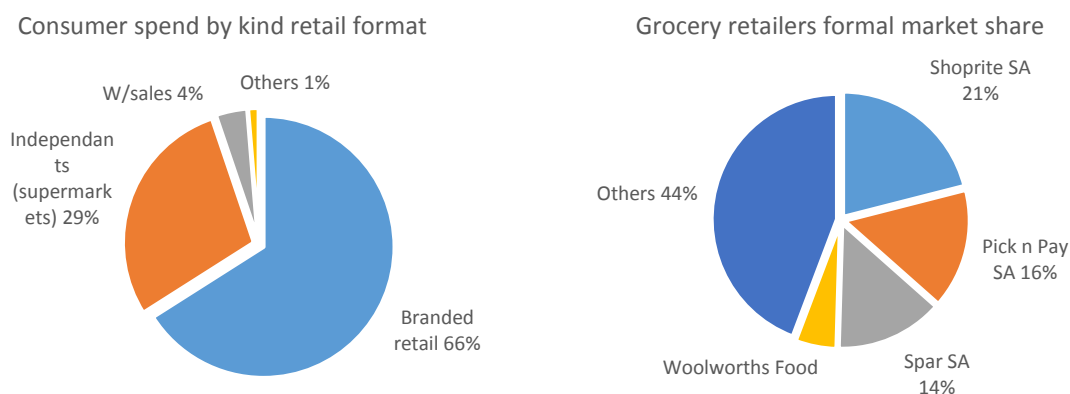
## Overview of the food retail sector in the country

South African's retail outlets offer a full variety of formats that range from cafés, general dealers, specialty stores, supermarket chains, department stores, cash and carry wholesale outlets and the co-operative stores which serve most rural areas. The South African retail industry has grown from strength to strength in recent years, supported by the increase in both retail space and the number of shopping centres in the country. It employs an estimated 2,825,000 people, 22% of the national labour force<sup>498</sup>. The retail industry has benefited from the improvement of infrastructure. The rapid construction of high-density housing in the surrounds of major urban areas has increased the development of retail centres, which have shifted from being concentrated in inner-cities, to suburbs and townships.<sup>499</sup>

The country's aggregate retail sales surpassed a trillion rand for the first time in 2011, and is by far the largest on the African continent. Out of the total retail sales, retail grocery (both formal and informal e.g. spaza stores) amounted to an estimated 492 billion rand in 2014. The supermarket industry in South Africa is quite concentrated, with the 4 largest supermarket chains Shoprite, Pick 'n Pay, SPAR and Woolworths, holding together 56% of the grocery retail market (in decline over the last decade)<sup>500</sup>. These supermarket chains have a wide geographical presence in all the country accumulated over several decades. In 2011, Walmart entered the South African market through the acquisition of Massmart, which operates local retail brands such as Game, Makro, Builders Warehouse and Cambridge Food. In addition, Fruit and Veg City, originally a part-line retailer focused primarily on fruits and vegetables, has grown to become another effective competitor in the retail industry. This has initiated a new dynamic of intensified competition, placing added pressure on historical actors.<sup>501</sup>

To address this context, supermarket chains have developed several strategies, in particular the development of Forecourt retailing and the increase of private label products which have shown rapid growth over the last few years (but only account for 10% of sales compared to 40% and above in European grocery retailing). In addition, South Africa's large retail companies are also increasingly expanding into other African countries as the domestic market matures and offers less growth opportunities (although their presence outside the country is still limited at this stage).<sup>502</sup>

**Fig. 248 Main retail outlets and retailers' market shares in South Africa**

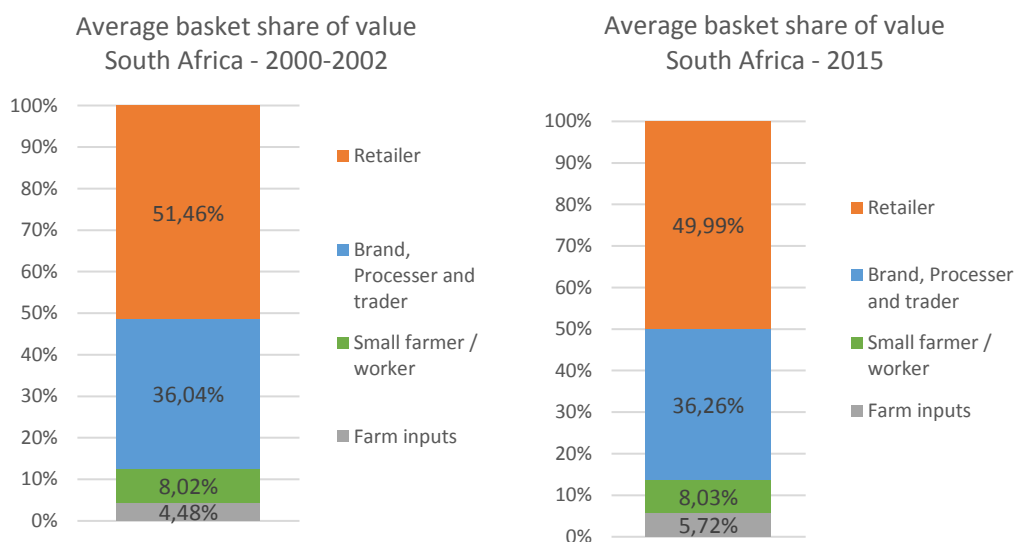


Source: BASIC, based on Nielsen data (2016)

## Overview of the food basket value breakdown

The evolution of the value breakdown of the basket of goods for South Africa is detailed below for 2000-2002 and 2015:

**Fig. 249 Value breakdown of the South African basket of goods**



Source: BASIC

As illustrated above, the share of value retained by retailers, as well as small farmers and workers, appear to be globally stable between 2000 and 2015. The detailed analysis of each product in the basket is provided in the following sub-sections.

## Coffee

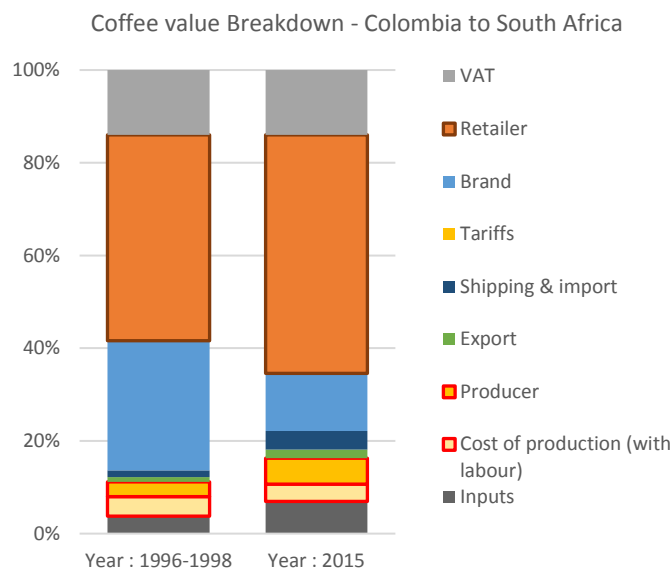
### Overview of the sector in South Africa

For an overview of the sector, the structure of the chain and its evolution, see section 3 on the coffee global value chain.

### Comparison of the value breakdown in the 1990's and in 2015

Our estimations of value breakdown (expressed in nominal currency so as to avoid potential distortions linked to correction for inflation) are as follows:

**Fig. 250 Value breakdown of coffee produced in Colombia (average 1996-1998 and 2015)**

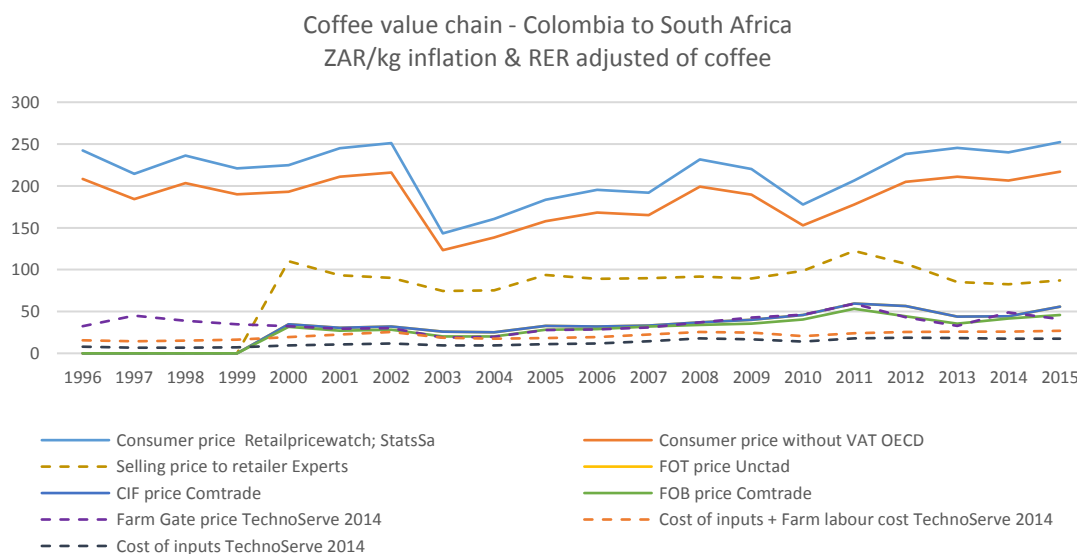


Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

As illustrated above, the value breakdown mirrors the evolution of the coffee chain where supermarket chains have a growing influence (through the development of private label) as well as coffee brands and roasters. The share of value retained by retailers is the largest and has tended to increase significantly since 1996 (from 44% in 1996-98 to 51% in 2015). In comparison, the share of value of brands/roasters is the 2<sup>nd</sup> largest but has apparently strongly declined from 28% to 12% and the value remaining in Colombia has risen from 12% to 18%. This is not taking into account the costs of inputs (fertilizers and pesticides) which has more than doubled in proportion, generating strong economic pressure on both coffee growers and workers. To investigate further this situation, we have analysed the value evolution of the coffee producer prices, export FOB prices and costs of production since the early 1990s. The results for the main destinations of Colombian coffee are provided below.

**Analysis of the value breakdown**

**Fig. 251 Value breakdown of coffee produced in Colombia (1991-2015)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports

On the consumer side, taking into account the evolution of costs of living in South Africa, the diagram illustrates that the consumer prices have amplified the evolution of the coffee CIF import prices since 1991 (prices increase as well as prices fall). Their share of value seems to have been quite volatile and strongly increased since 2011.

In the middle of the chain, the selling price (of roasters) to retailers has been quite aligned with the evolution of the coffee CIF import price, and even slightly amplifies peaks such as in 1994, 1997 and more recently 2010-2011 during the rust epidemic.

In Colombia, the value left for small coffee growers as well as workers has undergone two spikes in 1994-98 because of the end of the international coffee agreement and in 2010-12 because of the ravages of rust combined with El Nino/La Nina effects. In 2015, producers only sell their coffee to the same unit price than in 1991 – one corrected for inflation – but production costs have sharply risen, thereby squeezing what is left for them to live on (see the section on coffee global value chain for more details).

As pointed out by Daviron and Ponte (2005) a “coffee paradox” emerges, as the value of coffee for consumers is not so much linked to the green coffee price, but to the ways of combining different coffees in blends, roasting and marketing, and selling them in bars and coffee shops.<sup>503</sup>

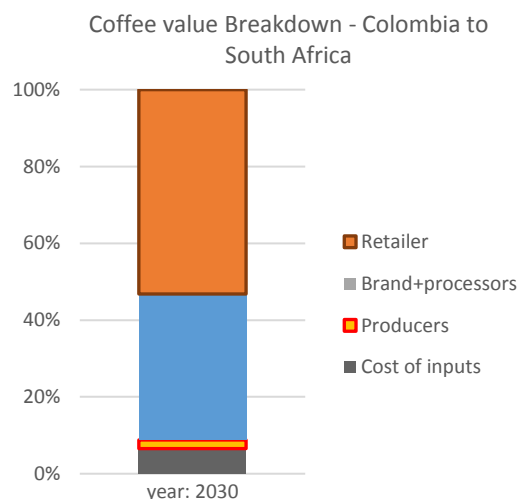
### Projections in 2030 of the value breakdown in a “Business as Usual” scenario

Based on the previous estimates, we performed a projection of the coffee value breakdown in the year 2030 in a “Business as Usual” scenario:

- producer prices, wage levels and costs of inputs in Colombia are based on the latest projections of the World Bank in 2030 (for coffee FOB prices, fuel and fertilisers’ prices)
- price trends at the supermarkets’ and roasters’ levels have been extrapolated based on the last 15 years and using a linear regression (price trends seem to be closely related to market concentration which has been continuously growing for the past 20 years with no sign of trend reversal).

The results are as follows:

**Fig. 252 Value breakdown of coffee (forecast 2030)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

According to these estimates, the share of value captured by retailers would increase further at 53% and brands, roasters and traders would remain at 38%. At the beginning of the chain, producers could be left with 2% of the total value instead of 7% today. In a “business as usual

scenario', this pressure on prices is likely to accelerate further the difficulties of small coffee growers and the disappearance of the smallest ones.

### Ability of small farmers to earn a living income and levers for change

In order to cover the costs of production and ensure that both workers and small farmers can earn a living wage, the share of value for farmers in Colombia should be increased from 0.9 USD/kg currently to 1.27 USD/kg (see the section on coffee global value chain for more details). This corresponds to a mark-up of less than 0.37 USD/kg, which only represents 2% of the end consumer price of coffee which is 19.77 USD/kg.

This increase does not need to be passed on to consumers: according to our estimates, the retailers have increased their share of value from 6.50 USD/kg in 2011 to 10.10 USD per kg in 2015. This increase which happened over the last 5 years is more than enough to cover the payment of a living wage to coffee farmers and workers in Colombia.

Retailers appear to have the means to address the unsustainability of the Colombian coffee chain, and have started to do so through selling Fair trade and organic coffee. However, they would need to generalize their commitments and take on their responsibility to ensure that the coffee they sell is not produced at the cost of the living conditions of producers and workers, as well as the environment. In the case of Colombia, they could promote the establishment of a minimum support price for farmers and the increase of the minimum wage for workers – which are effective tools to secure living income in the sector – by leaving a sufficient share of the value in the producing country so that the costs of sustainable production can be covered.<sup>504</sup>

## Tea

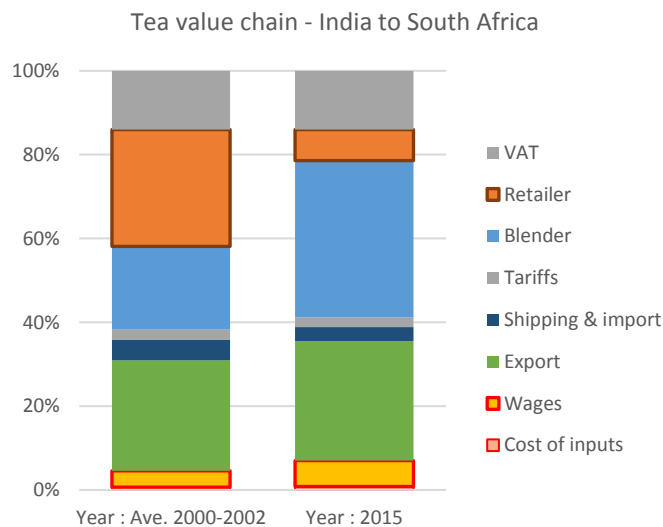
### Overview of the sector in South Africa

For an overview of the sector, the structure of the chain and its evolution, see section 3 on the tea global value chain.

### Comparison of the value breakdown in the 1990's and in 2015

Our estimations of value breakdown (expressed in nominal currency so as to avoid potential distortions linked to correction for inflation) are as follows:

**Fig. 253 Value breakdown of tea produced in India (average 2000-2002 and 2015)**



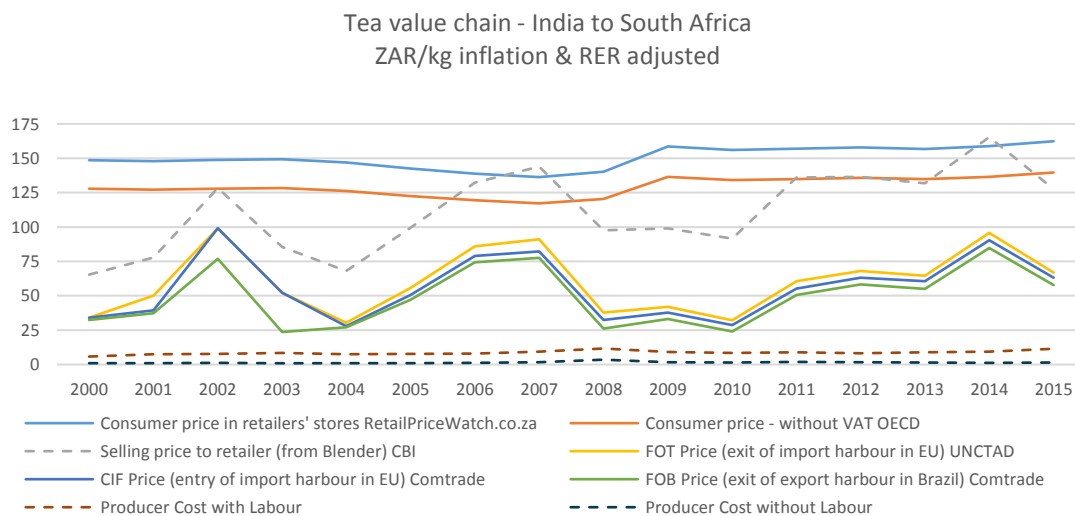
Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports

As illustrated above, the share of value retained by retailers is the largest and has dropped sharply since 2000 from 28% down to 7%. In comparison, the share of value of brands/blenders is the 2<sup>nd</sup> largest and has increased strongly from 20% up to 37%, showing their growing influence over the chain. The value remaining in India has also increased from 31% to 35.5%.

To investigate further this situation, we have analysed the value evolution of the tea producer prices and wages, export FOB prices and costs of production since the early 1990s. The results for the main destinations of Indian tea are provided below.

### Analysis of the value breakdown

**Fig. 254 Value breakdown of tea produced in India (2000-2015)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

On the consumer side, taking into account the evolution of costs of living in South Africa, the diagram above shows that the consumer prices have increased by almost 10% since 1991 (especially in 2007-09, the tendency being quite stable over the rest of the period). The low consumer prices compared to the selling price of brands/blenders can be explained by the fact that the data we were able to collect on South African retail shops do not reflect the price level of Indian tea, but a lower average. In reality, supermarkets are very unlikely to sell Indian tea at loss. Nevertheless, beyond these limitations, the consumer price evolution provides information on the structural trend over the last 15 years.

In the middle of the chain, the tea blenders appear to have followed quite closely the trend of CIF import prices over the period, and slightly increased their share of value significantly since 2010.

In India, the export prices have also closely followed the CIF import prices. More particularly, they have increased since 2010, but dropped when expressed in local currency over the same period, generating pressure on plantations with low productivity and consequently on the workers' wages (see the section on tea global value chain for more details).

### Projections in 2030 of the value breakdown in a "Business as Usual" scenario

Based on the previous estimates, we performed a projection of the tea value breakdown in the year 2030 in a "Business as Usual" scenario:

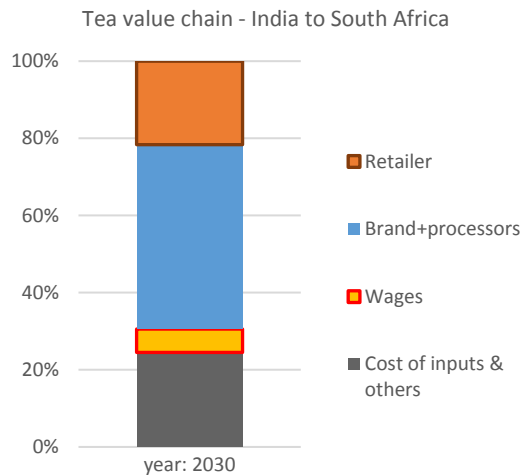
- producer prices, wage levels and costs of inputs in India are based on the latest projections of the World Bank in 2030 (for tea FOB prices, fuel and fertilisers' prices)



- price trends at the supermarkets' and blenders' levels have been extrapolated based on the last 15 years and using a linear regression (price trends seem to be closely related to market concentration which has been continuously growing for the past 20 years with no sign of trend reversal).

The results are as follows:

**Fig. 255 Value breakdown of tea (forecast 2030)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

According to these estimates, the share of value captured by retailers could be reduced to 22% because of the increasing share of value accruing to brands, blenders and traders which could become the largest at 48%. At the beginning of the chain, workers could be left with only 6% of the total value. In a 'business as usual scenario', this pressure on prices is likely to continue affecting the wages and labour conditions of the tea workers, as well as the disappearance of the lowest productive plantations.

### Ability of workers to earn a living wage and levers for change

In order to cover the costs of production and ensure that workers can earn a living wage, the share of value for workers in India should be increased from 0.78 USD/kg currently to 2.29 USD/kg (see the section on tea global value chain for more details). This corresponds to a mark-up of 1.51 USD/kg, which represents 12% of the end consumer price of tea which is 162 ZAR/kg (12.70 USD/kg). However, given that the real consumer price of Indian tea in South African supermarkets is higher than our estimation in reality, the mark-up is likely to be substantially lower.

This increase does not need to be passed on to consumers: according to our estimates, the blenders have strongly increased their share of value from 1.80 USD per kg in 2002 to 4.70 USD per kg in 2015. This increase which happened over the last 10 years is more than enough to cover the payment of a living wage for tea workers in India.

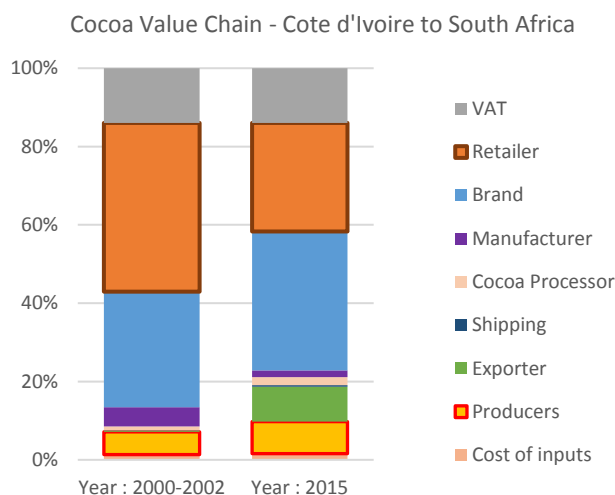
Retailers appear to have the means to address the unsustainability of the Indian tea chain. More specifically, they would need to generalize their commitments and take on their responsibility to ensure that the tea they sell is not produced at the cost of the living conditions of workers, as well as the environment. In the case of India, they could promote the rise of the minimum wage for workers to ensure it covers the costs basic needs of their families – which is an effective tool to secure living income in the sector – by leaving a sufficient share of the value in the producing country so that the costs of sustainable production can be covered.<sup>505</sup>

# Cocoa

## Overview of the sector in South Africa

Our estimations of value breakdown (expressed in nominal currency so as to avoid potential distortions linked to correction for inflation) are as follows:

**Fig. 256 Value breakdown of a 70% dark chocolate bar made from cocoa produced in Cote d'Ivoire (average 1996-1998 & 2015)**

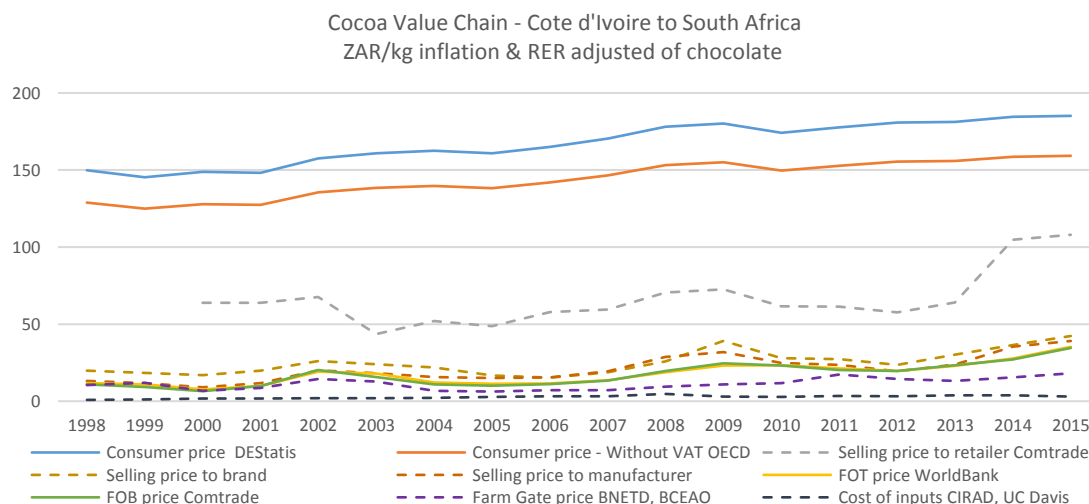


Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

As illustrated above, the share of value retained by retailers has sharply declined from 43% up down to 28%, while the share of the chocolate brands has become the largest, increasing from 29.5% up to 35.5% and showing their growing influence on the market. The value remaining in Cote d'Ivoire has increased from 8% up to 18%. To investigate further this situation, we have analysed the value evolution of the cocoa producer prices and wages, export FOB prices and costs of production since the early 1990s. The results for the main destinations of Ivorian cocoa are provided below.

## Analysis of the value breakdown

**Fig. 257 Value breakdown of a 70% dark chocolate bar made from cocoa produced in Cote d'Ivoire (1991-2015)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

On the consumer side, taking into account the evolution of costs of living in South Africa, the diagram illustrates that the consumer prices have steadily increased by 23% since 1998. Retailers appear to have “cushioned” the evolution of cocoa prices further up in the chain (i.e. limiting increases in case of peaks, but also remaining stable in case of drops). They have apparently eroded their share of the value in the last 2 years (which could be mainly a distortion due to the modelling used to estimate the value breakdown due to the limited data available on South African cocoa prices and costs).

In the middle of the chain, the chocolate brands (selling price to retailer) appear to have followed and amplified the trends of CIF import prices until recently and increased significantly their share of value in the last 2 years. Upstream, the selling price to brands and manufacturers demonstrates that margins remain slim for chocolate makers and cocoa grinders, obliging them to boost volumes of cocoa in order to keep their profitability (see section 3 on the cocoa global value chain for more details).

In Cote d'Ivoire, the producer prices have dropped significantly in the beginning of the 1990s, and during the period 2003-2009, strongly affecting the small cocoa growers which couldn't make ends meet. Prices recovered slowly until 2016 thanks to the re-establishment of a minimum support price for cocoa and its significant increase year after year. However, this price was cut by more than 30% early 2017 because of the sharp fall of cocoa price on world's markets, plunging farmers again far below the poverty line (see the section on cocoa global value chain for more details).

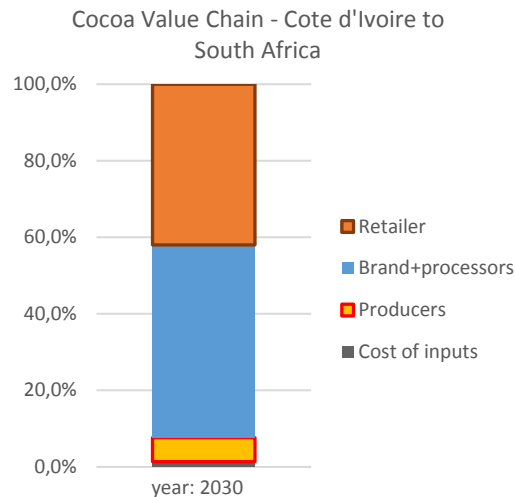
### Projections in 2030 of the value breakdown in a “Business as Usual” scenario

Based on the previous estimates, we performed a projection of the cocoa value breakdown in the year 2030 in a “Business as Usual” scenario:

- producer prices, wage levels and costs of inputs in Cote d'Ivoire are based on the latest projections of the World Bank in 2030 (for cocoa FOB prices, fuel and fertilisers' prices)
- price trends at the supermarkets' and brands' have been extrapolated based on the last 15 years and using a linear regression (price trends seem to be closely related to market concentration which has been continuously growing for the past 20 years with no sign of trend reversal).

The results are as follows:

**Fig. 258 Value breakdown of cocoa (forecast 2030)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

According to these estimates, the share of value captured by retailers could increase back to 42% because of their increasing influence on the chain due to their position of major selling channel and the development of private labels. In parallel, the value accruing to brands, processors and traders could be reduced to 50.5%, still the largest share in the chain. At the beginning of the chain, small cocoa growers could be left with less than 6% of the total value. In a 'business as usual scenario', this pressure on prices is likely to continue affecting the difficult living conditions of cocoa smallholders and encourage deforestation, one of the main ways for producers to maintain productivity and profitability.

#### **Ability of small farmers to earn a living income and levers for change**

In order to cover the costs of production and ensure that cocoa farmers can earn a living income, the share of value for farmers in Cote d'Ivoire should be increased from 1.18 USD/kg to 1.60 USD/kg (see the section on cocoa global value chain for more details). This corresponds to very limited mark-up of 0.42 USD/kg, which only represents 3% of the end consumer price of chocolate which is 185 ZAR/kg (14.51 USD/kg).

This increase does not need to be passed on to consumers: according to our estimates, the chocolate brands have increased their share of value from 3.20 USD per kg in 2009 to 5.10 USD per kg in 2015. This increase which happened over the last 10 years is more than enough to cover the payment of a living wage for cocoa farmers in Cote d'Ivoire.

Retailers appear to have the means to address the unsustainability of the Ivorian cocoa chain. To do so, they would need to generalize their commitments and take on their responsibility to ensure that the chocolate they sell is not produced at the cost of the living conditions of cocoa farmers, as well as the environment. In particular, this would require a stronger commitment of chocolate brands to offer less confectionery products where cocoa is just a commoditized ingredient, and more chocolate products that value the origin and quality of cocoa, hence the work of farmers paid at a fair price, enabling them to cover their costs of production and the living needs of their families.<sup>506</sup>

# Rice

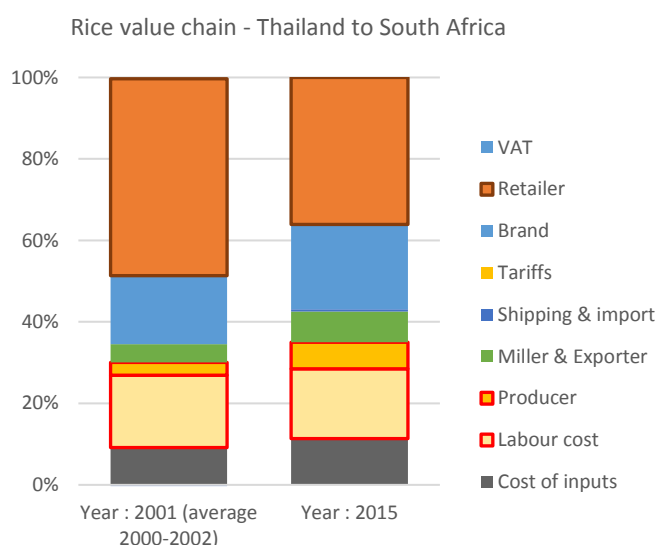
## Overview of the sector in South Africa

For an overview of the sector, the structure of the chain and its evolution, see section 3 on the rice global value chain.

## Comparison of the value breakdown in the 1990's and in 2015

Our estimations of value breakdown (expressed in nominal currency so as to avoid potential distortions linked to correction for inflation) are as follows:

**Fig. 259 Value breakdown of rice produced in Thailand (average 2000-2002 & 2015)**



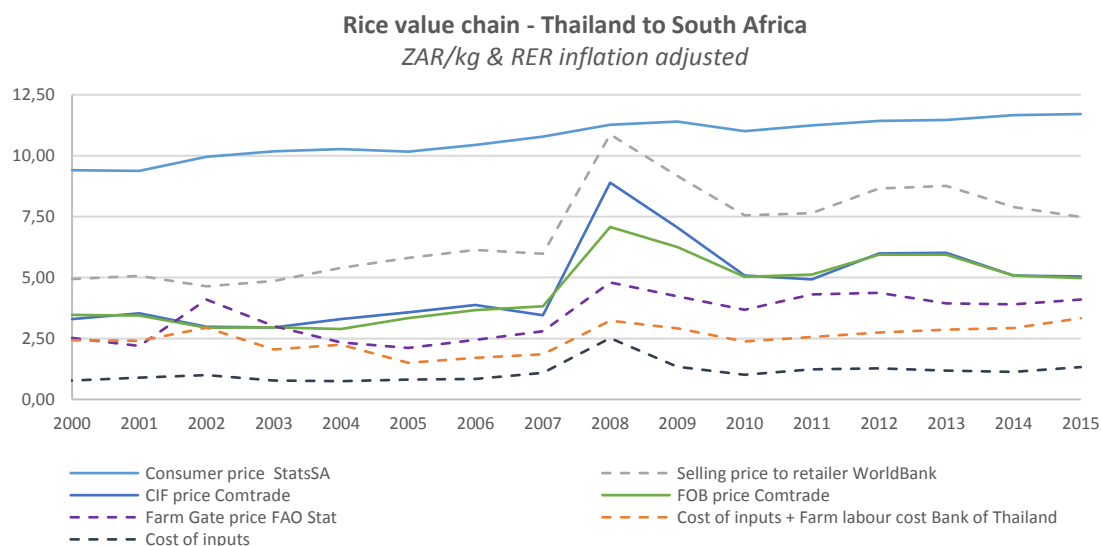
Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

As illustrated above, the share of value retained by retailers is the largest and has declined substantially from 48.5% down to 36%, showing their loss of influence in comparison with packers and brands which now capture the largest share of the value (from 17% in 2000-2002 up to 21% in 2015). The value remaining in Thailand has increased to 42.5%.

To investigate further this situation, we have analysed the value evolution of the rice producer prices and wages, export FOB prices and costs of production since the early 1990s. The results for the main destinations of Thai rice are provided below.

## Analysis of the value breakdown

**Fig. 260 Value breakdown of rice produced in Thailand (1991-2015)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

On the consumer side, taking into account the evolution of costs of living in South Africa, the diagram illustrates that the consumer prices have steadily increased by almost 25% until 2015. In particular, retailers appear to have “cushioned” the evolution of rice prices further up in the chain (i.e. limiting increases in case of peaks, but also remaining stable in case of drops), and globally decreased their share of the total value since 2000.

In the middle of the chain, the packers and brands (selling price to retailer) seem to have followed the trend of CIF import prices over the same period, and progressively increased their share of value too.

In Thailand, the share of value of millers and exporters has grown significantly since 2008, demonstrating their growing influence on the chain at the detriment of small rice growers. The situation is all the more difficult for producers than the costs of farm inputs and labour costs have doubled since the early 1990s and the support price system managed by the government has been suspended in 2014, triggering a decline in producer prices in local currency for the past two years (see section 3 on the rice global value chain for more details).

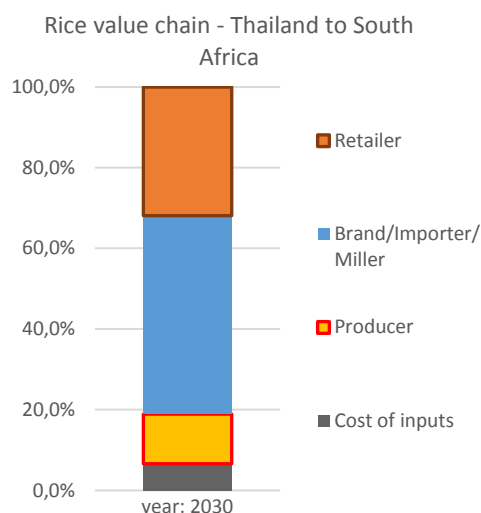
### Projections in 2030 of the value breakdown in a “Business as Usual” scenario

Based on the previous estimates, we performed a projection of the rice value breakdown in the year 2030 in a “Business as Usual” scenario:

- producer prices, wage levels and costs of inputs in Thailand are based on the latest projections of the World Bank in 2030 (for rice FOB prices, fuel and fertilisers’ prices)
- price trends at the supermarkets’ and brands’ levels have been extrapolated based on the last 15 years and using a linear regression (price trends seem to be closely related to market concentration which has been continuously growing for the past 20 years with no sign of trend reversal).

The results are as follows:

**Fig. 261 Value breakdown of rice (forecast 2030)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

According to these estimates, the share of value captured by retailers could decrease further to 32%, while the value accruing to brands, processors and traders could reach 42%. At the beginning of the chain, small rice growers could be left with less than 12% of the total value compared to 17% currently. In a ‘business as usual scenario’, this pressure on prices is likely to continue affecting the difficult living conditions of rice smallholders and accelerate the disappearance of the smallest ones.

### Ability of small farmers to earn a living income and levers for change

In order to cover the costs of production and ensure that workers can earn a living wage, the share of value for farmers in Thailand should be increased from 0.22 USD/kg to 0.31 USD/kg (see the section on rice global value chain for more details). This corresponds to very limited mark-up of 0.09 USD/kg, which represents 10% of the end consumer price of rice which is 11.71 ZAR/kg (0.92 USD/kg).

This increase does not need to be passed on to consumers: according to our estimates, the retailers have increased their share of value from 0.21 USD per kg in 2009 to 0.33 USD per kg in 2015. This increase which happened over the last 5 years is enough to cover the payment of a living wage for rice farmers in Thailand.

Retailers appear to have the means to address the unsustainability of the Thai rice chain. TO do so, they would need to generalize their commitments and take on their responsibility to ensure that the rice they sell is not produced at the cost of the living conditions of rice farmers and workers. In Thailand, they could promote the re-establishment of a minimum support price for farmers and the increase of the minimum wage for workers – which are effective tools to secure living income in the sector – by leaving a sufficient share of the value in the producing country so that the costs of sustainable production can be covered.

## Canned tuna

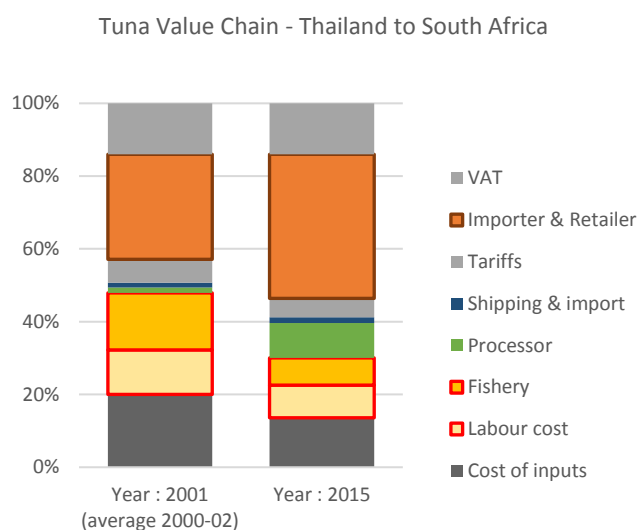
### Overview of the sector in South Africa

For an overview of the sector, the structure of the chain and its evolution, see section 3 on the canned tuna global value chain.

## Comparison of the value breakdown in the 1990's and in 2015

Our estimations of value breakdown (expressed in nominal currency so as to avoid potential distortions linked to correction for inflation) are as follows:

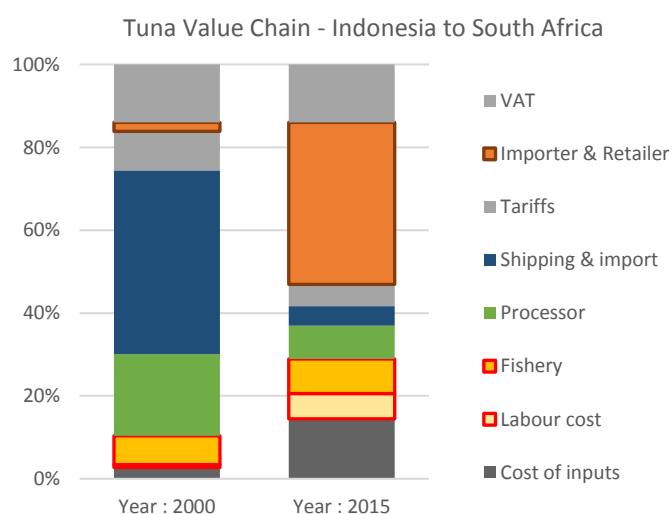
**Fig. 262 Value breakdown of canned tuna produced in Thailand (average 1996-1998 & 2015)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

As illustrated above, the share of value retained by retailers is the largest and has increased from 29% up to 39.5%, showing their large influence over the chain, especially through the dominance of their private labels. The share of the manufacturers of canned tuna has significantly increased too from 1.5% down to 9.5%. Most importantly, the share of fisheries has shrunk from 17.5% to 8%, as they have had to face the sheer rise of fuel and operation costs without being able to pass on this increase onto processors, because of their weak bargaining position. This leaves only 3% on average for labour costs on vessels.

**Fig. 263 Value breakdown of canned tuna produced Indonesia**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

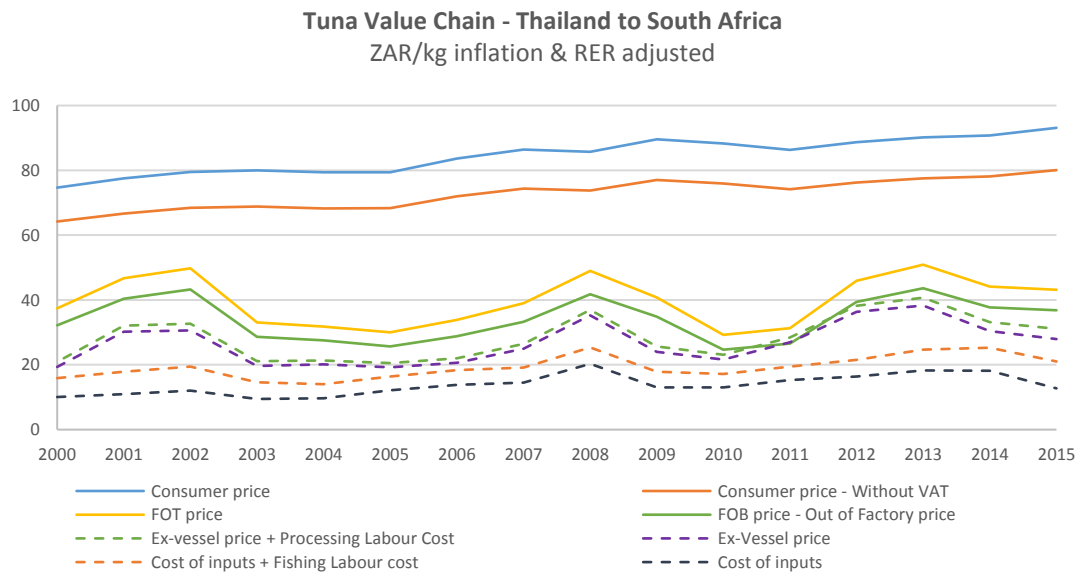


Our estimates for canned tuna from Indonesia is quite similar from the previous value breakdown: retailers appear to have gained influence over the chain, their share reaching 39% of the total value. Importers have decreased their share from 9.5% down to 5.5%, so as the processors from 19% to 8%. Eventually, fisheries appear to have maintained their share at around 7-8%, but face the pressure of increasing internal costs.

To investigate further this situation, we have analysed the value evolution of the canned tuna production prices and wages, export FOB prices and costs of production since the early 1990s. The results for the main destinations of Thai and Indonesian canned tuna are provided below.

### Analysis of the value breakdown

**Fig. 264 Value breakdown of canned tuna produced in Thailand (1996-2015)**

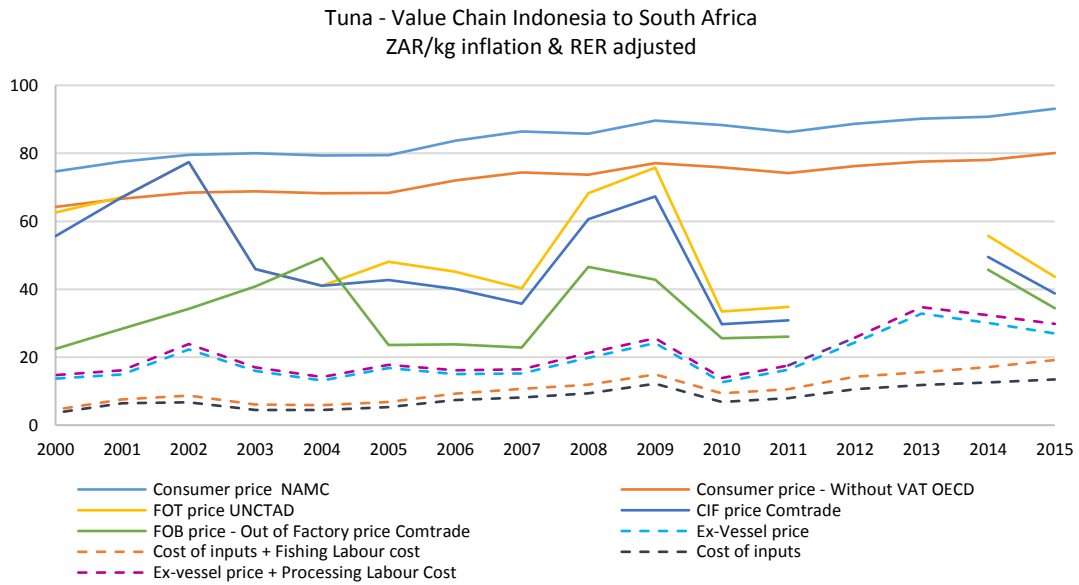


Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports

On the consumer side, taking into account the evolution of costs of living in South Africa, the diagram illustrates that the consumer prices have steadily increased by 25% until 2015. Retailers appear to have “cushioned” the evolution of canned tuna prices further up in the chain (i.e. limiting increases in case of peaks, but also remaining stable in case of drops).

In Thailand, the manufacturers (out of factory price) appear to have followed the trend of CIF import prices and were able to maintain their share thanks to their vertically integrated systems. However, their slim margins most probably oblige them to boost production volumes in order to keep their profitability. Upstream, the fisheries are facing the largest pressure with a strong decrease of their share of value since 1998, albeit for a small and short recovery in 2013-2014 because they got squeezed between the strong increase of fuel prices and the pressure on price from processors/manufacturers. The pressure is passed onto the workers, the majority being migrant, and on the level of their wages (see the section on canned tuna global value chain for more details).

**Fig. 265 Value breakdown of canned tuna produced in Indonesia**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports

As illustrated in the diagram above, the evolution of value breakdown for canned tuna sourced from Indonesia follows a similar pattern as for Thailand with an increasing share for retailers, and an increasing pressure on fisheries in recent years, with significant potential impacts on the working conditions and wages of workers on tuna vessels.

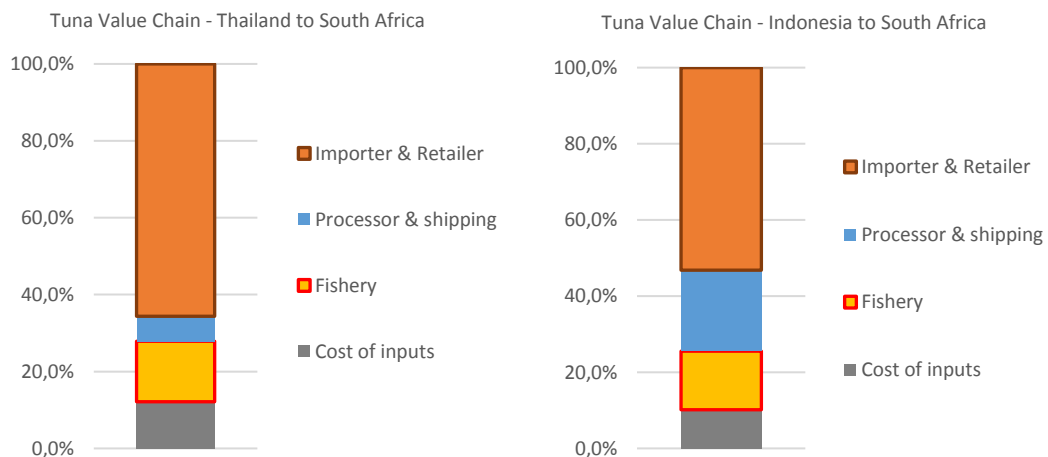
**Projections in 2030 of the value breakdown in a “Business as Usual” scenario**

Based on the previous estimates, we performed a projection of the canned tuna value breakdown in the year 2030 in a “Business as Usual” scenario:

- producer prices, wage levels and costs of inputs are based on the latest projections of the World Bank in 2030 (for grain, fuel and fertilisers’ prices)
- price trends at the supermarkets’, brands’ and fisheries’ levels have been extrapolated based on the last 15 years and using a linear regression (price trends seem to be closely related to market concentration which has been continuously growing for the past 20 years with no sign of trend reversal).

The results are as follows:

**Fig. 266 Value breakdown of canned tuna (forecast 2030)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports

According to these estimates, the share of value captured by retailers could further increase up to 53% and 65% respectively because of their increasing influence on the chain due to their position of major selling channel and the development of private labels. As a result, the value accruing to brands, processors and traders could be reduced at 21% and 6.5% respectively. At the beginning of the chain, fisheries could be left with 15% of the total value. In a 'business as usual scenario', this pressure on prices is likely to continue affecting the difficult living conditions of workers on Thai vessels as well as on the Indonesian fleet.

### Ability of workers to earn a living wage and levers for change

In order to cover the costs of sustainable production, the share of value for workers in Thailand and Indonesia should be increased at least by 0.08 USD/kg (see the section on canned tuna global value chain for more details), which only represents 1% of the end consumer price of canned tuna which is 93.10 ZAR/kg (7.30 USD/kg). This increase does not need to be passed on to consumers: according to our estimates, the retailers have increased their share of value from 2.50 USD per kg in 2013 to 2.90 USD per kg in 2015. This increase which happened over the last 2 years is more than enough to cover the payment of a living wage for workers in Thai fisheries.

Retailers and brands appear to have the means to address the unsustainability of the Thai canned tuna chain and have started to make some voluntary commitments in this direction. However, they would need to generalize their engagement and take on their responsibility to ensure that the canned tuna they sell is not produced at the cost of the living conditions of workers in the chain. In particular, this would require increasing the minimum wage for workers (on vessels, as well as in processing) to the living wage level, and allocating enough resources for controls on the ground as it is one of the main ways to ensure that both can achieve a sustainable livelihood.<sup>507</sup>

## Table grape

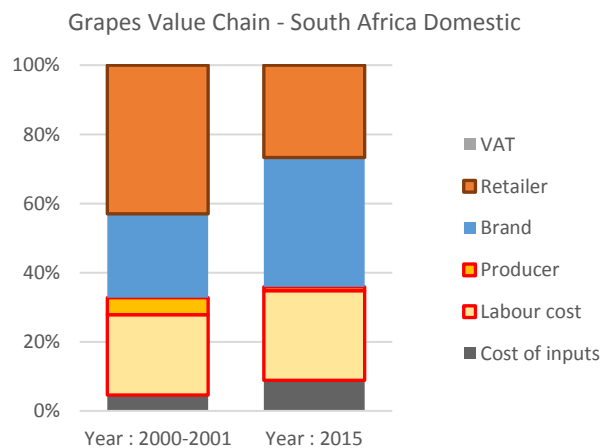
### Overview of the sector in South Africa

For an overview of the sector, the structure of the chain and its evolution, see section 3 on the grape global value chain.

### Comparison of the value breakdown in the 1990's and in 2015

Our estimations of value breakdown (expressed in nominal currency so as to avoid potential distortions linked to correction for inflation) are as follows:

**Fig. 267 Value breakdown grape produced in South Africa (average 2000-2001 and 2015)**



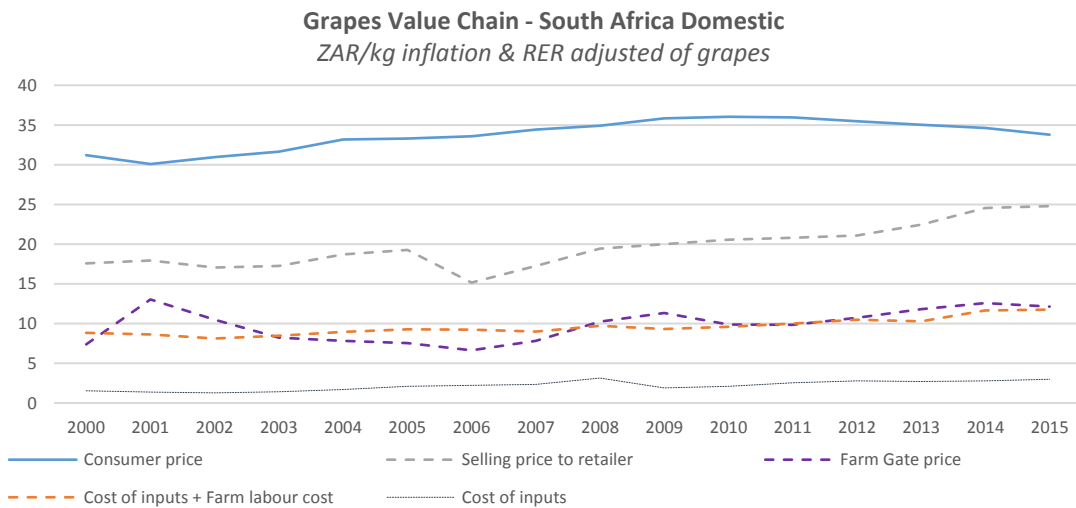
Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports

As illustrated above, the share of value retained by retailers is the largest, but it has increased strongly since 2000 from 43% down to 27%. In contrast, the share of value of wholesalers has increased from 12% up to 15%. The labour costs have slightly increased from 23% up to 26%.

To investigate further this situation, we have analysed the value evolution of the table grape producer prices and wages, export FOB prices and costs of production since the early 1990s. The results for the main destinations of South African grape are provided below.

### Analysis of the value breakdown

**Fig. 268 Value breakdown of grape produced in South Africa (2000-2015)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

On the consumer side, taking into account the evolution of costs of living in South Africa, the diagram illustrates that the consumer prices have steadily increased by approx. 10% since 2000. Retailers appear to have “cushioned” the evolution of grape prices further up in the chain (i.e. limiting increases in case of peaks, but also remaining stable in case of drops).

In the middle of the chain, the wholesalers (retail price to retailer) have maintained or slightly increased their share of the total value.

In South Africa, the plantations have been facing a sharp increase in farm inputs since the end of the 1990s which has squeezed their share of value. In order to maintain their margin, a general trend of casualization of labour has been observed among South African plantations (see the section on grape global value chain for more details).

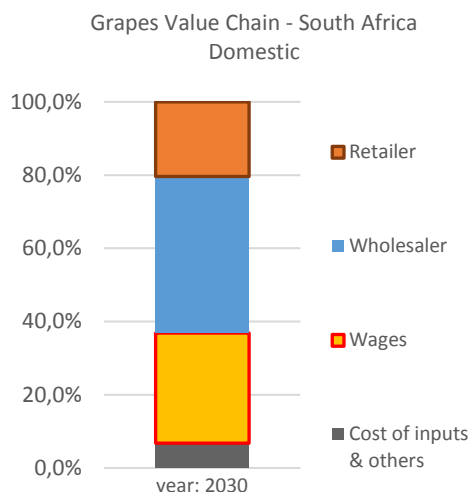
### Projections in 2030 of the value breakdown in a “Business as Usual” scenario

Based on the previous estimates, we performed a projection of the grape value breakdown in the year 2030 in a “Business as Usual” scenario:

- producer prices, wage levels and costs of inputs in South Africa are based on the latest projections of the World Bank in 2030 (for fuel and fertilisers’ prices)
- price trends at the supermarkets’, wholesalers’ and producers’ levels have been extrapolated based on the last 15 years and using a linear regression (price trends seem to be closely related to market concentration which has been continuously growing for the past 20 years with no sign of trend reversal).

The results are as follows:

**Fig. 269 Value breakdown of grape (forecast 2030)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

### Ability of workers to earn a living wage and levers for change

In order to cover the costs of production and ensure that workers can earn a living wage, the share of value for workers in South Africa should be increased from 0.69 USD/kg currently to 0.89 USD/kg (see the section on the grape global value chain for more details). This corresponds to a mark-up of 0.20 USD/kg, which represents 7.5% of the end consumer price of table grape which is 33.80 ZAR/kg (2.65 USD/kg).

This increase seems to have to be passed on to consumers: according to our estimates, given the low price of table grapes and margins in the domestic sector.

Retailers appear to have the means to address the unsustainability of the South African grape chain, and have started to do so through selling Fair trade, sustainable and organic grapes. However, they would need to generalize their commitments and take on their responsibility to ensure that the grape they sell is not produced at the cost of the living conditions of workers, as well as the environment. In the case of South Africa, they could promote the rise of the minimum wage for workers to ensure it covers the costs basic needs of their families – which is an effective tool to secure living income in the sector – by leaving a sufficient share of the value in the producing country so that the costs of sustainable production can be covered.<sup>508</sup>

## Green bean

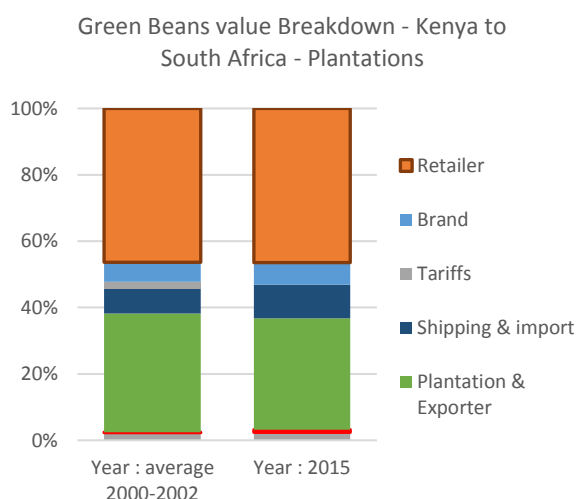
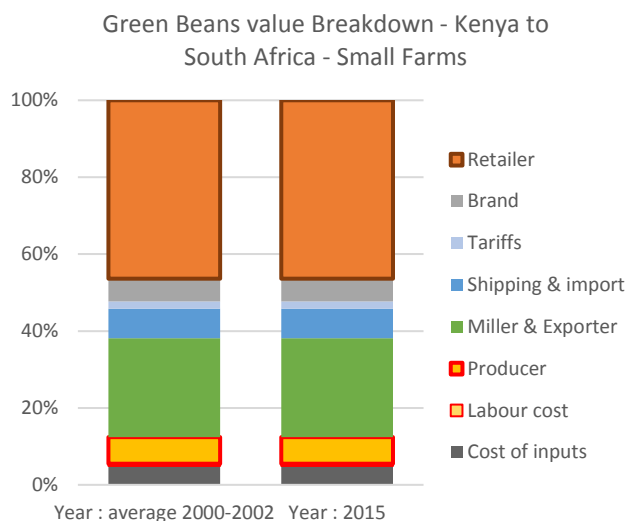
### Overview of the sector in South Africa

For an overview of the sector, the structure of the chain and its evolution, see section 3 on the green bean global value chain.

### Comparison of the value breakdown in the 1990's and in 2015

Our estimations of value breakdown (expressed in nominal currency so as to avoid potential distortions linked to correction for inflation) are as follows:

**Fig. 270 Value breakdown of green bean produced in Kenya, supplied by plantations, and by small farmers (average 2000-2002 & 2015)**



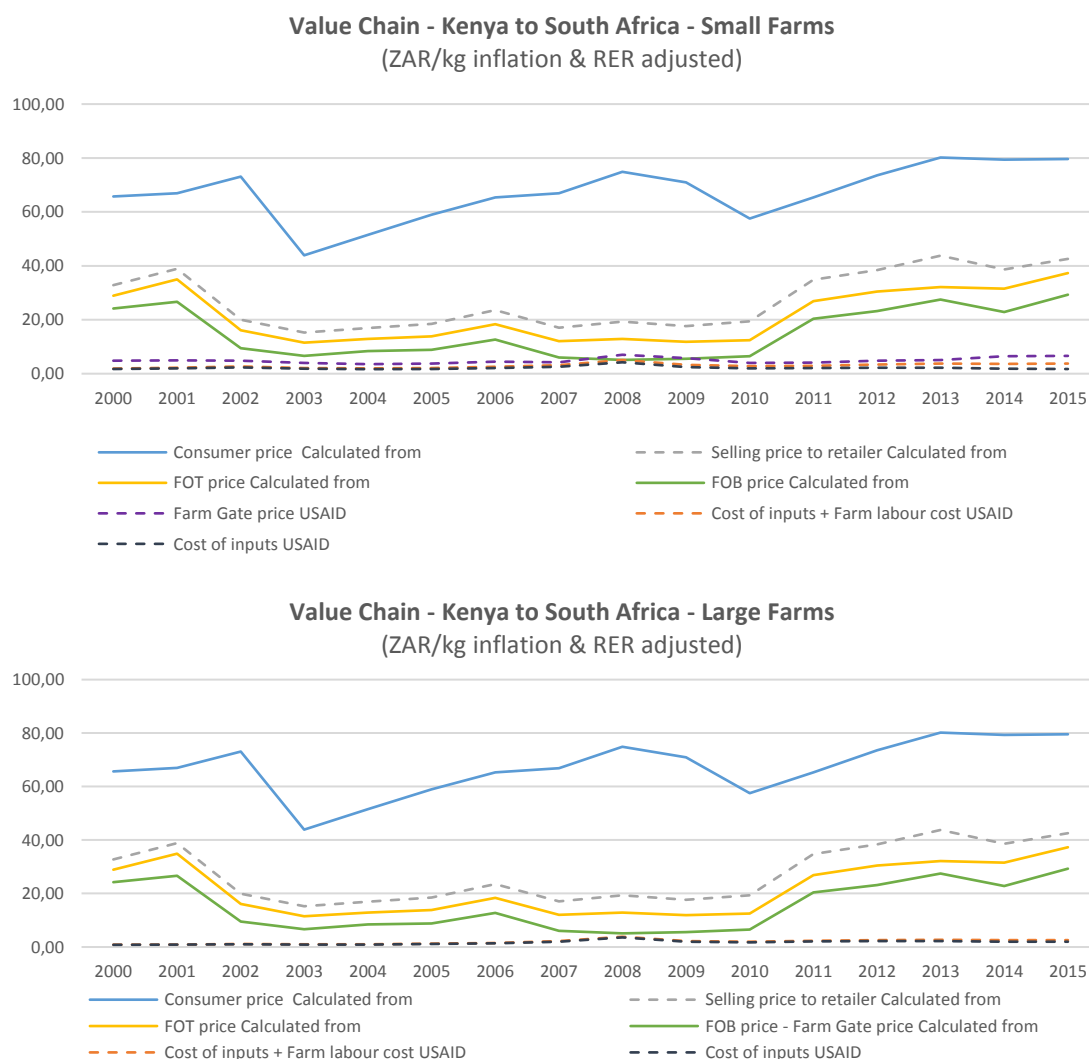
Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

As illustrated above, the share of value retained by retailers is the largest and has remained stable at 46%, showing their strong influence over the chain. The share of the brands/wholesalers has remained stable too at around 7%, whereas the share of the plantations/exporters in Kenya have slightly declined from 37% to 33.5% when they source beans from their own farms (and from 31% to 28.5% when beans are purchased to small farmers). Finally, the share of small farmers and workers' wages amount to 3.5% and 1% respectively.

To investigate further this situation, we have analysed the value evolution of the green bean producer prices and wages, export FOB prices and costs of production since the early 1990s. The results for the main destinations of Kenyan beans are provided below.

## Analysis of the value breakdown

**Fig. 271 Value breakdown of green bean produced in Kenya, supplied by plantations, and by small farmers (1991-2015)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

On the consumer side, taking into account the evolution of costs of living in South Africa, the diagram illustrates that the consumer prices have been very fluctuating between 2000 and 2015, retailers amplifying the CIF import prices and increasing their share of the value over the period.

In the middle of the chain, the brands/wholesalers (selling price to retailers) have mainly followed the trends in CIF import prices.

In Kenya, the processors (out of factory price) appear to have managed to increase their share of value since 2010 thanks to their vertically integrated systems, especially when sourcing from small farmers who got squeezed by plantations which are in a strong bargaining position and able to impose decreasing producer prices, as well as casualisation of labour for workers (see the section on green bean global value chain for more details).

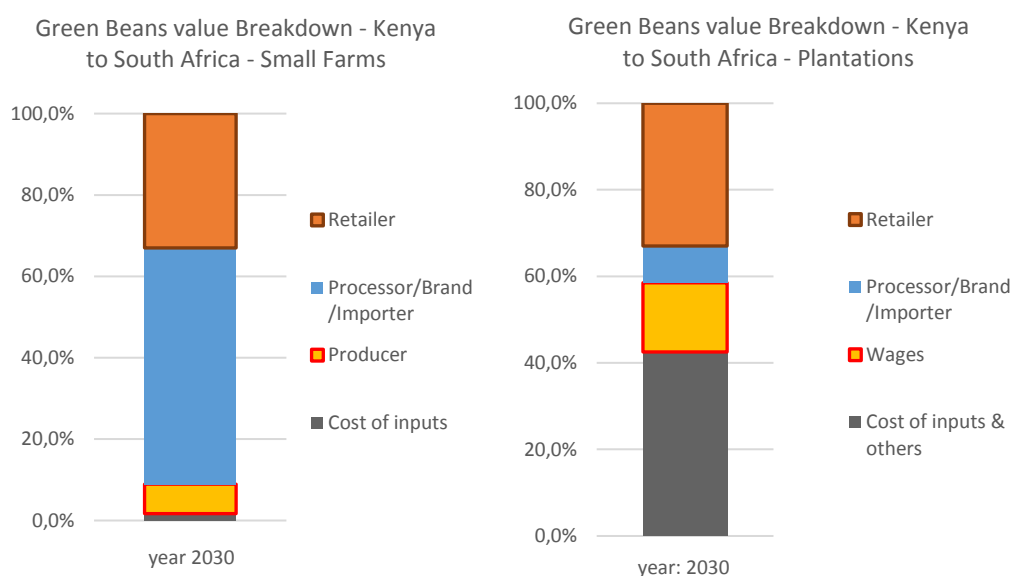
### Projections in 2030 of the value breakdown in a “Business as Usual” scenario

Based on the previous estimates, we performed a projection of the green bean value breakdown in the year 2030 in a “Business as Usual” scenario:

- producer prices, wage levels and costs of inputs in Kenya are based on the latest projections of the World Bank in 2030 (for fuel and fertilisers’ prices)
- price trends at the supermarkets’, brands’ and processors’ levels have been extrapolated based on the last 15 years and using a linear regression (price trends seem to be closely related to market concentration which has been continuously growing for the past 20 years with no sign of trend reversal).

The results are as follows:

**Fig. 272 Value breakdown of green bean produced in Kenya, supplied by plantations, and by small farmers (forecast 2030)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

According to these estimates, the share of value captured by retailers could decrease and stabilize at 33% because of the competition for value with brands/exporters/plantations who could increase up to 58% of the total value. At the beginning of the chain, small farmers and workers could be left with respectively less than 47% and 16% of the total value. In a ‘business as usual scenario’, this pressure on prices is likely to continue affecting the difficult living conditions of small growers and farm workers in Kenya.

#### Ability of small farmers and workers to earn a living income/wage and levers for change

In order to cover the costs of green beans from Kenya, the share of value allocated for small farmers or workers should be increased at least from an estimated 0.23 USD/kg to 0.46 USD/kg (see the section on green bean global value chain for more details). This corresponds to limited mark-up of 0.23 USD/kg, which only represents 3% of the end consumer price of green beans which is 79 ZAR/kg (6.24 USD/kg).

This increase does not need to be passed on to consumers: according to our estimates, the brands/wholesalers have increased their share of value from 2.60 USD per kg in 2003 to 3.60 USD per kg in 2014. This increase which happened over the last 15 years is enough to cover the living income of farmers and the payment of a living wage for workers.



Retailers and brands appear to have the means to address the unsustainability of the Kenyan green bean chain. To do so, they would need to ensure that the green bean they sell is not produced at the cost of the living conditions of small farmers and workers in the chain. In particular, this would require increasing the minimum wage for workers (in farming and processing) to the living wage level, and allocating enough resources for controls on the ground as it is one of the main ways to ensure that they can achieve a sustainable livelihood. In addition, they could support the establishment of a guaranteed price for smallholders enabling them to generate a living income, together with environmental and social conditions to ensure the sustainability of production.<sup>509</sup>

# THAILAND

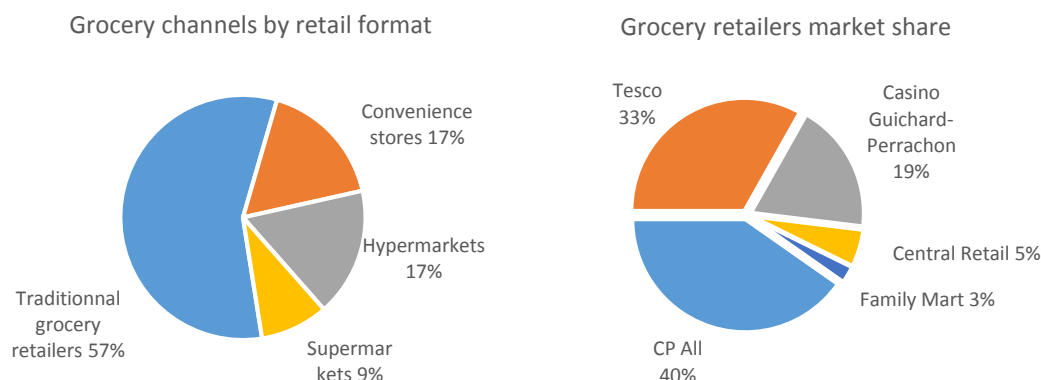
## Overview of the food retail sector in the country

Thailand's global retail consumption is estimated at about 25% of the country's GDP. Total retail sales and food retail sales are valued respectively at 84.3 billion and 52.5 billion USD in 2015. As Thai consumer lifestyles are changing, and urban population is growing, Thailand represents one of the most attractive food and drink markets in the Asia Pacific region and the Thai retail food sector has been one of the fastest-growing in the world. The retail food business can be classified into two models: traditional and modern, the latter gaining increasing market shares while traditional retailers gradually decline.<sup>510</sup>

The modern sector encompasses hypermarkets, supermarkets, cash and carry, and convenience stores. It is characterized by standardized management systems, point of sales, new technology, and are located in densely populated areas. Modern food retailing accounts for 70% of total retail sales as the flow of local shoppers has been diverted from wet markets and grocery stores to hypermarkets and supermarkets. These changes began in 2000 when Thailand's retail sector experienced an increase in new investments from both local and foreign players, making Thailand the second most dynamic retail market in Asia after China. The majority of these investments have come from leading international retail chains such as Tesco, French Casino Group through its Big C Supercenter (acquired by Thai tycoon Mr. Charoen Sirivadhanabhakdi of TCC Group in 2016), and the Dutch cash and carry Siam Makro (acquired by Thai tycoon Mr. Dhanin Chearavanont of CP Group in August 2013), as well as Villa Market, Tops Marketplace, Foodland Supermarket, 7-Eleven, Home Fresh Mart and Gourmet Market. All these retailers are also developing dedicated stores to serve the increasing number of tourists in the country (annual estimations are 23 million visitors to Bangkok alone). Hypermarkets and convenience stores are the best performing segments (90% of urban Thai shoppers use both at least once a week) while supermarkets are highly competitive, being concentrated in Bangkok where consumers with greater disposable income are situated.<sup>511</sup>

In constant decline, the traditional retailers/operators consist of mom and pop stores, street vendors and wet markets that are commonly found in the rural areas. These stores are usually smaller establishments operated by local family owners. Competition with modern retail is intense, especially as retailers have shown interest in smaller-sized stores, which can better reach communities and serve the needs of new consumers who like to shop near their homes or communities. Another emerging trend is the development of "non-store retailing" (internet, vending...) which is growing fast and has already reached 4 billion USD in 2015.<sup>512</sup>

**Fig. 273 Main retail outlets and retailers' market shares in Thailand**

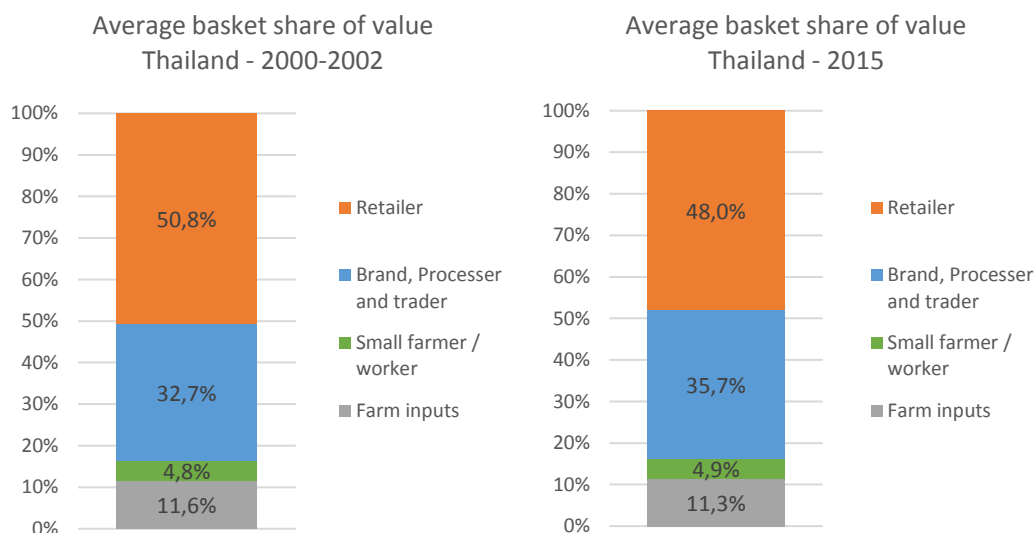


Source: BASIC, based on Euromonitor and DBS Bank data (2016)

## Overview of the food basket value breakdown

The evolution of the value breakdown of the basket of goods for Thailand is detailed below for 2000-2002 and 2015:

**Fig. 274 Value breakdown of the Thai basket of goods**



Source: BASIC

As illustrated above, the share of value retained by retailers has slightly declined since 2000 and the share of small farmers and workers appears to be globally stable over the same period. The detailed analysis of each product in the basket is provided in the following sub-sections.

## Tea

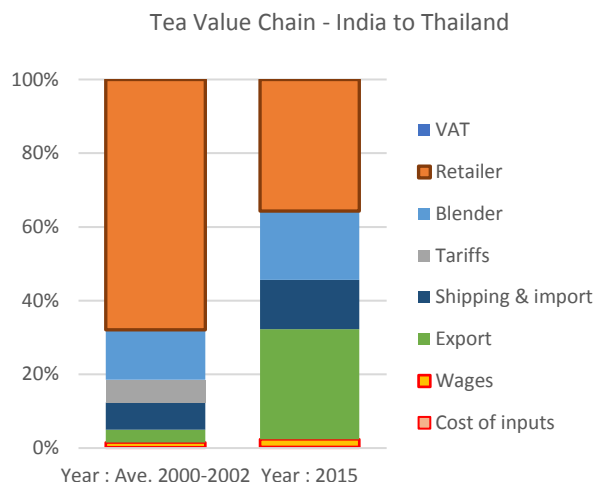
### Overview of the sector in Thailand

For an overview of the sector, the structure of the chain and its evolution, see section 3 on the tea global value chain.

### Comparison of the value breakdown in the 1990's and in 2015

Our estimations of value breakdown (expressed in nominal currency so as to avoid potential distortions linked to correction for inflation) are as follows:

**Fig. 275 Value breakdown of tea produced in India (average 2000-2002 and 2015)**



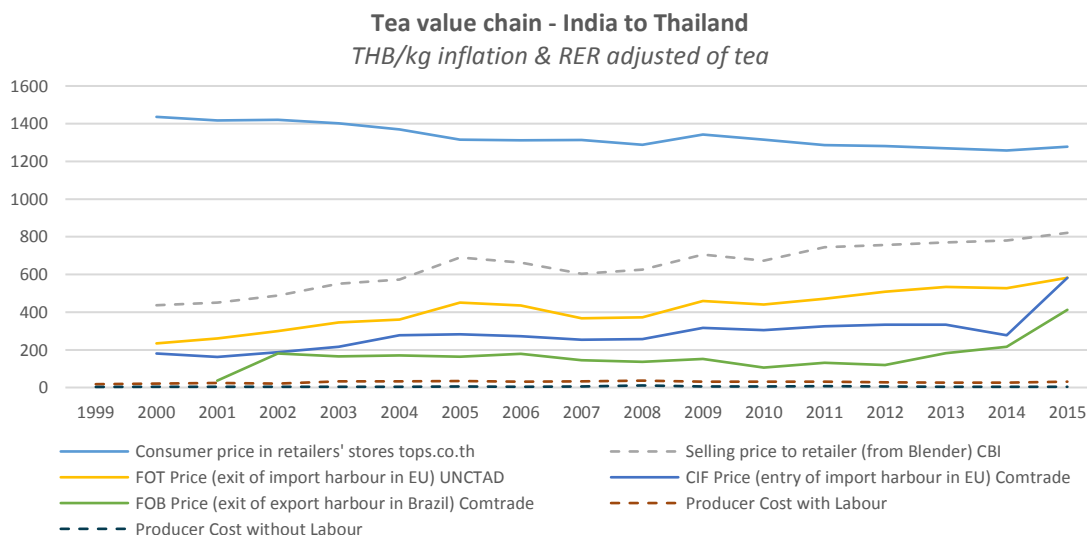
Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

As illustrated above, the share of value retained by retailers is the largest and has fallen sharply since 2000 from 68% down to 38%. In comparison, the share of value of brands/blenders is the 2<sup>nd</sup> largest and has increased significantly from 14% up to 19%, showing their growing influence over the chain. The value remaining in India has also increased very substantially from 5% to 32%, but workers' wages only represent 2% of the total (against 1.3% in 2000)

To investigate further this situation, we have analysed the value evolution of the tea producer prices and wages, export FOB prices and costs of production since the early 1990s. The results for the main destinations of Indian tea are provided below.

### Analysis of the value breakdown

Fig. 276 Value breakdown of tea produced in India (1991-2015)



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

On the consumer side, taking into account the evolution of costs of living in Thailand, the diagram illustrates that the consumer prices have steadily decreased by 11% since 2000. Retailers appear to have “cushioned” the evolution of the selling price of tea by brands and blenders.

In the middle of the chain, the tea blenders appear to have followed the upward trend of CIF import prices which have been multiplied by 3, from 180 THB/kg up to 580 THB/kg.

In India, the export prices have decreased in THB until 2012, generating pressure on plantations with low productivity and consequently on the workers' wages. They have increased significantly over the last 3 years, but this is hardly the case when expressed in local currency. The relative disconnection between export FOB prices and CIF import prices seem to reflect the power concentration in the hands of brokers and traders who capture most of the value in India (see the section on tea global value chain for more details).

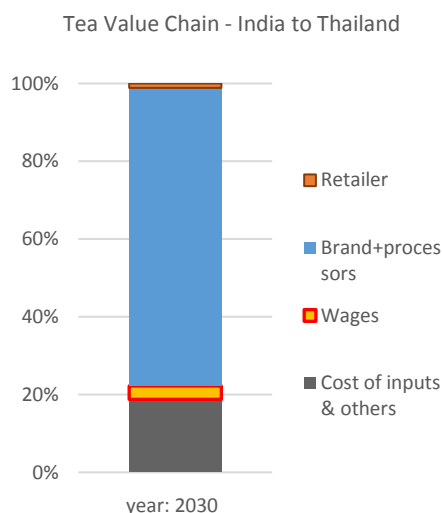
### Projections in 2030 of the value breakdown in a “Business as Usual” scenario

Based on the previous estimates, we performed a projection of the tea value breakdown in the year 2030 in a “Business as Usual” scenario:

- producer prices, wage levels and costs of inputs in India are based on the latest projections of the World Bank in 2030 (for tea FOB prices, fuel and fertilisers' prices)
- price trends at the supermarkets' and blenders' levels have been extrapolated based on the last 15 years and using a linear regression (price trends seem to be closely related to market concentration which has been continuously growing for the past 20 years with no sign of trend reversal).

The results are as follows:

**Fig. 277 Value breakdown of tea (forecast 2030)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

### Ability of workers to earn a living wage and levers for change

In order to cover the costs of production and ensure that workers can earn a living wage, the share of value for workers in India should be increased from 0.78 USD/kg currently to 2.29 USD/kg (see the section on tea global value chain for more details). This corresponds to a mark-up of 1.51 USD/kg, which only represents 4% of the end consumer price of tea which is 1277 THB/kg (37,29 USD/kg).

This increase does not need to be passed on to consumers: according to our estimates, the blenders have increased their share of value from 5.00 USD per kg in 2004 to 7.00 USD per kg

in 2015. This increase which happened over the last 10 years is more than enough to cover the payment of a living wage for tea workers in India.

Retailers appear to have the means to address the unsustainability of the Indian tea chain. To do so, they would need to generalize their commitments and take on their responsibility to ensure that the tea they sell is not produced at the cost of the living conditions of workers, as well as the environment. In the case of India, they could promote the rise of the minimum wage for workers to ensure it covers the costs basic needs of their families – which is an effective tool to secure living income in the sector – by leaving a sufficient share of the value in the producing country so that the costs of sustainable production can be covered.<sup>513</sup>

## Cocoa

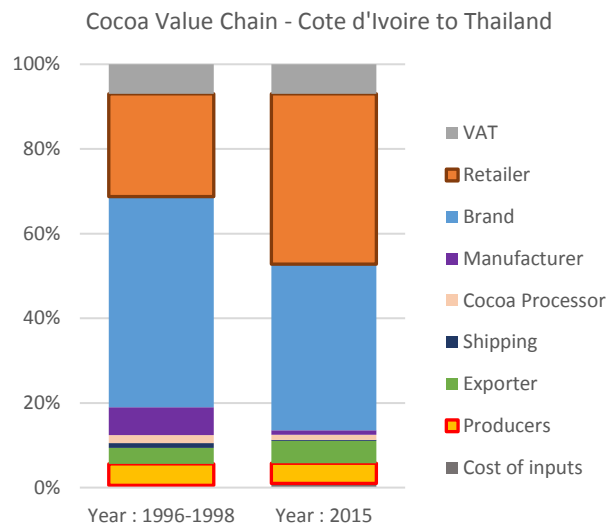
### Overview of the sector in Thailand

For an overview of the sector, the structure of the chain and its evolution, see section 3 on the cocoa global value chain.

### Comparison of the value breakdown in the 1990's and in 2015

Our estimations of value breakdown (expressed in nominal currency so as to avoid potential distortions linked to correction for inflation) are as follows:

**Fig. 278 Value breakdown of a 70% dark chocolate bar made from cocoa produced in Cote d'Ivoire (average 1996-1998 & 2015)**



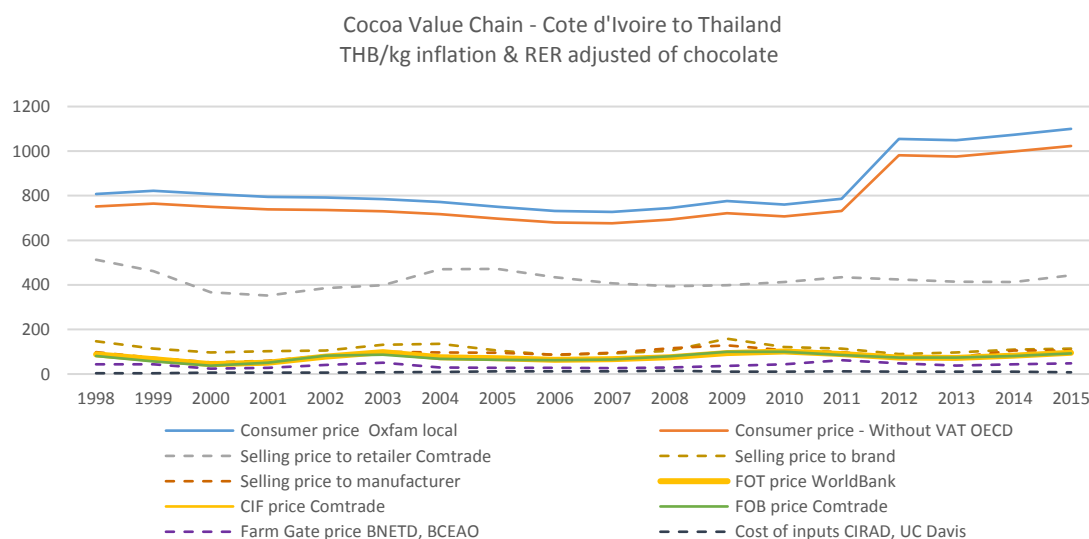
Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

As illustrated above, the share of value retained by retailers is the largest and has increased strongly from 24% up to 40%, showing their growing influence over the chain. In contrast, the share of the chocolate brands, the 2<sup>nd</sup> largest, has sharply decreased from 50% down to 39%. The value remaining in Cote d'Ivoire has globally stagnated at around 10%.

To investigate further this situation, we have analysed the value evolution of the cocoa producer prices and wages, export FOB prices and costs of production since the early 1990s. The results for the main destinations of Ivorian cocoa are provided below.

## Analysis of the value breakdown

**Fig. 279 Value breakdown of a 70% dark chocolate bar made from cocoa produced in Cote d'Ivoire (1991-2015)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

On the consumer side, taking into account the evolution of costs of living in Thailand, the diagram illustrates that the consumer prices have steadily declined by 10% between 1998 and 2007, then recovered steadily until 2015. Retailers appear to have substantially increased their share of the total value, especially since 2009.

In the middle of the chain, the chocolate brands (selling price to retailer) appear to have followed and amplified the trend of CIF import prices. Upstream, the selling price to brands and manufacturers demonstrates that margins remain slim for chocolate makers and cocoa grinders, obliging them to boost volumes of cocoa in order to keep their profitability (see section 3 on the cocoa global value chain for more details).

In Cote d'Ivoire, the producer prices have dropped significantly throughout the 1990s, and during the period 2003-2009, strongly affecting the small cocoa growers which couldn't make ends meet. Prices recovered slowly until 2016 thanks to the re-establishment of a minimum support price for cocoa and its significant increase year after year. However, this price was cut by more than 30% early 2017 because of the sharp fall of cocoa price on world's markets, plunging farmers again far below the poverty line (see the section on cocoa global value chain for more details).

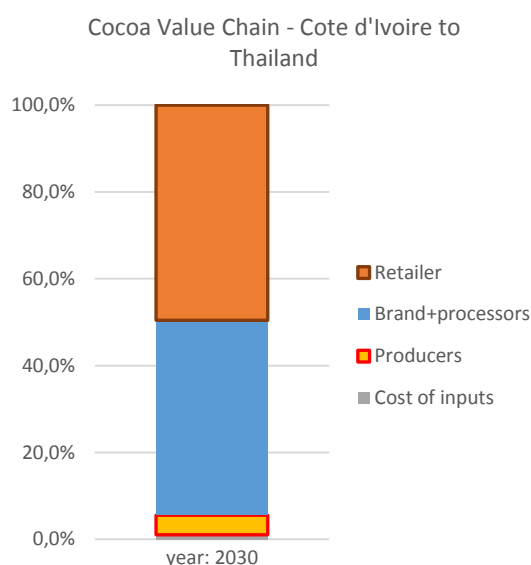
### Projections in 2030 of the value breakdown in a "Business as Usual" scenario

Based on the previous estimates, we performed a projection of the cocoa value breakdown in the year 2030 in a "Business as Usual" scenario:

- producer prices, wage levels and costs of inputs in Cote d'Ivoire are based on the latest projections of the World Bank in 2030 (for cocoa FOB prices, fuel and fertilisers' prices)
- price trends at the supermarkets' and brands' levels have been extrapolated based on the last 15 years and using a linear regression (price trends seem to be closely related to market concentration which has been continuously growing for the past 20 years with no sign of trend reversal).

The results are as follows:

**Fig. 280 Value breakdown of cocoa (forecast 2030)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

According to these estimates, the share of value captured by retailers could be further increased up to 49.5% because of their growing influence on the chain due to their position of major selling channel and the development of private labels. As a result, the value accruing to brands, processors and traders could be reduced at 45%. At the beginning of the chain, small cocoa growers could be left with less than 5% of the total value. In a 'business as usual scenario', this pressure on prices is likely to continue affecting the difficult living conditions of cocoa smallholders and encourage deforestation, one of the main ways for producers to maintain productivity and profitability.

#### **Ability of small farmers to earn a living income and levers for change**

In order to cover the costs of production and ensure that cocoa farmers can earn a living income, the share of value for farmers in Cote d'Ivoire should be increased from 1.18 USD/kg to 1.60 USD/kg (see the section on cocoa global value chain for more details). This corresponds to very limited mark-up of 0.42 USD/kg, which only represents 2% of the end consumer price of chocolate which is 840 THB/kg (24.53 USD/kg).

This increase does not need to be passed on to consumers: according to our estimates, the retailers have increased their share of value from 7.40 USD per kg in 2007 to almost 9.80 USD per kg in 2015. This increase which happened over the last 10 years is more than enough to cover the payment of a living wage for cocoa farmers in Cote d'Ivoire.

Retailers appear to have the means to address the unsustainability of the Ivorian cocoa chain, and have started to do so through selling Fair trade, sustainable and organic cocoa. However, they would need to generalize their commitments and take on their responsibility to ensure that the chocolate they sell is not produced at the cost of the living conditions of cocoa farmers, as well as the environment. In particular, this would require a stronger commitment of chocolate brands to offer less confectionery products where cocoa is just a commoditized ingredient, and more chocolate products that value the origin and quality of cocoa, hence the work of farmers paid at a fair price, enabling them to cover their costs of production and the living needs of their families.<sup>514</sup>



# Rice

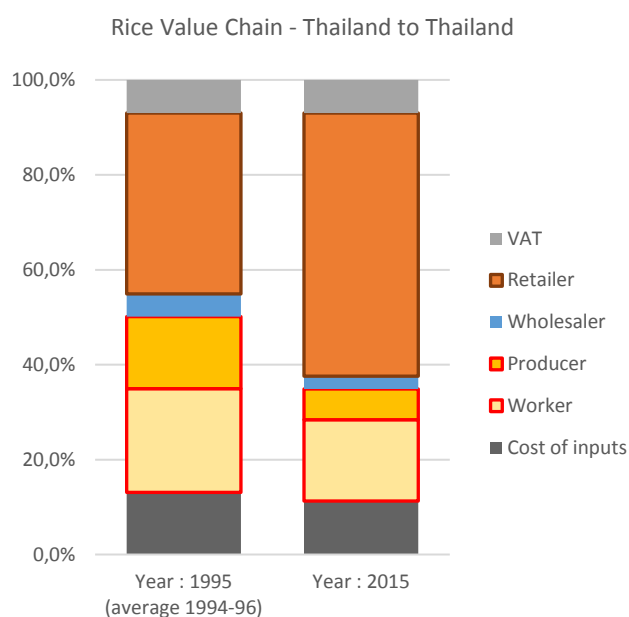
## Overview of the sector in Thailand

For an overview of the sector, the structure of the chain and its evolution, see section 3 on the rice global value chain.

## Comparison of the value breakdown in the 1990's and in 2015

Our estimations of value breakdown (expressed in nominal currency so as to avoid potential distortions linked to correction for inflation) are as follows:

**Fig. 281 Value breakdown of rice produced in Thailand (average 2000-2002 & 2015)**



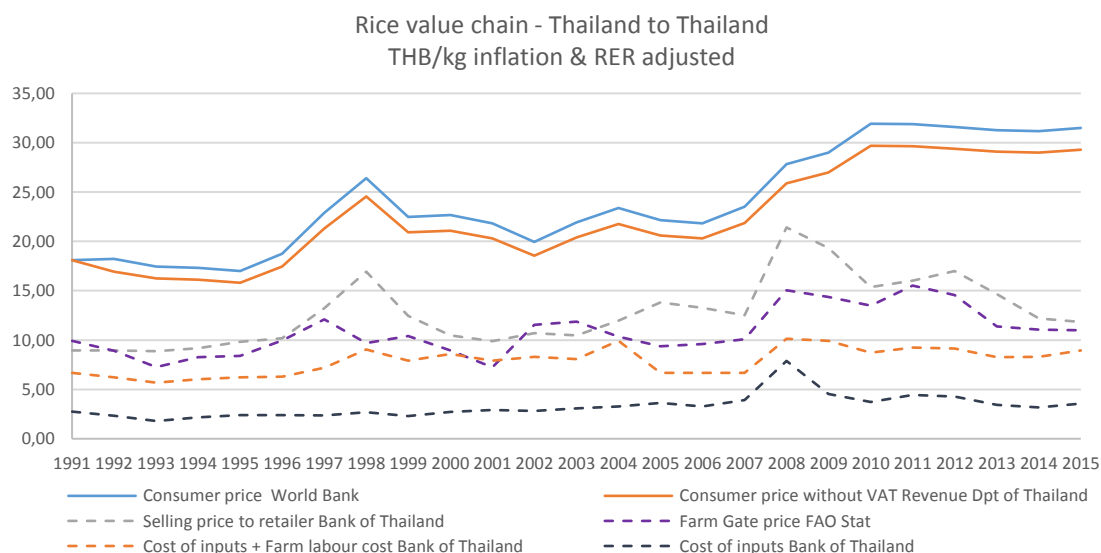
Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

As illustrated above, the share of value retained by retailers is the largest and has increased very substantially from 38% up to 55.5%, showing their growing influence over the chain. In contrast, the share of rice producers has dropped dramatically from 15% down to 3% over the same period.

To investigate further this situation, we have analysed the value evolution of the rice producer prices and wages, export FOB prices and costs of production since the early 1990s. The results for the main destinations of Thai rice are provided below.

## Analysis of the value breakdown

**Fig. 282 Value breakdown of rice produced in Thailand (1991-2015)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

Analysing the domestic rice market, and taking into account the evolution of costs of living in Thailand, the diagram illustrates that the consumer prices have increased by more than 70% until 2010, with an important peak in 1998. Retail prices seem to have stabilized since 2010. Whereas supermarkets seem to have passed on the fluctuations of the rice farm-gate price up to the consumer until 2008, they have apparently increased very substantially their share of the total value over the last 7 years.

In the middle of the chain, the packers and brands (selling price to retailer) seem to have followed and amplified the trend of farm-gate prices over the same period.

At the level of small rice growers, the producer price seems to have been steadily rising up until 2012, then fallen to the same level as in 1997 (once corrected for inflation). The situation is all the more difficult for producers than the costs of farm inputs have doubled since the early 1990s, and labour costs have increased too. The suspension of the support price system managed by the government in 2014 has further worsened their situation (see section 3 on the rice global value chain for more details).

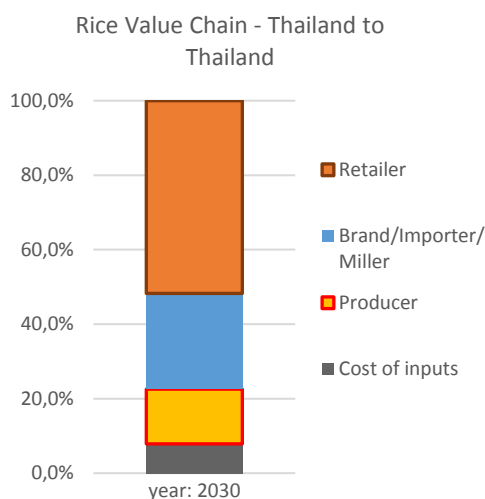
### Projections in 2030 of the value breakdown in a “Business as Usual” scenario

Based on the previous estimates, we performed a projection of the rice value breakdown in the year 2030 in a “Business as Usual” scenario:

- producer prices, wage levels and costs of inputs in Thailand are based on the latest projections of the World Bank in 2030 (for rice FOB prices, fuel and fertilisers’ prices)
- price trends at the supermarkets’ and brands’ levels have been extrapolated based on the last 15 years and using a linear regression (price trends seem to be closely related to market concentration which has been continuously growing for the past 20 years with no sign of trend reversal).

The results are as follows:

**Fig. 283 Value breakdown of rice (forecast 2030)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

According to these estimates, the share of value captured by retailers could stabilize at around 51.5% because of the growing influence of brands and millers which could increase their share up to 25.5%. At the beginning of the chain, small rice growers could be left with 14% of the total value. In a 'business as usual scenario', this pressure on prices is likely to continue affecting the difficult living conditions of rice smallholders and accelerate the disappearance of the smallest ones.

### Ability of small farmers to earn a living income and levers for change

In order to cover the costs of production and ensure that workers can earn a living wage, the share of value for farmers in Thailand should be increased from 0.22 USD/kg to 0.31 USD/kg (see the section on rice global value chain for more details). This corresponds to a mark-up of 0.09 USD/kg, which represents 10% of the end consumer price of rice which is 31.5 THB/kg (0.93 USD/kg).

This increase does not need to be passed on to consumers: according to our estimates, the retailers have substantially increased their share of value from 0.22 USD per kg in 2010 to 0.51 USD per kg in 2015. This increase which happened over the last 5-6 years is more than enough to cover the payment of a living wage for rice farmers.

Retailers appear to have the means to address the unsustainability of the Thai rice chain. To do so, they would need to generalize their commitments and take on their responsibility to ensure that the rice they sell is not produced at the cost of the living conditions of rice farmers and workers. In Thailand, they could promote the re-establishment of a minimum support price for farmers and the increase of the minimum wage for workers – which are effective tools to secure living income in the sector – by leaving a sufficient share of the value for farmers so that the costs of sustainable production can be covered.

## Canned tuna

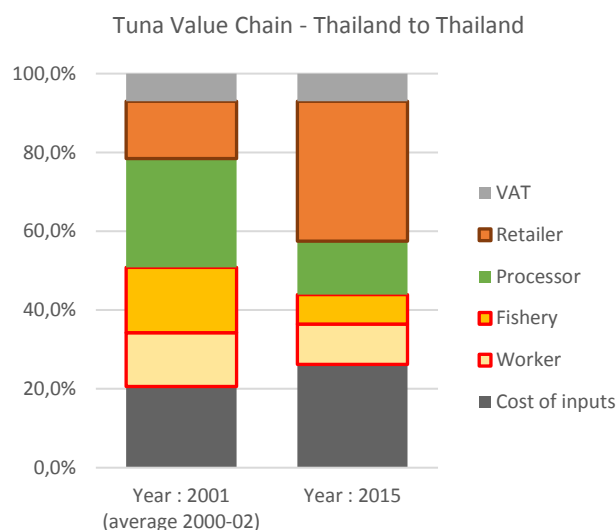
### Overview of the sector in Thailand

For an overview of the sector, the structure of the chain and its evolution, see section 3 on the canned tuna global value chain.

## Comparison of the value breakdown in the 1990's and in 2015

Our estimations of value breakdown (expressed in nominal currency so as to avoid potential distortions linked to correction for inflation) are as follows:

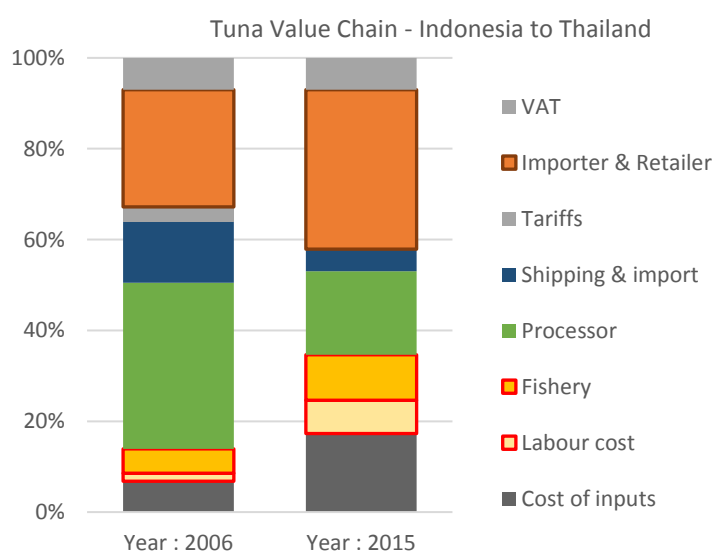
**Fig. 284 Value breakdown of canned tuna produced in Thailand (average 1996-1998 & 2015)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

As illustrated above, the share of value retained by retailers is the largest and has increased strongly from 14.5% up to 35.5%, showing their large influence over the chain. In contrast, the share of the manufacturers of canned tuna has significantly decreased from 27.5% down to 13.5%. Most importantly, the share of fisheries has shrunk from 19% to 3%, as they have had to face the sheer rise of fuel and operation costs without being able to pass on this increase onto processors, because of their weak bargaining position. To investigate further this situation, we have analysed the value evolution of the canned tuna production prices and wages, export FOB prices and costs of production since the early 1990s. The results for the main destinations of Thai canned tuna are provided below.

**Fig. 285 Value breakdown of canned tuna produced Indonesia**



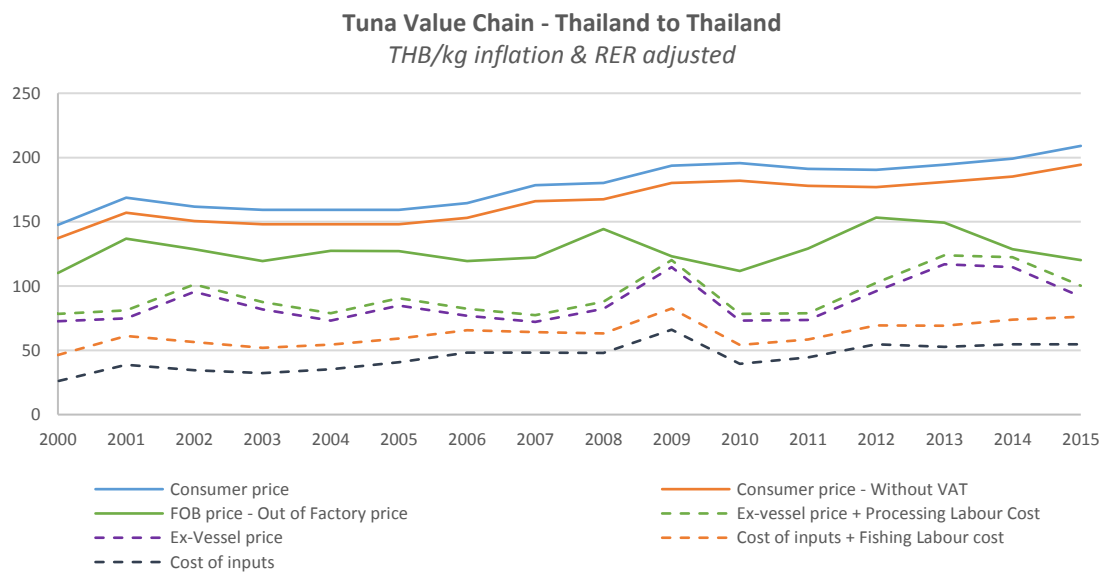
Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

Our estimates for canned tuna from Indonesia is quite similar from the previous value breakdown: retailers appear to have gained influence over the chain, their share increasing from 26% to 35% of the total value. Processors have markedly decreased their share from 36% to 18%. Eventually, fisheries appear to have increased their share at around 10%, but face the pressure of increasing internal costs.

To investigate further this situation, we have analysed the value evolution of the canned tuna production prices and wages, export FOB prices and costs of production since the early 1990s. The results for the main destinations of Thai and Indonesian canned tuna are provided below.

### Analysis of the value breakdown

**Fig. 286 Value breakdown of canned tuna produced in Thailand (1996-2015)**

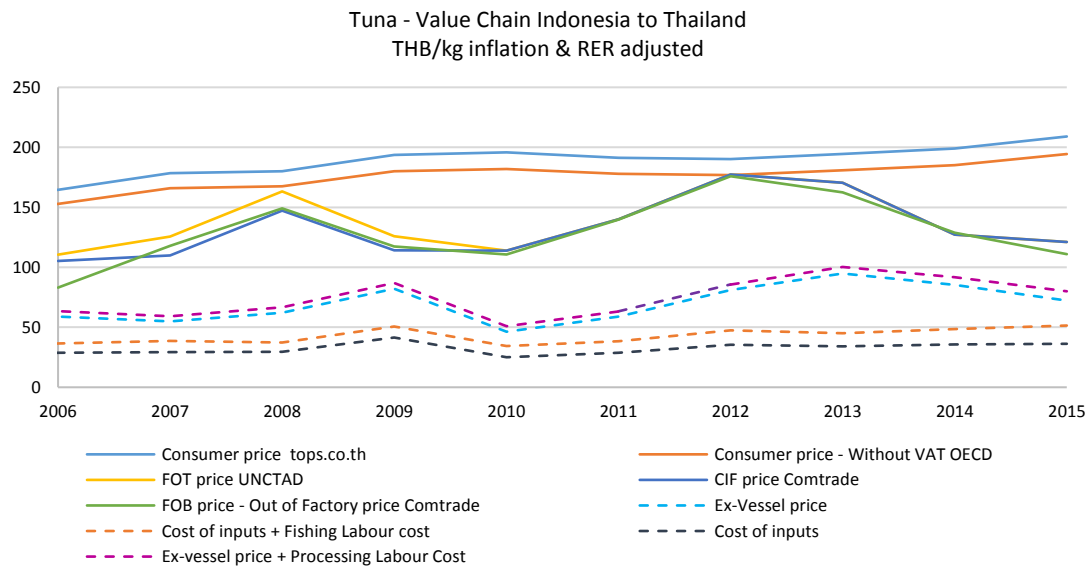


Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

Analysing the domestic Thai market for canned tuna, and taking into account the evolution of costs of living in Thailand, the diagram illustrates that the consumer prices have steadily increased by more than 35% until 2015. Retailers appear to significantly increase their share of the total value over the period, especially since 2012.

The manufacturers (out of factory price) did not seem to be able to maintain their share of value despite their vertically integrated systems. Their slim margins most probably oblige them to boost production volumes in order to keep their profitability. Upstream, the fisheries are facing the largest pressure with a strong decrease of their share of value since 1998, albeit for a small and short recovery in 2013-2014 because they got squeezed between the strong increase of fuel prices and the pressure on price from processors/manufacturers. The pressure is passed onto the workers, the majority being migrant, and on the level of their wages (see the section on canned tuna global value chain for more details).

**Fig. 287 Value breakdown of canned tuna produced in Indonesia**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports

As illustrated in the diagram above, the evolution of value breakdown for canned tuna sourced from Indonesia follows a similar pattern as for Thailand with an increasing share for retailers, and an increasing pressure on fisheries in recent years, with significant potential impacts on the working conditions and wages of workers on tuna vessels.

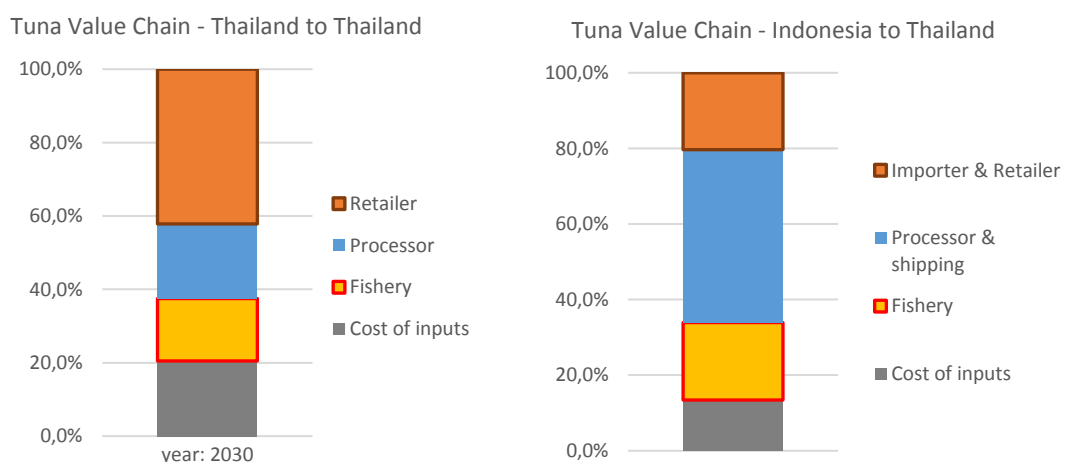
**Projections in 2030 of the value breakdown in a “Business as Usual” scenario**

Based on the previous estimates, we performed a projection of the canned tuna value breakdown in the year 2030 in a “Business as Usual” scenario:

- producer prices, wage levels and costs of inputs are based on the latest projections of the World Bank in 2030 (for grain, fuel and fertilisers’ prices)
- price trends at the supermarkets’, brands’ and fisheries’ levels have been extrapolated based on the last 15 years and using a linear regression (price trends seem to be closely related to market concentration which has been continuously growing for the past 20 years with no sign of trend reversal).

The results are as follows:

**Fig. 288 Value breakdown of canned tuna (forecast 2030)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports

According to these estimates, the share of value captured by retailers could stabilize at 42% and decrease at 20% respectively, while the value accruing to brands, processors and traders could go up to 20% and 45% respectively. At the beginning of the chain, fisheries could be left with 17-20% of the total value. In a 'business as usual scenario', this pressure on prices is likely to continue affecting the difficult living conditions of workers on Thai vessels as well as on the Indonesian fleet.

### **Ability of workers to earn a living wage and levers for change**

In order to cover the costs of sustainable production, the share of value for workers in Thailand and Indonesia should be increased at least by 0.08 USD/kg (see the section on canned tuna global value chain for more details), which only represents 1.5% of the end consumer price of canned tuna which is 209 THB/kg (6.10 USD/kg). This increase does not need to be passed on to consumers: according to our estimates, the retailers have increased their share of value from 1.00 USD per kg in 2013 to 2.15 USD per kg in 2015. This increase which happened over the last 2 years is more than enough to cover the payment of a living wage for workers in Thai fisheries.

Retailers and brands appear to have the means to address the unsustainability of the Thai canned tuna chain, and have started to make some voluntary commitments in this direction. However, they would need to generalize their engagement and take on their responsibility to ensure that the canned tuna they sell is not produced at the cost of the living conditions of workers in the chain. In particular, this would require increasing the minimum wage for workers (on vessels, as well as in processing) to the living wage level, and allocating enough resources for controls on the ground as it is one of the main ways to ensure that both can achieve a sustainable livelihood.<sup>515</sup>

## **Orange juice**

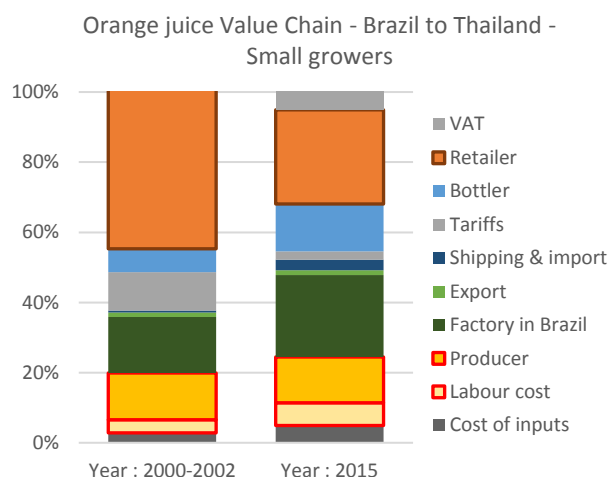
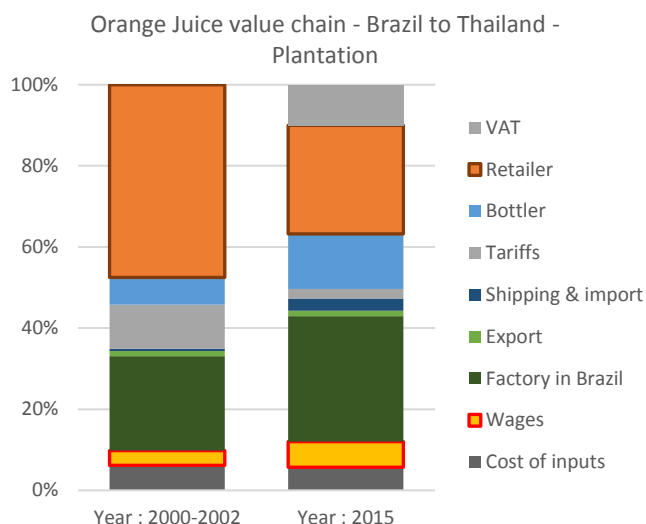
### **Overview of the sector in Thailand**

For an overview of the sector, the structure of the chain and its evolution, see section 3 on the orange juice global value chain.

### **Comparison of the value breakdown in the 1990's and in 2015**

Our estimations of value breakdown (expressed in nominal currency so as to avoid potential distortions linked to correction for inflation) are as follows:

**Fig. 289 Value breakdown of orange juice made from FCOJ produced in Brazil, supplied by plantations, and by small orange farmers (average 1996-1998 & 2015)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

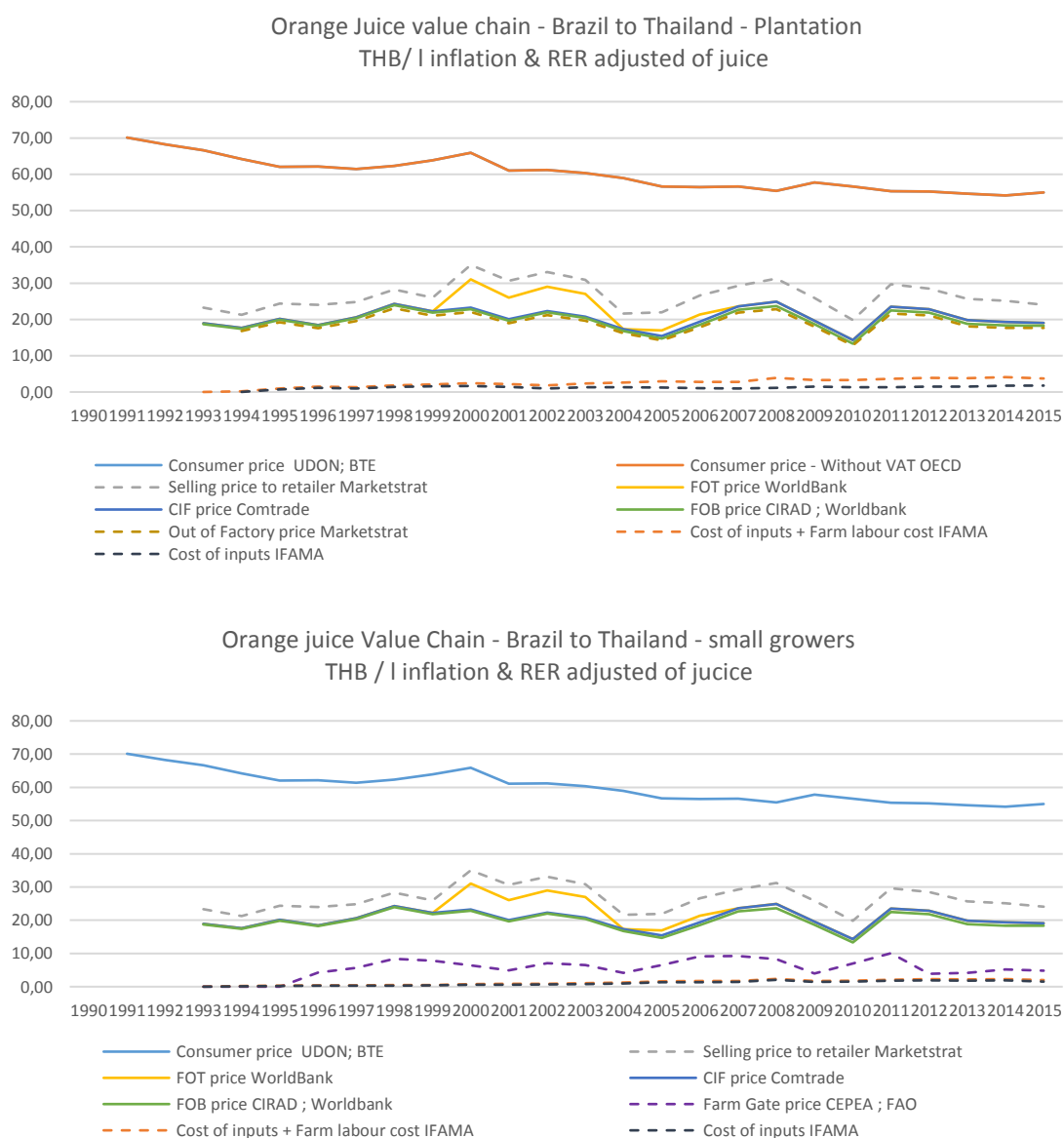
As illustrated above, the share of value retained by retailers is the largest but has substantially decreased from 47.5% down to 27%, showing their failing influence over the chain. In contrast, the share of the bottlers has increased from 6.5% up to 13.5% and the share of factories in Brazil have increased too from 23% up to 31% when they source orange from their own plantations (and from 16% to 23.5% when oranges are purchased to small farmers). Most importantly, the share of small farmers has stabilized at 13%, but they have to face the rise of input and labour costs without being able to pass on this increase onto processors, because of their weak bargaining position.

To investigate further this situation, we have analysed the value evolution of the orange producer prices and wages, export FOB prices and costs of production since the early 1990s. The results for the main destinations of Brazilian FCOJ are provided below.



## Analysis of the value breakdown

**Fig. 290 Value breakdown of orange juice made from FCOJ produced in Brazil, supplied by plantations, and by small orange farmers (1991-2015)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

On the consumer side, taking into account the evolution of costs of living in Thailand, the diagram illustrates that the consumer prices have steadily declined by approx. 21% between 1991 and 2015, as retailers appear to have “cushioned” the evolution of FCOJ prices further up in the chain (i.e. limiting increases in case of peaks, but also remaining stable in case of drops).

In the middle of the chain, the brands/bottlers (selling price to retailers) have followed the trends in CIF import prices and managed to gradually increase their share of value by a small amount.

In Brazil, the processors (out of factory price) appear to have faced increasing costs (hence eroding margins) over the whole period but managed to increase their share of value thanks to their vertically integrated systems, and when sourcing from small orange producers who got squeezed between the increase of input prices and the pressure from processors (see the section on orange juice global value chain for more details).

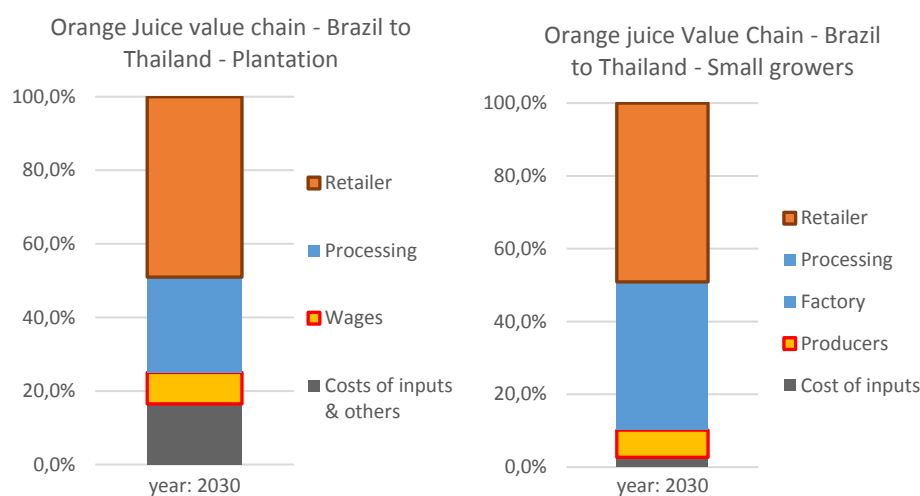
## Projections in 2030 of the value breakdown in a “Business as Usual” scenario

Based on the previous estimates, we performed a projection of the orange juice value breakdown in the year 2030 in a “Business as Usual” scenario:

- producer prices, wage levels and costs of inputs in Brazil are based on the latest projections of the World Bank in 2030 (for fuel and fertilisers’ prices)
- price trends at the supermarkets’, brands’ and processors’ levels have been extrapolated based on the last 15 years and using a linear regression (price trends seem to be closely related to market concentration which has been continuously growing for the past 20 years with no sign of trend reversal).

The results are as follows:

**Fig. 291 Value breakdown of orange juice made from FCOJ produced in Brazil, supplied by plantations, and by small orange farmers (forecast 2030)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

According to these estimates, the share of value captured by retailers could further increase up to 49% because of their increasing influence on the chain due to their position of major selling channel and the development of private labels. In contrast, the share of value of brands/bottlers and importers could decrease down to 26% of the total value. At the beginning of the chain, small farmers and workers could be left with respectively less than 8% and 9% of the total value. In a ‘business as usual scenario’, this pressure on prices is likely to continue affecting the difficult living conditions of small orange growers and especially farm workers in Brazil.

### Ability of small farmers and workers to earn a living income/wage and levers for change

In order to cover the costs of orange juice from Brazil, the share of value for small farmers or workers should be increased at least from an estimated 0.08 USD/kg up to 0.14 USD/kg (see the section on orange juice global value chain for more details). This corresponds to very limited mark-up of 0.06 USD/kg, which only represents 6% of the end consumer price of orange juice which is 55 THB/L (1.61 USD/L).

This increase does not need to be passed on to consumers: according to our estimates, the retailers have substantially increased their share of value from 0.70 USD per kg in 2008 to 0.90 USD per kg in 2015. This increase which happened over the last decade is enough to cover the living income of farmers and the payment of a living wage for workers.

Retailers and brands appear to have the means to address the unsustainability of the Brazilian orange juice chain. To do so, they would need to ensure that the orange juice they sell is not produced at the cost of the living conditions of small farmers and workers in the chain. In particular, this would require increasing the minimum wage for workers (in farming and processing) to the living wage level, and allocating enough resources for controls on the ground as it is one of the main ways to ensure that they can achieve a sustainable livelihood. In addition, they could support the establishment of a guaranteed price for the small orange growers enabling them to generate a living income, together with environmental and social conditions to ensure the sustainability of production.<sup>516</sup>

# INDONESIA

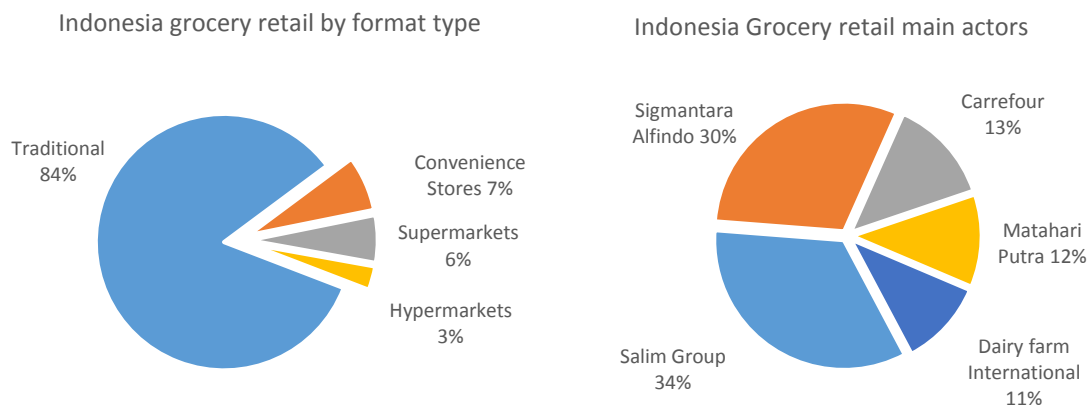
## Overview of the food retail sector in the country

Accounting for 84% of total food grocery sales, traditional channels still dominate the Indonesian market, particularly in rural areas with inadequate infrastructure to support growth of international modern retailers. However, modern channels are gradually gaining share through expansion of outlets and offerings. Convenience stores enjoy the fastest annual growth at 19%, followed by supermarkets at 16%.<sup>517</sup>

Convenience stores such as Indomaret are fast replacing traditional pasars and warungs, by targeting the low-mid income level group through competitive prices. The popularity of convenience stores across the country, even in rural areas, is largely attributed to the low capital required and established franchise schemes available. Supermarkets and hypermarkets are more popular among the mid-high income group. Hypermarkets offer reasonable prices for a broad offering of groceries and non-groceries, whereas supermarkets provide premium products at higher prices. While sales for supermarket and hypermarket channels are on the rise, slower growth is expected as high capital and sales areas required for operations pose barriers to expansion.<sup>518</sup>

Given the weak penetration of modern grocery retail in Indonesia, several modern retail operators have developed e-commerce to widen their reach and target urban consumers who wish to avoid queues and traffic jams. Key examples are Carrefour with its online retail platform and drivethrough-concept service (named Click and Drive), Alfamart with its service Alfaonline or pure internet grocery retail such as Sukamart.<sup>519</sup>

**Fig. 292 Main retail outlets and retailers' market shares in Thailand**



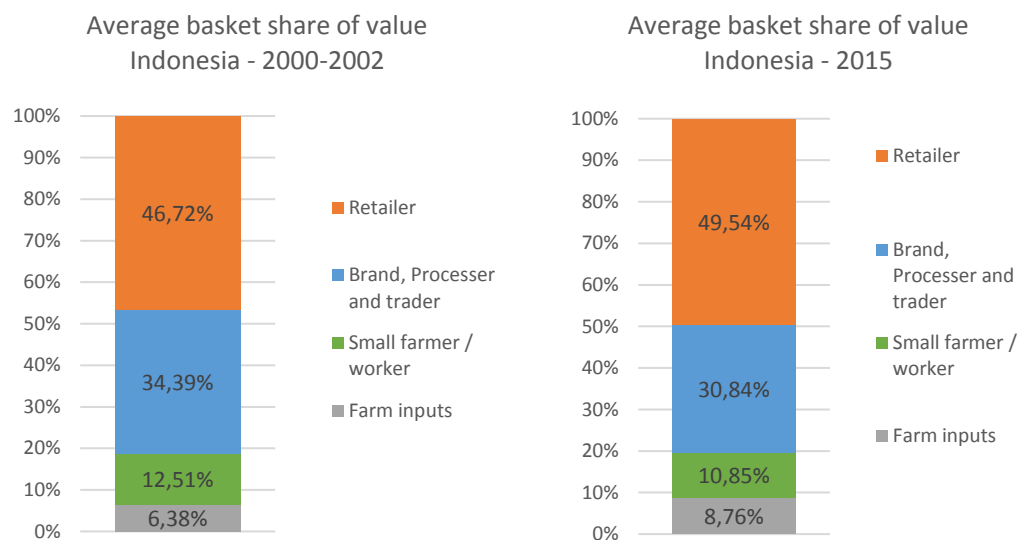
Source: BASIC, based on Euromonitor and DBS Bank data (2016)

The two main actors of the grocery retail sector, Salim group and Sigmantara Alfindo, are in the convenience store segment. In the supermarket sector, Super Indo is the fastest-growing retailer, while in the hypermarket segment Carrefour is the leader with 36% market share, but is losing foothold rapidly (Carrefour had a 51% market share in 2009).<sup>520</sup>

## Overview of the food basket value breakdown

The evolution of the value breakdown of the basket of goods for Indonesia is detailed below for 2000-2002 and 2015:

**Fig. 293 Value breakdown of the Indonesian basket of goods**



Source: BASIC

As illustrated above, the share of value retained by retailers has slightly increased since 2000 and, in contrast, the share of small farmers and workers decreased over the same period. The detailed analysis of each product in the basket is provided in the following sub-sections.

## Tea

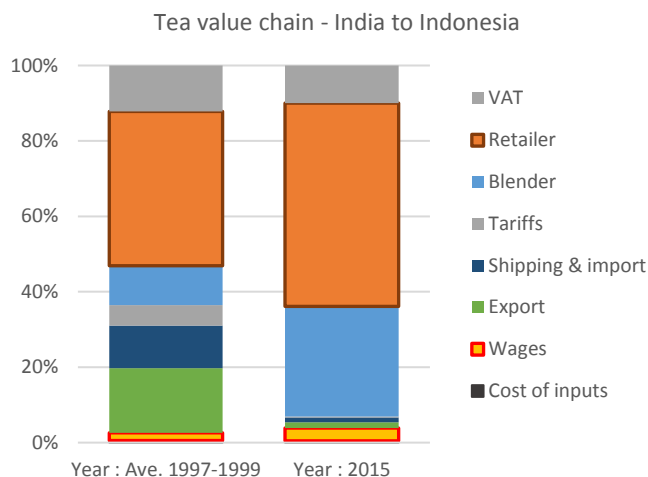
### Overview of the sector in Indonesia

For an overview of the sector, the structure of the chain and its evolution, see section 3 on the tea global value chain.

### Comparison of the value breakdown in the 1990's and in 2015

Our estimations of value breakdown (expressed in nominal currency so as to avoid potential distortions linked to correction for inflation) are as follows:

**Fig. 294 Value breakdown of tea produced in India (average 1996-1998 and 2015)**

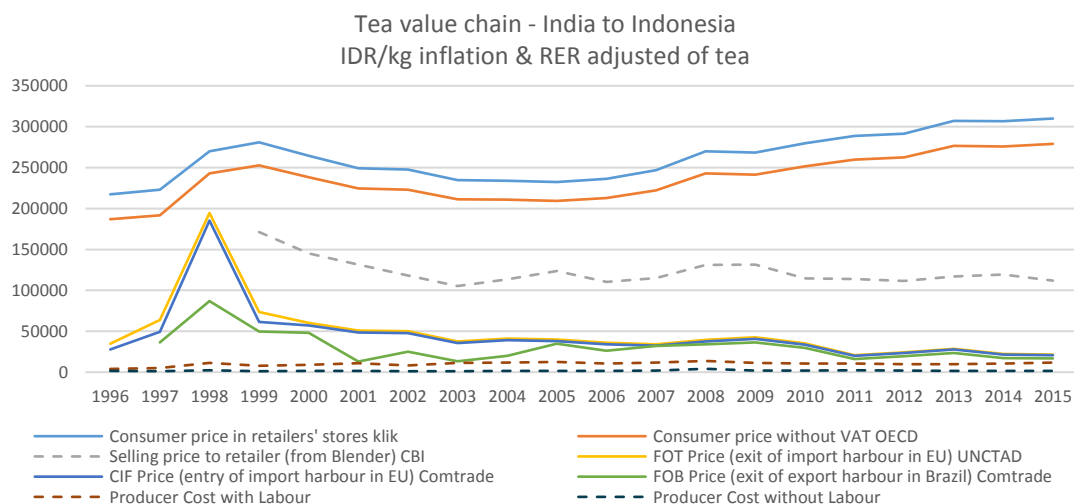


Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

As illustrated above, the share of value retained by retailers is the largest and has increased significantly since 1997 from 41% down to 54%. The share of value of brands/blenders is the 2<sup>nd</sup> largest and has been multiplied by almost 3 from 11% up to 29%, showing their growing influence over the chain. The value remaining in India has decreased sharply from 19.5% to 5.5%. To investigate further this situation, we have analysed the value evolution of the tea producer prices and wages, export FOB prices and costs of production since the early 1990s. The results for the main destinations of Indian tea are provided below.

**Analysis of the value breakdown**

**Fig. 295 Value breakdown of tea produced in India (1999-2015)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

On the consumer side, taking into account the evolution of costs of living in Indonesia, the diagram illustrates that the consumer prices have first steadily decreased by 18% between 1999 and 2005, then recovered until 2013 and remained stable since then. Retailers appear to have sharply increased their share of value since 2009.

In the middle of the chain, the tea blenders appear to have followed much more closely the downward trend of CIF import prices until 2009 and stabilized since then.

In India, the export prices have dropped significantly between 1999 and 2005, generating pressure on plantations with low productivity and on the workers' wages. Prices recovered slowly until the early 2000s, then declined again until 2015 which has once again exerted a strong pressure on tea plantations and workers (see the section on tea global value chain for more details).

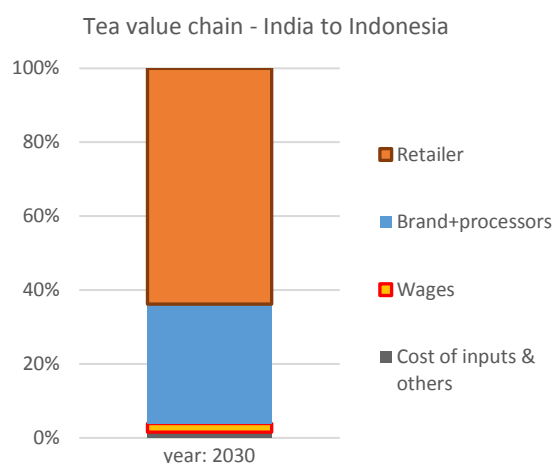
### Projections in 2030 of the value breakdown in a “Business as Usual” scenario

Based on the previous estimates, we performed a projection of the tea value breakdown in the year 2030 in a “Business as Usual” scenario:

- producer prices, wage levels and costs of inputs in India are based on the latest projections of the World Bank in 2030 (for tea FOB prices, fuel and fertilisers' prices)
- price trends at the supermarkets' and blenders' levels have been extrapolated based on the last 15 years and using a linear regression (price trends seem to be closely related to market concentration which has been continuously growing for the past 20 years with no sign of trend reversal).

The results are as follows:

**Fig. 296 Value breakdown of tea (forecast 2030)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

According to these estimates, the share of value captured by retailers could grow up to 64%, while blenders and traders could drop at 32%. At the beginning of the chain, workers could be left with only 2% of the total value. In a ‘business as usual scenario’, this pressure on prices is likely to continue affecting the wages and labour conditions of the tea workers, as well as the disappearance of the lowest productive plantations.

### Ability of workers to earn a living wage and levers for change

In order to cover the costs of production and ensure that workers can earn a living wage, the share of value for workers in India should be increased from 0.78 USD/kg currently to 2.29 USD/kg (see the section on tea global value chain for more details). This corresponds to a mark-up of 1.51 USD/kg, which only represents 6% of the end consumer price of tea which is 310,000 IDR/kg (23.15 USD/kg).

This increase does not need to be passed on to consumers: according to our estimates, the blenders have increased their share of value from 7.35 USD per kg in 2003 to 11.00 USD per kg in 2015. This increase which happened over the last 10 years is more than enough to cover the payment of a living wage for tea workers in India.

Retailers appear to have the means to address the unsustainability of the Indian tea chain. To do so, they would need to generalize their commitments and take on their responsibility to ensure that the tea they sell is not produced at the cost of the living conditions of workers, as well as the environment. In the case of India, they could promote the rise of the minimum wage for workers to ensure it covers the costs basic needs of their families – which is an effective tool to secure living income in the sector – by leaving a sufficient share of the value in the producing country so that the costs of sustainable production can be covered.<sup>521</sup>

## Cocoa

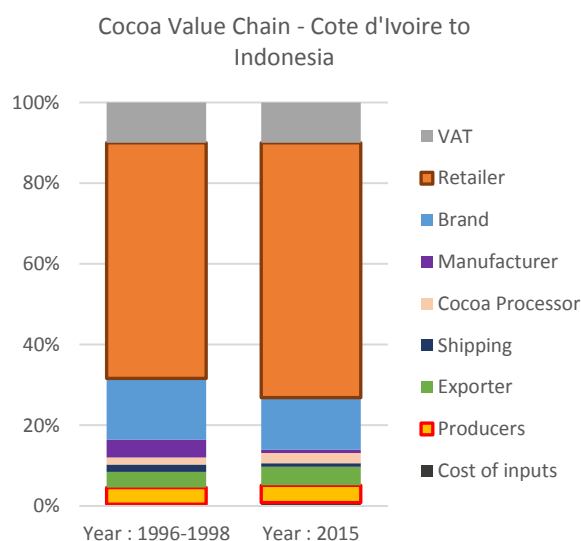
### Overview of the sector in Indonesia

For an overview of the sector, the structure of the chain and its evolution, see section 3 on the cocoa global value chain.

### Comparison of the value breakdown in the 1990's and in 2015

Our estimations of value breakdown (expressed in nominal currency so as to avoid potential distortions linked to correction for inflation) are as follows:

**Fig. 297 Value breakdown of a 70% dark chocolate bar made from cocoa produced in Cote d'Ivoire (average 1996-1998 & 2015)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

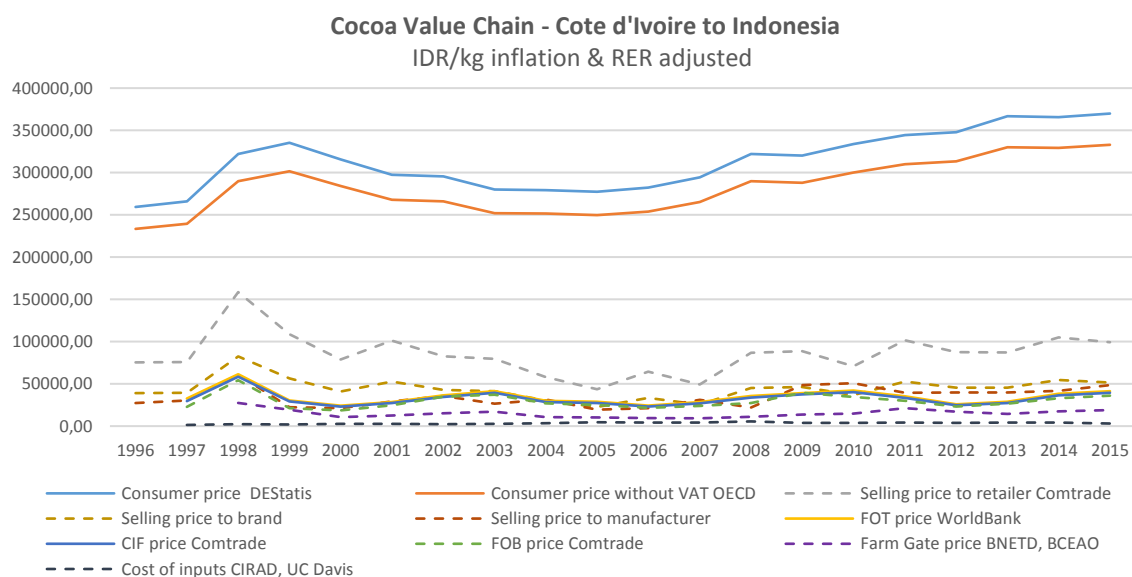
As illustrated above, the share of value retained by retailers is the largest and has increased from 58.5% up to 63.5%, showing their growing influence over the chain. In contrast, the share of the chocolate brands, the 2<sup>nd</sup> largest, has decreased from 15% down to 13%. The value remaining in Cote d'Ivoire has globally stagnated at around 9%.

To investigate further this situation, we have analysed the value evolution of the cocoa producer prices and wages, export FOB prices and costs of production since the early 1990s. The results for the main destinations of Ivorian cocoa are provided below.



## Analysis of the value breakdown

**Fig. 298 Value breakdown of a 70% dark chocolate bar made from cocoa produced in Cote d'Ivoire (1991-2015)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

On the consumer side, taking into account the evolution of costs of living in Indonesia, the diagram illustrates that the consumer prices have steadily declined by 17% between 1999 and 2007, then recovered and increased by 33% until 2015. Retailers appear to have substantially increased their share of the total value, especially since 2008.

In the middle of the chain, the chocolate brands (selling price to retailer) appear to have followed and amplified the trend of CIF import prices. Upstream, the selling price to brands and manufacturers demonstrates that margins remain slim for chocolate makers and cocoa grinders, obliging them to boost volumes of cocoa in order to keep their profitability (see section 3 on the cocoa global value chain for more details).

In Cote d'Ivoire, the producer prices have dropped significantly throughout the 1990s, and during the period 2003-2009, strongly affecting the small cocoa growers which couldn't make ends meet. Prices recovered slowly until 2016 thanks to the re-establishment of a minimum support price for cocoa and its significant increase year after year. However, this price was cut by more than 30% early 2017 because of the sharp fall of cocoa price on world's markets, plunging farmers again far below the poverty line (see the section on cocoa global value chain for more details).

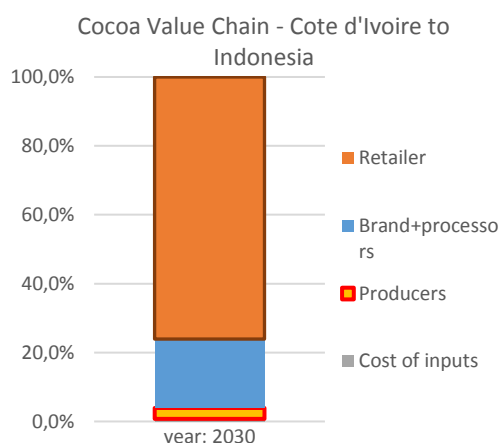
### Projections in 2030 of the value breakdown in a "Business as Usual" scenario

Based on the previous estimates, we performed a projection of the cocoa value breakdown in the year 2030 in a "Business as Usual" scenario:

- producer prices, wage levels and costs of inputs in Cote d'Ivoire are based on the latest projections of the World Bank in 2030 (for cocoa FOB prices, fuel and fertilisers' prices)
- price trends at the supermarkets' and brands' levels have been extrapolated based on the last 15 years and using a linear regression (price trends seem to be closely related to market concentration which has been continuously growing for the past 20 years with no sign of trend reversal).

The results are as follows:

**Fig. 299 Value breakdown of cocoa (forecast 2030)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

According to these estimates, the share of value captured by retailers could be further increased up to 76% because of their increasing influence on the chain due to their position of major selling channel and the development of private labels. As a result, the value accruing to brands, processors and traders could be reduced at 20%. At the beginning of the chain, small cocoa growers could be left with less than 3% of the total value. In a 'business as usual scenario', this pressure on prices is likely to continue affecting the difficult living conditions of cocoa smallholders and encourage deforestation, one of the main ways for producers to maintain productivity and profitability.

#### **Ability of small farmers to earn a living income and levers for change**

In order to cover the costs of production and ensure that cocoa farmers can earn a living income, the share of value for farmers in Cote d'Ivoire should be increased from 1.18 USD/kg to 1.60 USD/kg (see the section on cocoa global value chain for more details). This corresponds to very limited mark-up of 0.42 USD/kg, which only represents 2% of the end consumer price of chocolate which is 369,880 IDR/kg (27.62 USD/kg).

This increase does not need to be passed on to consumers: according to our estimates, the retailers have increased their share of value from 14.30 USD per kg in 2006 to almost 17.40 USD per kg in 2015. This increase which happened over the last 10 years is more than enough to cover the payment of a living wage for cocoa farmers in Cote d'Ivoire.

Retailers appear to have the means to address the unsustainability of the Ivorian cocoa chain. To do so, they would need to generalize their commitments and take on their responsibility to ensure that the chocolate they sell is not produced at the cost of the living conditions of cocoa farmers, as well as the environment. In particular, this would require a stronger commitment of chocolate brands to offer less confectionery products where cocoa is just a commoditized ingredient, and more chocolate products that value the origin and quality of cocoa, hence the work of farmers paid at a fair price, enabling them to cover their costs of production and the living needs of their families.<sup>522</sup>

# Rice

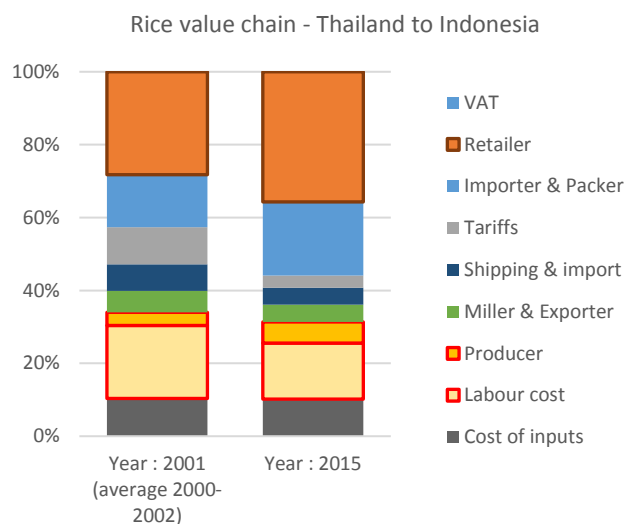
## Overview of the sector in Indonesia

For an overview of the sector, the structure of the chain and its evolution, see section 3 on the rice global value chain.

## Comparison of the value breakdown in the 1990's and in 2015

Our estimations of value breakdown (expressed in nominal currency so as to avoid potential distortions linked to correction for inflation) are as follows:

**Fig. 300 Value breakdown of rice produced in Thailand (average 2000-2002 & 2015)**



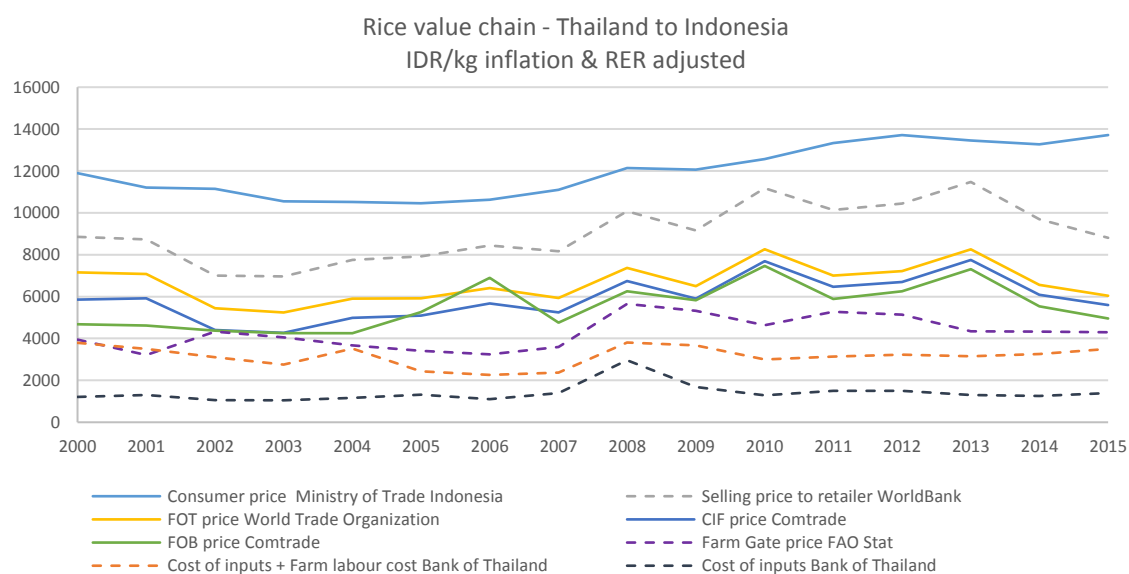
Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports

As illustrated above, the share of value retained by retailers is the largest and has increased significantly from 28% up to 35.5%, showing their growing influence over the chain. The share of the packers and brands has increased too, from 14.5% up to 20% and is now the 2<sup>nd</sup> largest. The value remaining in Thailand has declined from 40% down to 36% over the same period.

To investigate further this situation, we have analysed the value evolution of the rice producer prices and wages, export FOB prices and costs of production since the early 1990s. The results for the main destinations of Thai rice are provided below.

## Analysis of the value breakdown

**Fig. 301 Value breakdown of rice produced in Thailand (2000-2015)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports

On the consumer side, taking into account the evolution of costs of living in Indonesia, the diagram illustrates that the consumer prices slightly declined by 12% until 2006, then increased steadily by 28% until 2015. In particular, retailers appear to have “cushioned” the evolution of rice prices further up in the chain (i.e. limiting increases in case of peaks, but also remaining stable in case of drops), and started to increase substantially their share of the total value over the last 2 years.

In the middle of the chain, the packers and brands (selling price to retailer) seem to have followed and amplified the trend of CIF import prices over the same period, and progressively increased their share of value too.

In Thailand, the share of value of millers and exporters has grown very significantly since 2010, demonstrating their growing influence on the chain at the detriment of small rice growers. The situation is all the more difficult for producers than the costs of farm inputs have doubled since the early 1990s and the support price system managed by the government has been suspended in 2014, triggering a decline in producer prices since then (see section 3 on the rice global value chain for more details).

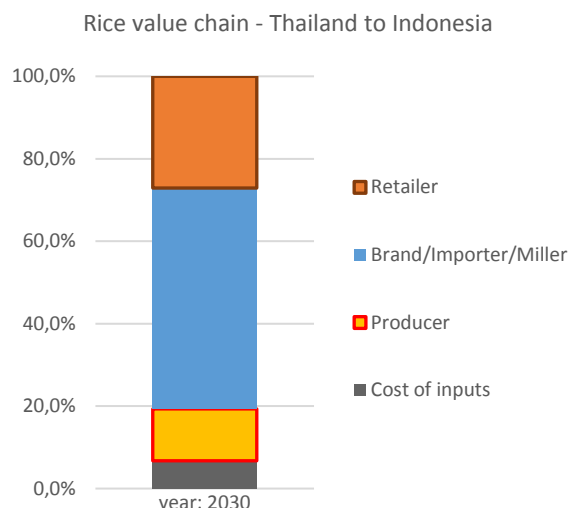
### Projections in 2030 of the value breakdown in a “Business as Usual” scenario

Based on the previous estimates, we performed a projection of the rice value breakdown in the year 2030 in a “Business as Usual” scenario:

- producer prices, wage levels and costs of inputs in Thailand are based on the latest projections of the World Bank in 2030 (for rice FOB prices, fuel and fertilisers’ prices)
- price trends at the supermarkets’ and brands’ levels have been extrapolated based on the last 15 years and using a linear regression (price trends seem to be closely related to market concentration which has been continuously growing for the past 20 years with no sign of trend reversal).

The results are as follows:

**Fig. 302 Value breakdown of rice (forecast 2030)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

According to these estimates, the share of value captured by retailers could be reduced back to 27% because of the growing influence of brands, processors and traders which could increase their share up to 53%. At the beginning of the chain, small rice growers could be left with 12% of the total value, compared to 15.5% currently. In a 'business as usual scenario', this pressure on prices is likely to continue affecting the difficult living conditions of rice smallholders and accelerate the disappearance of the smallest ones.

### Ability of small farmers to earn a living income and levers for change

In order to cover the costs of production and ensure that workers can earn a living wage, the share of value for farmers in Thailand should be increased from 0.22 USD/kg to 0.31 USD/kg (see the section on rice global value chain for more details). This corresponds to very limited mark-up of 0.09 USD/kg, which represents 9% of the end consumer price of rice which is 13,710 IDR/kg (1.02 USD/kg).

This increase does not need to be passed on to consumers: according to our estimates, the retailers have increased their share of value from 0.13 USD per kg in 2010 to 0.36 USD per kg in 2015. This increase which happened over the last 5-6 years is more than enough to cover the payment of a living wage for rice farmers in Thailand.

Retailers appear to have the means to address the unsustainability of the Thai rice chain. To do so, they would need to generalize their commitments and take on their responsibility to ensure that the rice they sell is not produced at the cost of the living conditions of rice farmers and workers. In Thailand, they could promote the re-establishment of a minimum support price for farmers and the increase of the minimum wage for workers – which are effective tools to secure living income in the sector – by leaving a sufficient share of the value in the producing country so that the costs of sustainable production can be covered.

## Canned tuna

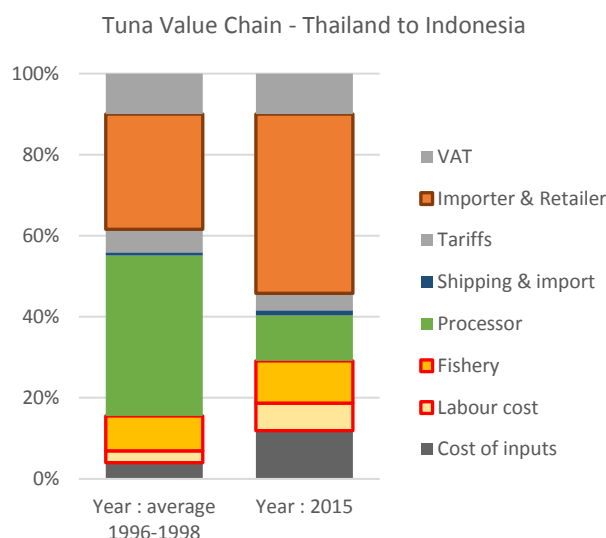
### Overview of the sector in Indonesia

For an overview of the sector, the structure of the chain and its evolution, see section 3 on the canned tuna global value chain.

## Comparison of the value breakdown in the 1990's and in 2015

Our estimations of value breakdown (expressed in nominal currency so as to avoid potential distortions linked to correction for inflation) are as follows:

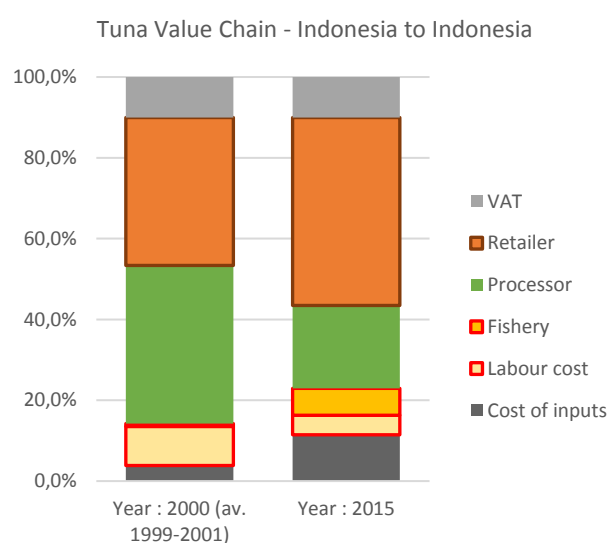
**Fig. 303 Value breakdown of canned tuna produced in Thailand (average 1996-1998 & 2015)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports

As illustrated above, the share of value retained by retailers is the largest and has increased from 28.5% up to 44%, showing their large influence over the chain, especially through the dominance of their private labels. In contrast, the share of the manufacturers of canned tuna has significantly decreased from 39.5% down to 11.5%. Most importantly, the share of fisheries has shrunk from 9.5% to 2%, as they have had to face the sheer rise of fuel and operation costs without being able to pass on this increase onto processors, because of their weak bargaining position. This leaves only 2.5% on average for labour costs on vessels.

**Fig. 304 Value breakdown of canned tuna produced Indonesia**



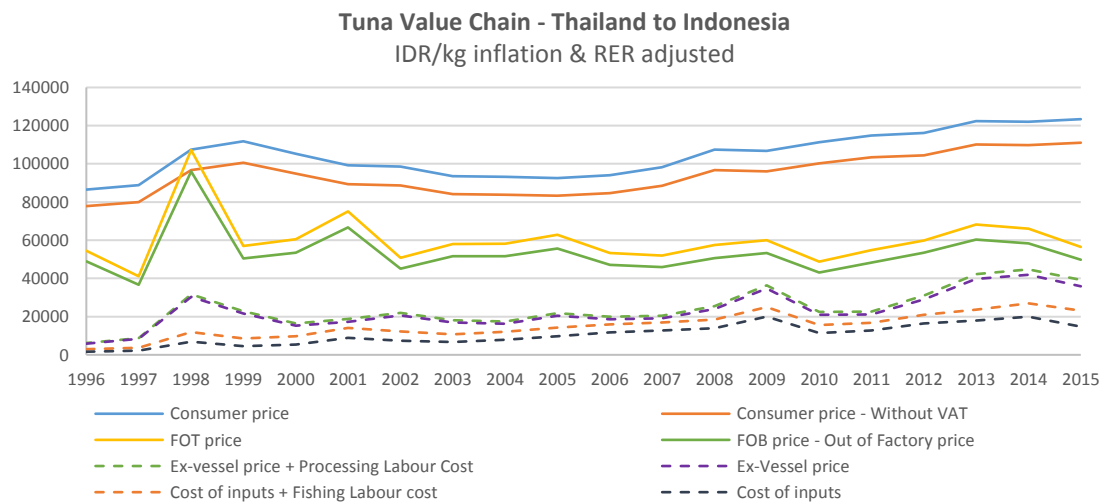
Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

Our estimates for canned tuna from Indonesia is quite similar from the previous value breakdown: retailers appear to have gained influence over the chain, their share increasing from 37% to 47% of the total value. Processors have markedly decreased their share from 39% to 20%. Eventually, fisheries appear to have reached around 6.5%, but face the pressure of increasing internal costs.

To investigate further this situation, we have analysed the value evolution of the canned tuna production prices and wages, export FOB prices and costs of production since the early 1990s. The results for the main destinations of Thai and Indonesian canned tuna are provided below.

### Analysis of the value breakdown

**Fig. 305 Value breakdown of canned tuna produced in Thailand (1996-2015)**

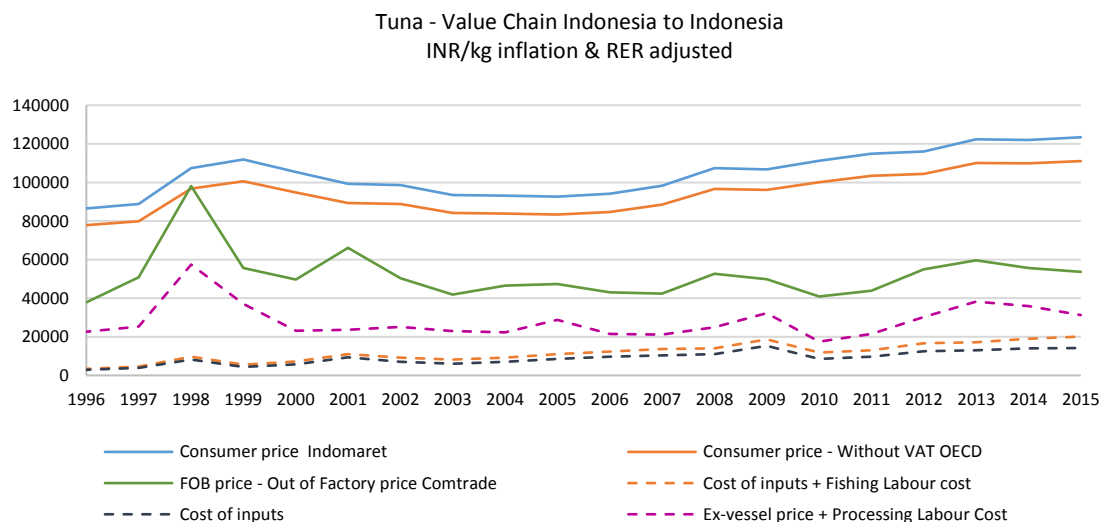


Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

On the consumer side, taking into account the evolution of costs of living in Indonesia, the diagram illustrates that the consumer prices have steadily increased by more than 40% until 2015. Retailers appear to significantly increase their share of the total value over the period, especially since 2005.

In Thailand, the manufacturers (out of factory price) appear to have followed the trend of CIF import prices and were unable to maintain their share despite their vertically integrated systems. However, their slim margins most probably oblige them to boost production volumes in order to keep their profitability. Upstream, the fisheries are facing the largest pressure with a strong decrease of their share of value since 1998, albeit for a small and short recovery in 2013-2014 because they got squeezed between the strong increase of fuel prices and the pressure on price from processors/manufacturers. The pressure is passed onto the workers, the majority being migrant, and on the level of their wages (see the section on canned tuna global value chain for more details).

**Fig. 306 Value breakdown of canned tuna produced in Indonesia**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports

As illustrated in the diagram above, the evolution of value breakdown for canned tuna sourced from Indonesia follows a similar pattern as for Thailand with an increasing share for retailers, and an increasing pressure on fisheries in recent years, with significant potential impacts on the working conditions and wages of workers on tuna vessels.

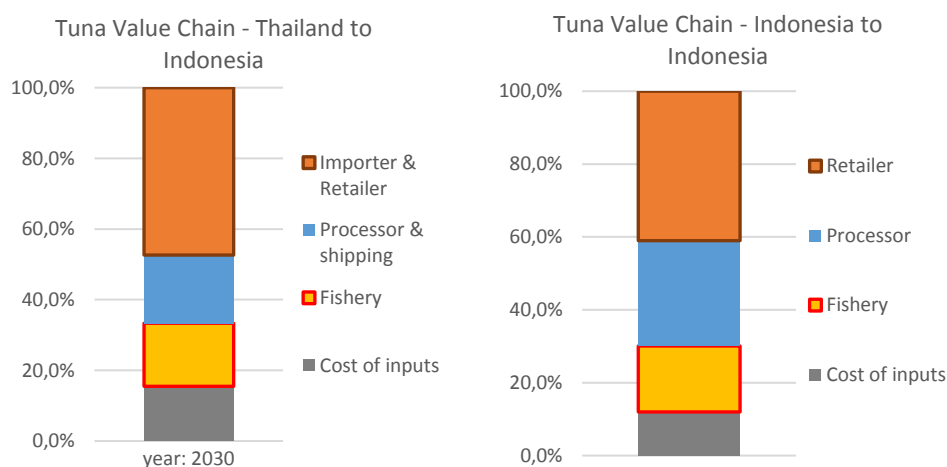
**Projections in 2030 of the value breakdown in a “Business as Usual” scenario**

Based on the previous estimates, we performed a projection of the canned tuna value breakdown in the year 2030 in a “Business as Usual” scenario:

- producer prices, wage levels and costs of inputs are based on the latest projections of the World Bank in 2030 (for grain, fuel and fertilisers’ prices)
- price trends at the supermarkets’, brands’ and fisheries’ levels have been extrapolated based on the last 15 years and using a linear regression (price trends seem to be closely related to market concentration which has been continuously growing for the past 20 years with no sign of trend reversal).

The results are as follows:

**Fig. 307 Value breakdown of canned tuna (forecast 2030)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).



According to these estimates, the share of value captured by retailers could reach 41% and 65% respectively, reflecting their influence on the chain due to their position of major selling channel and the development of private labels. As a result, the value accruing to brands, processors and traders could reach 9.5% and 28% respectively.

### Ability of workers to earn a living wage and levers for change

In order to cover the costs of sustainable production, the share of value for workers in Thailand and Indonesia should be increased at least by 0.08 USD/kg (see the section on canned tuna global value chain for more details), which only represents 1% of the end consumer price of canned tuna which is 123,400 INR/kg (9.22 USD/kg). This increase does not need to be passed on to consumers: according to our estimates, the retailers have increased their share of value from 3.60 USD per kg in 2013 to 4.00 USD per kg in 2015. This increase which happened over the last 2 years is more than enough to cover the payment of a living wage for workers in Thai fisheries.

Retailers and brands appear to have the means to address the unsustainability of the Thai canned tuna chain, and have started to make some voluntary commitments in this direction. However, they would need to generalize their engagement and take on their responsibility to ensure that the canned tuna they sell is not produced at the cost of the living conditions of workers in the chain. In particular, this would require increasing the minimum wage for workers (on vessels, as well as in processing) to the living wage level, and allocating enough resources for controls on the ground as it is one of the main ways to ensure that both can achieve a sustainable livelihood.<sup>523</sup>

## Orange juice

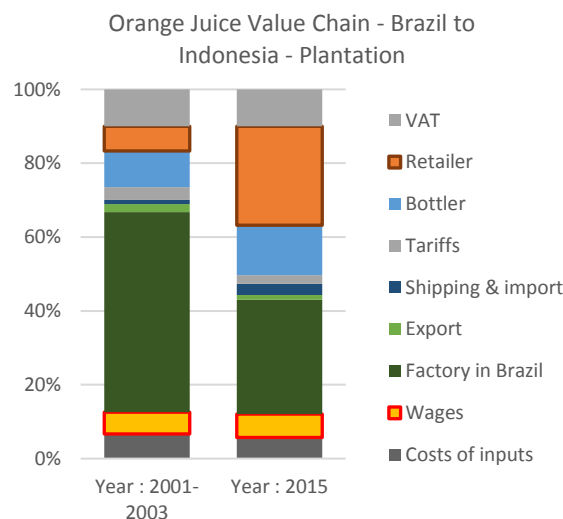
### Overview of the sector in Indonesia

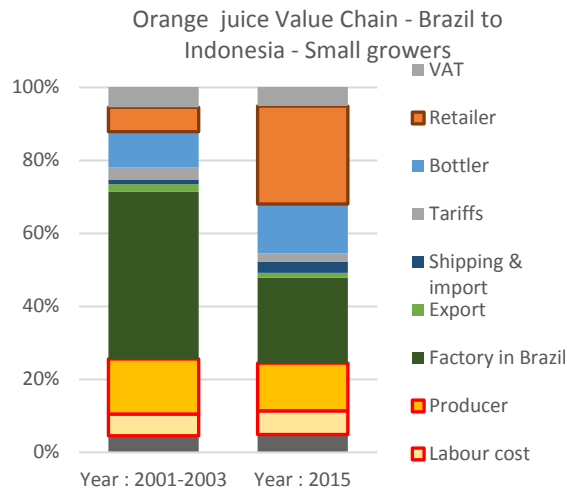
For an overview of the sector, the structure of the chain and its evolution, see section 3 on the orange juice global value chain.

### Comparison of the value breakdown in the 1990's and in 2015

Our estimations of value breakdown (expressed in nominal currency so as to avoid potential distortions linked to correction for inflation) are as follows:

**Fig. 308 Value breakdown of orange juice made from FCOJ produced in Brazil, supplied by plantations, and by small orange farmers (average 1996-1998 & 2015)**





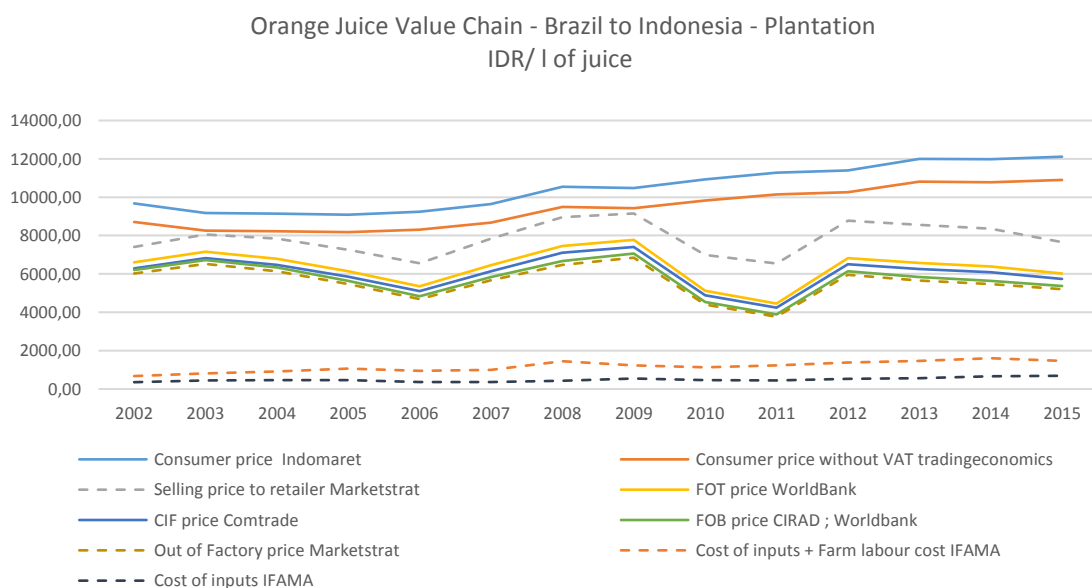
Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

As illustrated above, the share of value retained by retailers is the largest and has strongly increased from 6.5% up to 27%, showing their growing influence over the chain. The share of the bottlers has increased too from 10% up to 13.5%. In contrast, the share of factories in Brazil have dropped from 54% down to 31% when they source orange from their own plantations (and from 46% to 23.5% when oranges are purchased to small farmers). Most importantly, the share of small farmers has decreased from 15% to 13%, as they have to face the rise of input and labour costs without being able to pass on this increase onto processors, because of their weak bargaining position.

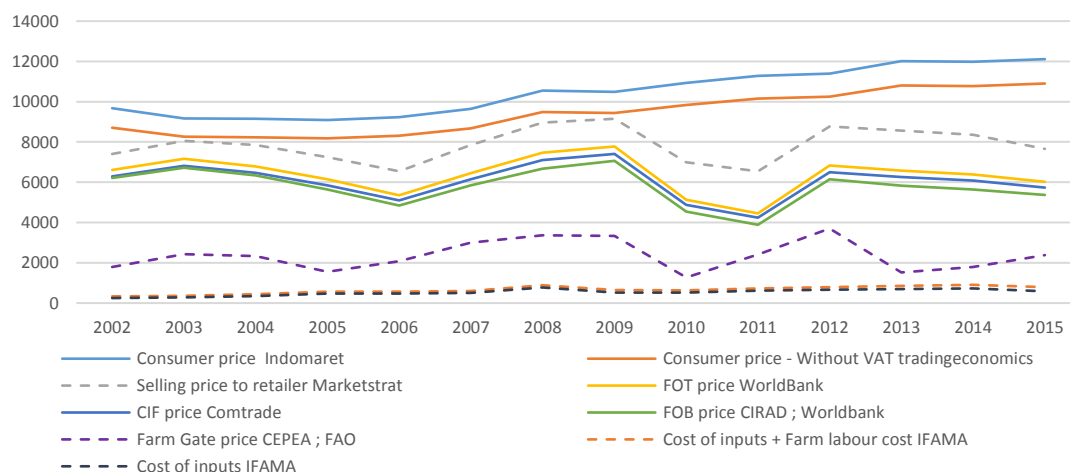
To investigate further this situation, we have analysed the value evolution of the orange producer prices and wages, export FOB prices and costs of production since the early 1990s. The results for the main destinations of Brazilian FCOJ are provided below.

### Analysis of the value breakdown

**Fig. 309 Value breakdown of orange juice made from FCOJ produced in Brazil, supplied by plantations, and by small orange farmers (1991-2015)**



Orange juice Value Chain - Brazil to Indonesia - Small growers  
IDR / l of juice



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

On the consumer side, taking into account the evolution of costs of living in Indonesia, the diagram illustrates that the consumer prices have steadily declined by approx. 30% between 1991 and 2015, as retailers appear to have “cushioned” the evolution of FCOJ prices further up in the chain (i.e. limiting increases in case of peaks, but also remaining stable in case of drops), while increasing their margins.

In the middle of the chain, the brands/bottlers (selling price to retailers) have followed the trends in CIF import prices and managed to gradually increase their share of value.

In Brazil, the processors (out of factory price) appear to have faced increasing costs (hence eroding margins) over the whole period and were unable to increase their share of value despite their vertically integrated systems, albeit when sourcing from small orange producers who got squeezed between the increase of input prices and the pressure from processors (see the section on orange juice global value chain for more details).

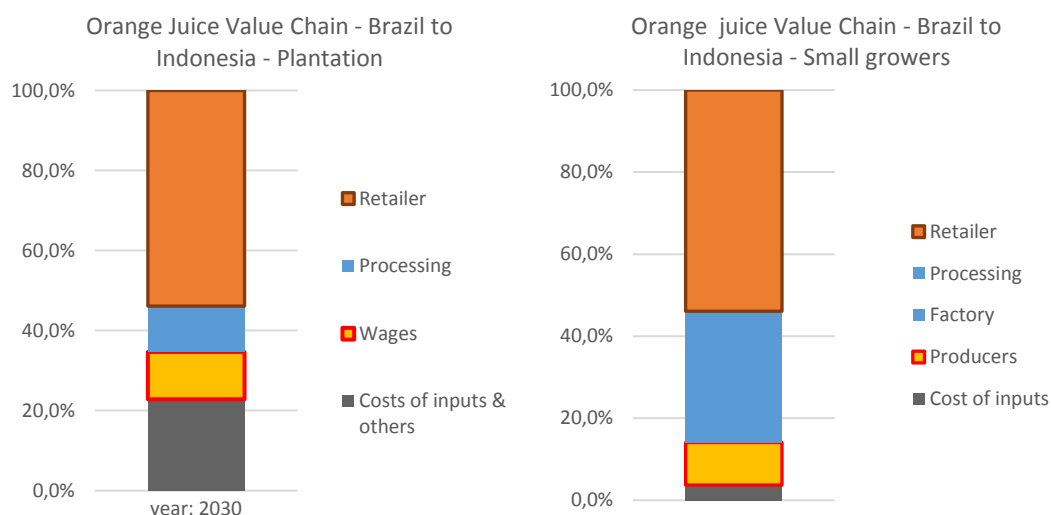
### Projections in 2030 of the value breakdown in a “Business as Usual” scenario

Based on the previous estimates, we performed a projection of the orange juice value breakdown in the year 2030 in a “Business as Usual” scenario:

- producer prices, wage levels and costs of inputs in Brazil are based on the latest projections of the World Bank in 2030 (for fuel and fertilisers’ prices)
- price trends at the supermarkets’, brands’ and processors’ levels have been extrapolated based on the last 15 years and using a linear regression (price trends seem to be closely related to market concentration which has been continuously growing for the past 20 years with no sign of trend reversal).

The results are as follows:

**Fig. 310 Value breakdown of orange juice made from FCOJ produced in Brazil, supplied by plantations, and by small orange farmers (forecast 2030)**



Source: BASIC, based on data from national statistics offices, UN Comtrade, academic studies and institutional reports (see section on methodology for further details).

According to these estimates, the share of value captured by retailers could further increase up to 54% because of their increasing influence on the chain due to their position of major selling channel and the development of private labels. In contrast, the share of value of brands/bottlers and importers could decrease down to 11.5% of the total value. At the beginning of the chain, small farmers and workers could be left with respectively less than 10% and 11.5% of the total value. In a ‘business as usual scenario’, this pressure on prices is likely to continue affecting the difficult living conditions of small orange growers and especially farm workers in Brazil.

**Ability of small farmers and workers to earn a living income/wage and levers for change**

In order to cover the costs of orange juice from Brazil, the share of value for small farmers or workers should be increased at least from an estimated 0.08 USD/kg up to 0.14 USD/kg (see the section on orange juice global value chain for more details). This corresponds to very limited mark-up of 0.06 USD/kg, which only represents 6% of the end consumer price of orange juice which is 12,113 IDR/L (0.90USD/L).

This increase does not need to be passed on to consumers: according to our estimates, the retailers have substantially increased their share of value from 0.14 USD per kg in 2012 to 0.24 USD per kg in 2015. This increase which happened over the last 3 years is enough to cover the living income of farmers and the payment of a living wage for workers.

Retailers and brands appear to have the means to address the unsustainability of the Brazilian orange juice chain. To do so, they would need to ensure that the orange juice they sell is not produced at the cost of the living conditions of small farmers and workers in the chain. In particular, this would require increasing the minimum wage for workers (in farming and processing) to the living wage level, and allocating enough resources for controls on the ground as it is one of the main ways to ensure that they can achieve a sustainable livelihood. In addition, they could support the establishment of a guaranteed price for the small orange growers enabling them to generate a living income, together with environmental and social conditions to ensure the sustainability of production. <sup>524</sup>

# NOTES

- 1 European Commission, The economic impact of modern retail on choice and innovation in the EU food sector, September 2014
- 2 The European Union, the USA and China World each generate almost 18% of global retail sales (food and non-food), cf. Federation of Direct Selling Associations (WFDSA), Global Direct Selling - 2014 Retail Sales, May 2015
- 3 Modern retail covers hypermarkets, supermarkets and discount stores; hypermarkets are defined as stores that have a sales area above 2,500 m<sup>2</sup> and supermarkets have a sales area between 400 m<sup>2</sup> and 2,500 m<sup>2</sup>, both selling a broad range of items; by comparison, discounters focus on everyday low price and private label products; their stores are of all sizes (often between 800 m<sup>2</sup> and 1,500 m<sup>2</sup>).
- 4 Planet Retail, European Grocery Retailing, May 2014
- 5 BASIC, Who's Got the Power: Tackling imbalances in agricultural supply chains, 2014
- 6 European Commission, The economic impact of modern retail in the EU food sector, 2014 op. cit.
- 7 Olivier de Schutter, Addressing concentration in Food Supply Chains, Briefing Note December 2010
- 8 These 10 companies are among the 30 largest world retailers, cf. Planet Retail, European Grocery Retailing, May 2014
- 9 Deloitte, Global Powers of Retailing, 2015
- 10 European Commission, The economic impact of modern retail in the EU food sector, 2014 op. cit.  
Note: the concentration ratio of the 5 leading retailers in the total consumer spending on food and drink (a wider scope than modern grocery retail sales which also includes green grocers, local markets, restaurants, etc.) is significantly lower, reaching 45% on average in the European Union, and ranging from 20% in Romania up to 67% in Austria
- 11 Planet Retail, European Grocery Retailing, May 2014 op. cit.
- 12 Reardon, The global rise and impact of supermarkets: an international perspective, Keynote address, 2011
- 13 Ibid.
- 14 Oxfam Internal report according to Pereira 2014
- 15 AT Kearney, Seizing Africa's Retail Opportunities: The 2014 African Retail Development Index, 2015 <https://www.atkearney.com/documents/10192/4371960/Seizing+Africas+Retail+Opportunities.pdf>
- 16 Reardon et al., The rise of supermarkets in Africa, Asia and Latin America, 2003
- 17 Reardon, The global rise and impact of supermarkets: an international perspective, Keynote address, 2011 op. cit.
- 18 Weatherspoon, Dave D., and Thomas Reardon. "The Rise of Supermarkets in Africa: Implications for Agrifood Systems and the Rural Poor." Development Policy Review, 2003
- 19 International Institute for Environment and Development (IIED) / hiVos / Mainumby Ñakurutú, Small producer agency in the globalised market - Making choices in a changing world, 2012
- 20 Oxfam Research Report, Who Will Feed the World?, April 2011
- 21 FAO, ILO, IUF-UITA, Agricultural workers and their contribution to sustainable agriculture and rural development, 2007
- 22 Un habitat, 2010
- 23 The Economist, 2009
- 24 BASIC, Who's Got the Power: Tackling imbalances in agricultural supply chains, 2014 op. cit.
- 25 Olivier de Schutter, Addressing concentration in Food Supply Chains, Briefing Note December 2010
- 26 ILO, Tripartite Meeting to Examine the Impact of Global Food Chains on Employment, 2007
- 27 Center on Globalisation, Governance & Competitiveness, Duke University, Skills for upgrading: Workforce Development and Global Value Chains in Developing Countries, November 2011.
- 28 BASIC, Who's Got the Power: Tackling imbalances in agricultural supply chains, 2014 op. cit.
- 29 Oxfam International, Who will feed the world?, 2011

- 30 Hopkins and Wallerstein (1986: 159)
- 31 Gereffi and Korzeniewicz, *Commodity Chains and Global Capitalism*, 1994
- 32 Gary Gereffi, John Humphrey, and Timothy Sturgeon. "The Governance of Global Value Chains." *Review of International Political Economy* 12, no. 1 (February 2005): 78–104
- 33 Gibbon, Bair and Ponte (2008) "Governing Global Value Chains: An Introduction," *Economy and Society*, Vol. 37, No. 3, pp. 315-338
- 34 The Global Value Chains approach initiated a wave of interdisciplinary literature which investigated the ways in which organizationally fragmented and geographically dispersed processes of production have been a critical feature of economic globalization: fresh fruit and vegetables (Raynolds; Dolan et al.), tropical commodities such as coffee, cocoa, cotton, sugar, rubber, tobacco, etc. (Ponte, Raynolds, Fold, Gibbon, Daviron, Gwynne, Barrientos), exports of apparel from East Asia, Mexico and the Caribbean (Gereffi, Palpacuer), electronics (Kenney and Florida), automobile industry (Hill; Doner; Barnes, Kaplinsky and Morris), semi-conductors (Henderson), tourism (Clancy), services (Rabach & Kim)...
- 35 BASIC, *The dark side of chocolate*, 2016  
Fairtrade Foundation, *Britain's Bruising Banana Wars*, 2014  
Sea Fish Industry Authority, *Overseas Market Introduction Service (OMIS) report on Vietnamese seafood/seafood industry*, 2014
- 36 We compared the gap of our calculations with the gaps documented by the "French Observatory of Food Prices and Margins". This public institution in France publishes each year detailed estimates of the value breakdown of local agricultural products sold in supermarkets (they are only 2 such observatories, France and Spain, according to the OECD). The orders of magnitude are the same as in our study: whereas the "gross margins" calculated based on the annual accounts of French retailers amounts to approx. 20%, the Observatory estimates that the share of value of retailers is in the range of 30%-45% for the majority of products they analyse (dairy, meat, bread, pasta, fruits & vegetables...)
- 37 The modern retailing sector covers hypermarkets, supermarkets, convenience and discount stores, as well as online purchase platform
- 38 Oxfam, *The Commitment to Reducing Inequality Index: A new global ranking of governments based on what they are doing to tackle the gap between rich and poor*, July 2017
- 39 Visser and Fesser, *Farm Workers' Living and Working Conditions in South Africa: key trends, emergent issues, and underlying and structural problems*, International Labour Organisation, 2015
- 40 Potts, J. et al., *The state of sustainability initiatives review*, 2014
- 41 Hivos, *Coffee Barometer*, 2014
- 42 Hivos, *Coffee Barometer*, 2014 op. cit.
- 43 International Coffee Organization, *Data on the Global Coffee Trade*, [http://www.ico.org/new\\_historical.asp](http://www.ico.org/new_historical.asp) retrieved on 26th May 2017
- 44 Hivos, *Coffee Barometer*, 2014 op. cit.
- 45 BASIC, *Who's got the power: tackling imbalances in agricultural chains*, 2014
- 46 Coffee division of ED&F Man, *Insight special: Debunking coffee myths*, 2013
- 47 Hivos, *Coffee Barometer*, 2014 op. cit.
- 48 BASIC, *Who's got the Power?*, December 2014 op. cit.
- 49 USDA, *Colombia Coffee annual report*, 2016
- 50 NewForesight, *Promoting sustainable trade between the Netherlands and Colombia: A case study of coffee, bananas, flowers, sugar, and palm oil*, 2011
- 51 USDA, *Colombia Coffee annual report*, 2016 op. cit.
- 52 NewForesight, *Promoting sustainable trade between the Netherlands and Colombia*, 2011 op. cit.
- 53 A. Marescotti and G. Belletti, *Differentiation strategies in coffee global value chains through reference to territorial origin in Latin American countries*, 2016
- 54 USDA, *Colombia Coffee annual report*, 2016 op. cit.
- 55 FAO, *Commodity Market Review 1997-98 and EFTA, Coffee: Speculator's plaything*, 1998 - [http://www.web.net/~bthomson/fair\\_trade/fair695.html](http://www.web.net/~bthomson/fair_trade/fair695.html) accessed on 3rd June 2017
- 56 Ibid.
- 57 J. Avelino, M. Cristancho et al., *The coffee rust crises in Colombia and Central America (2008–2013): impacts, plausible causes and proposed solutions*, 2015
- 58 Ibid.

- 59 USDA, Colombia Coffee annual report, 2016 op.cit.
- 60 Technoserve-IDH, Colombia: A business case for sustainable coffee production, 2014
- 61 DANE, Pobreza Monetaria en Colombia, 2014
- 62 Technoserve-IDH, Colombia: A business case for sustainable coffee production, 2014
- 63 Technoserve-IDH, Colombia: A business case for sustainable coffee production, 2014  
BASIC, Who's got the Power?, December 2014 op. cit.
- 64 P. Rogers, A short history of tea, 2004 and M. Groosman, Tea Sector Overview, IDH, 2011
- 65 FAO, Intergovernmental Group on Tea, Current market situation and medium term outlook, 2016
- 66 Ibid.
- 67 IUF-FIAN-Misereor, Harvesting Hunger: Plantation Workers and the Right to Food, 2014
- 68 FAO, Intergovernmental Group on Tea, 2016 op. cit.
- 69 M. Groosman, Tea Sector Overview, IDH, 2011
- 70 IUF-FIAN-Misereor, Harvesting Hunger: Plantation Workers and the Right to Food, 2014 op. cit.
- 71 M. N. Larsen, Sustaining Upgrading in Agricultural Value Chains? State-Led Value Chain Interventions and Emerging Bifurcation of the South Indian Smallholder Tea Sector, 2016
- 72 M. N. Larsen, Sustaining Upgrading in Agricultural Value Chains?, 2016 op. cit.
- 73 M. Groosman, Tea Sector Overview, IDH, 2011 op.cit.
- 74 FAO, Intergovernmental Group on Tea, 2016 op. cit.
- 75 Tropical Commodity Coalition, Tea Barometer, 2010
- 76 M. Groosman, Tea Sector Overview, IDH, 2011 op.cit.
- 77 K. B. Vijaybhai, P. D. Jayeshkumar et al., Analysis on Indian Tea Industry, V.M.Patel Institute of Management. Ganpat University, 2014
- 78 IUF-FIAN-Misereor, Harvesting Hunger: Plantation Workers and the Right to Food, 2014 op. cit.
- 79 K. B. Vijaybhai, P. D. Jayeshkumar et al., Analysis on Indian Tea Industry, V.M.Patel Institute of Management. Ganpat University, 2014
- 80 IUF-FIAN-Misereor, Harvesting Hunger: Plantation Workers and the Right to Food, 2014 op. cit.
- 81 M. Groosman, Tea Sector Overview, IDH, 2011 op.cit.
- 82 IUF-FIAN-Misereor, Harvesting Hunger: Plantation Workers and the Right to Food, 2014
- 83 IUF-FIAN-Misereor, Harvesting Hunger: Plantation Workers and the Right to Food, 2014
- 84 IUF-FIAN-Misereor, Harvesting Hunger: Plantation Workers and the Right to Food, 2014
- 85 IUF-FIAN-Misereor, Harvesting Hunger: Plantation Workers and the Right to Food, 2014
- 86 The Plantations Labour Act, 1951 is a national act applicable to all plantations in India and is administered by State Governments It specifies a number of health and welfare benefits that plantations must provide: housing, medical facilities, canteens, creches, education, rations & dry tea, firewood & fuel
- 87 Oxfam-ETI, Understanding wage issues in the tea industry, 2013
- 88 K. Mamkoottam & N. Kaicker, Living Wage Report Rural India – with a focus on Bhadohi, Uttar Pradesh, October 2016
- 89 Oxfam-ETI, Understanding wage issues in the tea industry, 2013
- 90 ICCO, The World Cocoa Economy, 2014
- 91 Central Bank of West African Countries, Étude monographique sur la filière cacao dans l'UEMOA, 2014
- 92 Ibid.
- 93 Le dessous des cartes, « Le cacao, en voie de disparition », 2015
- 94 ICCO, The World Cocoa Economy, 2014
- 95 BASIC, The dark side of chocolate, 2016
- 96 Candy Industry, 2014

- 97 C. Shapiro & H. R. Varian, « The art of standards wars », *California Management Review*, 1999
- 98 M.P. Squicciarini & J. Swinnen, *The Economics of Chocolate*, Oxford University Press, 2016
- 99 BASIC, *The dark side of chocolate*, 2016, op. cit.
- 100 Ibid.
- 101 C. Araujo Bonjean & J. F. Brun, "Concentration and Price Transmission in the Cocoa-Chocolate Chain", in M.P. Squicciarini & J. Swinnen, *The Economics...* op. cit.
- 102 Ibid.
- 103 D. Cogneau et R. Jedwab, *Commodity Price Shocks and Childs Outcomes: The 1990 Cocoa Crisis in Côte d'Ivoire*, Economic Development and Cultural Change, University of Chicago, 2012
- 104 BASIC, *The dark side of chocolate*, 2016, op. cit.
- 105 B. Losch, « Coup de cacao en Côte d'Ivoire. Économie politique d'une crise structurelle », *Critique internationale* 2000/4 n°9
- 106 ICCO Quarterly Bulletin of Cocoa Statistics, Vol. XLIII, No. 1, Cocoa year 2016/17
- 107 BASIC, *The dark side of chocolate*, 2016, op. cit.
- 108 J.F. Ruf, Y. N'Dao et S. Lemeilleur, « Certification du cacao, stratégie à hauts risques », *Inter-réseaux Développement rural*, 2013
- 109 J. P. Colin et F. Ruf, "Une économie de plantation en devenir. L'essor des contrats de planter-partager comme innovation institutionnelle dans les rapports entre les autochtones et étrangers en Côte d'Ivoire", *Revue Tiers Monde*, 2011/3 n°207
- 110 Aidenvironment, NewForesight, IIED et IFC, « Cocoa in Côte d'Ivoire », 2015
- 111 Agritrade, *Les réformes du secteur du cacao de la Côte d'Ivoire 2011-2012*, Rapport à la une, 2012
- 112 D. Cogneau et R. Jedwab, « Commodity Price Shocks and Childs Outcomes: The 1990 Cocoa Crisis in Côte d'Ivoire », *Economic Development and Cultural Change*, Université de Chicago, 2012
- 113 B. Losch, « Coup de cacao en Côte d'Ivoire. Économie politique d'une crise structurelle », *Critique internationale* 2000/4 n°9
- 114 C. Araujo-Bonjean et G. Chambas, « Impact du mode d'organisation des filières agro-alimentaires sur la pauvreté : la filière cacao en Côte d'Ivoire », *Études et documents*, septembre 2001
- 115 Leading to the coup d'État of Christmas 1999. President Bédié is dismissed and replaced by General Gueï. The second liberalised harvest takes place during the legislative and presidential elections in 2000 and Laurent Gbagbo is elected (B. Losch, « La Côte d'Ivoire... », op. cit.).
- 116 F. Ruf et J.L. Agkpo, *Étude sur les revenus et les investissements des producteurs de café et de cacao en Côte d'Ivoire*, 2008
- 117 Banque Centrale des États de l'Afrique de l'Ouest (BCEAO), « Étude monographique sur la filière cacao dans l'UEMOA », juin 2014
- 118 BASIC, *The dark side of chocolate*, 2016, op. cit.
- 119 M. A. Schweisguth, *Evaluating the Effects of Certification on Smallholders' Net Incomes, with a Focus on Cacao Farmers in Cooperatives in Côte d'Ivoire*, University of California Davis, Master Thesis, 2015 and F. Ruf et J.L. Agkpo, *Étude sur les revenus et les investissements des producteurs de café et de cacao en Côte d'Ivoire*, 2008 op. cit.
- 120 BASIC, *The dark side of chocolate*, 2016, op. cit.
- 121 US International Trade Commission, *Rice: Global competitiveness of the US Industry*, 2015 and Ir. Corné van Dooren, *Rice Value Chain Analysis: Each life starts with a little seed*, Condesan, 2005
- 122 FAO, *Rice Market Monitor*, 2016
- 123 CBI, *Exporting specialty rice varieties to Europe*, 2016
- 124 USITC, *Rice: Global competitiveness of the US Industry*, 2015 op.cit.
- 125 CBI, *Exporting specialty rice varieties to Europe*, 2016 op. cit., *Food & Water Watch, Grocery Goliaths: How food monopolies impact consumers*, 2013 and *Ebro Foods, Annual Report*, 2013
- 126 Oxfam, *Cereal Secrets: The world's largest grain traders and global agriculture*, 2012
- 127 E. J. Wailes and E. C. Chavez, *World Rice Outlook: International Rice Baseline with Deterministic and Stochastic Projections, 2012-2021*, University of Arkansas, 2012
- 128 H. Yagi, *Farm size and Distance-to-Field in Scattered Rice Field Areas*, University of Tokyo, 2012
- 129 B. Liese, T. Mollman et al., *Economics of Southeast Asian Rice Production*, *Agri Benchmark*, 2014



- 130 Ibid.
- 131 Ibid.
- 132 USITC, Rice: Global competitiveness of the US Industry, 2015 op.cit.
- 133 USITC, Rice: Global competitiveness of the US Industry, 2015 op.cit.
- 134 USITC, Rice: Global competitiveness of the US Industry, 2015 op.cit.
- 135 USITC, Rice: Global competitiveness of the US Industry, 2015 op.cit.
- 136 USITC, Rice: Global competitiveness of the US Industry, 2015 op.cit.
- 137 S. Kosanlawit, P. Soni and G. P. Shivakoti, The Relationship between Effective and Equitable Water Allocation, Local Rice Farmer Participation and Economic Well-Being: Insights from Thailand's Chiang Mai Province, *Water Journal* 2017, 9, 319, May 2017
- 138 <https://asia.floorwage.org/resources/wage-reports/asia-floor-wage-figures/view> accessed on 31st July 2017
- 139 FAO- Globefish, Commodity Update Shrimp, 2015
- 140 Responsible and Inclusive Business, Opportunities for Inclusive Business: A Case study of the shrimp Value Chain, 2015
- 141 FAO, Globefish Highlights: Quarterly update on world seafood markets including January-June 2016 statistics, 2016
- 142 FAO, Globefish Commodity Update Shrimp, 2015 op. cit.
- 143 FAO, Globefish Highlights: Quarterly update on world seafood markets including January-June 2016 statistics, 2016
- 144 FAO, Globefish Commodity Update Shrimp, 2015 op. cit.
- 145 Thai Union Group, Annual Report, 2015
- 146 Rabobank, Spotlight on Seafood: An investor's guide in the Global Marine Protein Industry, 2011
- 147 ILO, Migrant and Child Labor in Thailand's Shrimp and Other Seafood Supply Chains, 2015 op. cit.
- 148 Responsible and Inclusive Business, A Case study of the shrimp Value Chain, 2015 op. cit.
- 149 Sea Fish Industry Authority, Overseas Market Introduction Service (OMIS) report on Vietnamese seafish/seafood industry, 2014
- 150 According to data provided by the Vietnam Association of Seafood Exporters and Producers (VASEP) accessed in May 2017
- 151 Sea Fish Industry Authority, OMIS report on Vietnamese seafish/seafood industry, 2014 op. cit.
- 152 <https://www.seafood-tip.com/sourcing-intelligence/countries/vietnam/> accessed on 9 September 2017.
- 153 Sea Fish Industry Authority, OMIS report on Vietnamese seafish/seafood industry, 2014 op. cit.
- 154 <https://www.seafood-tip.com/sourcing-intelligence/countries/vietnam/> accessed on 9 September 2017.
- 155 Responsible and Inclusive Business, A Case study of the shrimp Value Chain, 2015 op. cit.
- 156 Responsible and Inclusive Business, A Case study of the shrimp Value Chain, 2015 op. cit.
- 157 Sea Fish Industry Authority, OMIS report on Vietnamese seafish/seafood industry, 2014 op. cit.
- 158 <https://www.seafood-tip.com/sourcing-intelligence/countries/vietnam/> accessed on 9 September 2017.
- 159 Responsible and Inclusive Business, A Case study of the shrimp Value Chain, 2015 op. cit.
- 160 Responsible and Inclusive Business, A Case study of the shrimp Value Chain, 2015 op. cit.
- 161 ILO, Migrant and Child Labor in Thailand's Shrimp and Other Seafood Supply Chains, 2015 op. cit.
- 162 Responsible and Inclusive Business, A Case study of the shrimp Value Chain, 2015 op. cit.
- 163 Responsible and Inclusive Business, A Case study of the shrimp Value Chain, 2015 op. cit.
- 164 ILO, Migrant and Child Labor in Thailand's Shrimp and Other Seafood Supply Chains, 2015 op. cit.
- 165 Fairfood International, Caught in a trap: The story of poverty wages behind Asian shrimp sold in European markets, 2015.

- 166 Research Center for Employment Relations, Living Wage Report Vietnam: Soc Trang to Thai Binh with focus on the Seafood Processing Industry, June 2017
- 167 Research Center for Employment Relations, Living Wage Report Vietnam, 2017 op. cit.
- 168 Responsible and Inclusive Business, A Case study of the shrimp Value Chain, 2015 op. cit.
- 169 Responsible and Inclusive Business, A Case study of the shrimp Value Chain, 2015 op. cit.
- 170 SAL Forest co., Economic Distribution in Thailand's Domestic Shrimp Supply Chain, 2017
- 171 Responsible and Inclusive Business, A Case study of the shrimp Value Chain, 2015 op. cit.
- 172 SAL Forest co., Economic Distribution in Thailand's Domestic Shrimp Supply Chain, 2017 op. cit.
- 173 SAL Forest co., Economic Distribution in Thailand's Domestic Shrimp Supply Chain, 2017 op. cit.
- 174 Responsible and Inclusive Business, A Case study of the shrimp Value Chain, 2015 op. cit.
- 175 Responsible and Inclusive Business, A Case study of the shrimp Value Chain, 2015 op. cit.
- 176 Responsible and Inclusive Business, A Case study of the shrimp Value Chain, 2015 op. cit.
- 177 ILO, Migrant and Child Labor in Thailand's Shrimp and Other Seafood Supply Chains, 2015 op. cit.
- 178 Fairfood International, Caught in a trap: The story of poverty wages behind Asian shrimp sold in European markets, 2015.
- 179 <https://asia.floorwage.org/resources/wage-reports/asia-floor-wage-figures/view> accessed on 31st July 2017
- 180 Responsible and Inclusive Business, A Case study of the shrimp Value Chain, 2015 op. cit.
- 181 Oxfam, A study on Inequality in Shrimp Value Chains, 2017
- 182 <http://www.seafood-tip.com/sourcing-intelligence/countries/indonesia/> accessed on 9 September 2017
- 183 <http://www.seafood-tip.com/sourcing-intelligence/countries/indonesia/> accessed on 9 September 2017
- 184 <http://www.seafood-tip.com/sourcing-intelligence/countries/indonesia/> accessed on 9 September 2017
- 185 <http://www.seafood-tip.com/sourcing-intelligence/countries/indonesia/> accessed on 9 September 2017
- 186 Responsible and Inclusive Business, A Case study of the shrimp Value Chain, 2015 op. cit.
- 187 Responsible and Inclusive Business, A Case study of the shrimp Value Chain, 2015 op. cit.
- 188 ILO, Migrant and Child Labor in Thailand's Shrimp and Other Seafood Supply Chains, 2015 op. cit.
- 189 Fairfood International, Caught in a trap: The story of poverty wages behind Asian shrimp sold in European markets, 2015.
- 190 <https://asia.floorwage.org/resources/wage-reports/asia-floor-wage-figures/view> accessed on 31st July 2017
- 191 Fitriana R., A study on Inequality in Shrimp Value Chains; not yet published
- 192 Ibid.
- 193 Responsible and Inclusive Business, A Case study of the shrimp Value Chain, 2015 op. cit.
- 194 FAO, An overview of the global tuna market, 2017 - <http://www.fao.org/in-action/globefish/fishery-information/resource-detail/en/c/880744/> accessed on 29<sup>th</sup> May 2017
- 195 Rabobank, Spotlight on Seafood, 2011 op. cit.
- 196 FAO, An overview of the global tuna market, 2017 op. cit.
- 197 Rabobank, Spotlight on Seafood, 2011 op. cit.
- 198 FAO, An overview of the global tuna market, 2017 op. cit.
- 199 Ibid.
- 200 Rabobank, Spotlight on Seafood, 2011 op. cit.
- 201 ILO, Migrant and Child Labor in Thailand's Shrimp and Other Seafood Supply Chains, 2015 op. cit.
- 202 ILO, Migrant and Child Labor in Thailand's Shrimp and Other Seafood Supply Chains, 2015 op. cit.
- 203 Thai Union Group, Annual Report, 2015 op. cit.
- 204 Rabobank, Spotlight on Seafood, 2011 op. cit.
- 205 ILO, Migrant and Child Labor in Thailand's Shrimp and Other Seafood Supply Chains, 2015 op. cit.

- 206 Ibid.
- 207 Ibid.
- 208 Rabobank, Spotlight on Seafood, 2011 op. cit.
- 209 ILO, Migrant and Child Labor in Thailand's Shrimp and Other Seafood Supply Chains, 2015 op. cit.
- 210 S.S. Bhattacharjee, A. Roy and V. Raaj, Precarious work in the Asian Seafood Global Value Chain: A report to the ILO, 2016
- 211 Ian Urbina, "'Sea Slaves': The Human Misery that Feeds Pets and Livestock," New York Times, July 27, 2015 - <http://www.nytimes.com/2015/07/27/world/outla> accessed 1<sup>st</sup> June 2017
- 212 Ian Urbina, "'Sea Slaves': The Human Misery that Feeds Pets and Livestock," New York Times, July 27, 2015 - <http://www.nytimes.com/2015/07/27/world/outla> accessed 1<sup>st</sup> June 2017
- 213 ILO, Migrant and Child Labor in Thailand's Shrimp and Other Seafood Supply Chains, 2015 op. cit.
- 214 <https://asia.floorwage.org/resources/wage-reports/asia-floor-wage-figures/view> accessed on 31st July 2017
- 215 ILO, Migrant and Child Labor in Thailand's Shrimp and Other Seafood Supply Chains, 2015 op. cit.
- 216 [www.seafood-tip.com](http://www.seafood-tip.com) accessed on 10<sup>th</sup> September 2017
- 217 [www.seafood-tip.com](http://www.seafood-tip.com) accessed on 10<sup>th</sup> September 2017
- 218 [www.seafood-tip.com](http://www.seafood-tip.com) accessed on 10<sup>th</sup> September 2017
- 219 Poseidon, Estimate of Global Sales Values from Tuna Fisheries, 2016
- 220 Rabobank, Spotlight on Seafood, 2011 op. cit.
- 221 Ian Urbina, "'Sea Slaves': The Human Misery that Feeds Pets and Livestock," New York Times, July 27, 2015 - <http://www.nytimes.com/2015/07/27/world/outla> accessed 1<sup>st</sup> June 2017
- 222 ILO, Migrant and Child Labor in Thailand's Shrimp and Other Seafood Supply Chains, 2015 op. cit.
- 223 <https://asia.floorwage.org/resources/wage-reports/asia-floor-wage-figures/view> accessed on 31st July 2017
- 224 ILO, Migrant and Child Labor in Thailand's Shrimp and Other Seafood Supply Chains, 2015 op. cit.
- 225 European Fruit Juice Association, Liquid Fruit Market Report, 2016
- 226 BSD Consulting, Assessing the Benefits of Fairtrade Orange Juice for Brazilian Small Farmers, 2014
- 227 Ibid.
- 228 Fruit juice legislation stipulates that a drink can only be described as fruit juice if it contains 100% juice and pulp from the fruit in question. Products that contain only 25% to 99% fruit juice are categorized as "juice drinks" and may not be labelled as juice. Juice drinks may contain preservatives, sweeteners or colourings and are generally cheaper than fruit juice.
- 229 ICE Futures, Frozen Concentrate Orange Juice, 2012
- 230 M. F. Neves, The Brazilian Orange Juice Chain, FAO, 2008
- 231 CBI, Fruit Juice in Europe Product Factsheet, 2015
- 232 M. F. Neves, The Brazilian Orange Juice Chain, FAO, 2008 op. cit.
- 233 M. F. Neves, The Brazilian Orange Juice Chain, FAO, 2008 op. cit.
- 234 Global 200 & Christliche Initiative Romero, Squeeze Out: The truth behind the orange juice business, 2016
- 235 CitrusBR estimates, in Global 200 & Christliche Initiative Romero, Squeeze Out, 2016 op. cit.
- 236 Global 200 & Christliche Initiative Romero, Squeeze Out, 2016 op. cit.
- 237 Ibid.
- 238 M. F. Neves, The Brazilian Orange Juice Chain, FAO, 2008 op. cit.
- 239 BSD Consulting, Assessing the Benefits of Fairtrade Orange Juice for Brazilian Small Farmers, 2014
- 240 M. F. Neves, The Brazilian Orange Juice Chain, FAO, 2008 op. cit.
- 241 M. F. Neves, The Brazilian Orange Juice Chain, FAO, 2008 op. cit.

- 242 ICE Futures, Frozen Concentrate Orange Juice, 2012 op. cit.
- 243 M. F. Neves, The Brazilian Orange Juice Chain, FAO, 2008 op. cit.
- 244 M. F. Neves, The Brazilian Orange Juice Chain, FAO, 2008 op. cit.
- 245 M. F. Neves, The Brazilian Orange Juice Chain, FAO, 2008 op. cit.
- 246 CIR, Orange Juice: No regard for labour rights?, 2014.
- 247 CIR, Orange Juice: No regard for labour rights?, 2014. op. cit.
- 248 M. F. Neves, Competitiveness of the Orange Juice Chain in Brazil, International Food and Agribusiness Management Review Volume 16, Special Issue 4, 2013
- 249 R. Anker and M. Anker, Living Wage for rural Brazil: Minas Gerais South/Southwestern region, 2016
- 250 FAO, The world banana economy 1985-2002, Rome 2003
- 251 'Make Fruit Fair', Banana value chains in Europe and the consequences of Unfair Trading Practices, 2015
- 252 Agritrade, Banana sector Executive brief, July 2011
- 253 'Make Fruit Fair', Banana value chains in Europe and the consequences of Unfair Trading Practices, 2015
- 254 ICTSD, Value Chains and Tropical Products in a Changing Global Trade Regime, 2008
- 255 FAO, The world banana economy 1985-2002, Rome 2003
- 256 Loeillet (CIRAD), Contribution to the world banana forum: The international banana market - From one world to the other, 2012
- 257 As of 1st January 2006, the EU moved to a tariff-only system. Imports have been liberalised by abolishing quantitative restrictions and progressive reductions of import duties for the dollar bananas
- 258 European Commission, DG Comp Merger Registry, Case M.7220 - Chiquita Brands International/ Fyffes, Commission decision on the merger procedure, October 2014
- 259 FAO, Ecuador's banana sector under climate change, 2016
- 260 Ibid.
- 261 The minimum support price is based on the estimation of the average costs of a typical industrialised plantation in Ecuador of 50 Ha and a productivity of 1,800 boxes/ha/year
- 262 INCAE, Analisis de la estructura salarial en la industria bananera en Ecuador, February 2012
- 263 El Universo - 10/01/2010; La Hora – 06/05/2013
- 264 Oxfam Deutschland, Analysis of German banana value chains and impacts on small farmers & workers, 2014
- 265 CIRAD, "Coûts intermédiaires de la filière banane d'importation en Europe : Répartition et évolution", Novembre 2012
- 266 IIED and NRI, Standard bearers: Horticultural exports and private standards in Africa, 2008
- 267 Ministry of Labour (July 2015)
- 268 based on the latest figures of the Ministry of Agriculture (Magap) in 2013
- 269 Sally Smith, Institute of Development Studies, University of Sussex, 'Fair trade Bananas: a global assessment of impact, 2010
- 270 INCAE, Analisis de la estructura salarial en la industria bananer en Ecuador, February 2012
- 271 Ibid.
- 272 Dr Raul Harari, IFA, Trabajo, ambiente y salud en la producción bananera del Ecuador, Nov 2009
- 273 Technoserve-IDH, Colombia: A business case for sustainable coffee production, 2014
- 274 Ecuadorian Ministry of Labour, The Living Wage in Ecuador and Other Wage Policies, 2015
- 275 INCAE, Analisis de la estructura salarial en la industria bananer en Ecuador, February 2012
- 276 'Make Fruit Fair', Banana value chains in Europe and the consequences of Unfair Trading Practices, 2015
- 277 FAO-OIV, Table and Dried Grapes, 2016

- 278 Eurofresh, Fresh table grapes: world demand and production estimates, 2015 - <http://www.eurofresh-distribution.com/news/fresh-table-grapes-world-demand-and-production-estimates> accessed on 27/05/2017
- 279 USAID, EMS Fresh and dried fruits in Germany, Agricultural Competitiveness and Enterprise Development project (ACED), 2012
- 280 USDA, Product Brief Fresh Fruits, 2014
- 281 Republic of South Africa, Department of Agriculture, Forestry and Fisheries, A profile of the South African Table Grape market value chain, 2012
- 282 Symington, Creating Sustainable Competitive Advantage in the Marketing of South African Table Grapes to the United Kingdom in the Deregulated Era, University of Cape Town, Thesis, February 2008
- 283 Tregurtha and Vink, 2002 - Fundira, 2003
- 284 Symington, Creating Sustainable Competitive Advantage in Marketing of South African Table Grapes, 2008 op. cit.
- 285 Blanchon, Vignes du Kalahari : des raisins dans les turbulences de la mondialisation, Cahiers d'Outre-Mer, 2008
- 286 South African Table Grape Industry, Statistics Booklet 2015-2016
- 287 Vinpro, 2014 record crop: the impact on primary wine grape producers' financial sustainability, 2015
- 288 Blanchon, Vignes du Kalahari : des raisins dans les turbulences de la mondialisation, 2008 op. it.
- 289 South African Table Grape Industry (SATI) Booklet 2009, 2010 and 2014
- 290 Ibid.
- 291 Barrientos and Visser, South African horticulture: opportunities and challenges for economic and social upgrading in value chains, 2012
- 292 South African Table Grape Industry (SATI) Booklet 2009, 2010 and 2014 op. cit.
- 293 Visser and Fesser, Farm Workers' Living and Working Conditions in South Africa: key trends, emergent issues, and underlying and structural problems, International Labour Organisation, 2015
- 294 Visser and Fesser, Farm Workers' Living and Working Conditions in South Africa, 2015 op. cit.
- 295 Visser and Fesser, Farm Workers' Living and Working Conditions in South Africa, 2015 op. cit.
- 296 Visser and Fesser, Farm Workers' Living and Working Conditions in South Africa, 2015 op. cit.
- 297 R. Anker and M. Anker, Living Wage for rural South Africa with Focus on Wine Grape Growing in Western Cape Province, 2013
- 298 Bek and Mc Ewan, The political economy of alternative trade: Social and environmental certification in the South African wine industry, 2009
- 299 S. Freidberg, French beans and food scares: culture and commerce in an anxious age, 2004
- 300 UN Comtrade data retrieved on 29<sup>th</sup> May 2017
- 301 IFPRI, Food safety Requirements in African Green Bean Exports and their impact on Small Farmers, 2007
- 302 S. Freidberg, French beans and food scares: culture and commerce in an anxious age, 2004 op. cit.
- 303 UN Comtrade data retrieved on 29<sup>th</sup> May 2017
- 304 IFPRI, Food safety Requirements in African Green Bean Exports, 2007 op. cit. and USAID-KAVES, French Bean Value Chain Analysis, 2015
- 305 Oxfam International : Exploring the links between international business and poverty reduction: Bouquets and beans from Kenya, 2013
- 306 USAID-KAVES, French Bean Value Chain Analysis, 2015
- 307 Ibid.
- 308 Oxfam International : Exploring the links between international business and poverty reduction: Bouquets and beans from Kenya, 2013 op. cit.
- 309 USAID-KAVES, French Bean Value Chain Analysis, 2015 op. cit.
- 310 USAID-KAVES, French Bean Value Chain Analysis, 2015 op. cit.

- 311 Oxfam International : Exploring the links between international business and poverty reduction: Bouquets and beans from Kenya, 2013
- 312 Oxfam International : Exploring the links between international business and poverty reduction: Bouquets and beans from Kenya, 2013
- 313 M. F. Neves, Competitiveness of the Orange Juice Chain in Brazil, International Food and Agribusiness Management Review Volume 16, Special Issue 4, 2013
- 314 Oxfam International : Exploring the links between international business and poverty reduction: Bouquets and beans from Kenya, 2013
- 315 Oxfam International : Bouquets and beans from Kenya, 2013 op. cit.
- 316 Oxfam International : Bouquets and beans from Kenya, 2013 op. cit.
- 317 R. & M. Anker, Living Wage Report Kenya – with a focus on rural Mount Kenya area, October 2016
- 318 Oxfam International : Bouquets and beans from Kenya, 2013 op. cit.
- 319 Ministerio de Agricultura y Riego, Comportamiento del Comercio Mundial de la Palta y Perspectivas del Mercado Chino, 2015
- 320 UNDP, A report on avocado value chain mapping, 2014
- 321 Ministerio de Agricultura y Riego, Comportamiento del Comercio Mundial de la Palta, 2015 op. cit.
- 322 UNDP, A report on avocado value chain mapping, 2014 op. cit.
- 323 CBI, Product Factsheet: Fresh Avocados in Europe, 2016
- 324 Ibid.
- 325 Ministerio de Agricultura y Riego, Comportamiento del Comercio Mundial de la Palta, 2015 op. cit.
- 326 UNDP, A report on avocado value chain mapping, 2014 op. cit.
- 327 CBI, Product Factsheet: Fresh Avocados in Europe, 2016 op. cit.
- 328 UNDP, A report on avocado value chain mapping, 2014 op. cit.
- 329 S. Newett, Report on avocado orchard visits in Peru, Department of agriculture and fisheries of Queensland, 2015
- 330 Ministerio de Agricultura y Riego, Comportamiento del Comercio Mundial de la Palta, 2015 op. cit.
- 331 R. Velarde, Derechos laborales en el sector de la agro-exportación, Universidad Católica Sede Sapientae, 2014 and S. Newett, Report on avocado orchard visits in Peru, Department of agriculture and fisheries of Queensland, 2015
- 332 Ministerio de Agricultura y Riego, Comportamiento del Comercio Mundial de la Palta, 2015 op. cit.
- 333 R. Velarde, Derechos laborales en el sector de la agro-exportación, Universidad Católica Sede Sapientae, 2014 and S. Newett, Report on avocado orchard visits in Peru, Department of agriculture and fisheries of Queensland, 2015
- 334 Eurofresh, World Tomato Market, 2016 - <http://www.eurofresh-distribution.com/news/around-world-tomatoes> accessed on 1st June 2017
- 335 <http://www.fao.org/faostat/en/#data/FBS> retrieved on 1st June 2017
- 336 Eurofresh, World Tomato Market, 2016 op. cit.
- 337 <http://www.worldstopexports.com/tomatoes-exports-country/> accessed on 1<sup>st</sup> June 2017
- 338 X. Zang, H. Qiu, Apple and tomato chains in China and the EU, Wageningen University, 2015
- 339 Centre International des Hautes Etudes Agronomiques Méditerranéennes (CIHEAM), Logistique de la filière marocaine d'exportation de tomates fraîches, 2012
- 340 X. Zang, H. Qiu, Apple and tomato chains in China and the EU, Wageningen University, 2015 op. cit.
- 341 Ministère de l'économie et des finances du Maroc, Performances et compétitivité des exportations des filières phares du secteur agroalimentaire marocain, 2014
- 342 Ibid.
- 343 Ibid.
- 344 Ministère de l'économie et des finances du Maroc, Performances et compétitivité des exportations des filières phares du secteur agroalimentaire marocain, 2014 op. cit.
- 345 Ministère de l'économie et des finances du Maroc, Performances et compétitivité des exportations des filières phares du secteur agroalimentaire marocain, 2014 op. cit.

- 346 <http://www.corpwatch.org/article.php?id=15990> accessed on 4th June 2017
- 347 Fairfood, The fruits of their labour: the low wages behind Moroccan tomatoes sold in European supermarkets, August 2014
- 348 <http://juristconseil.blogspot.com/2014/06/augmentation-du-salaire-minimum-smig-et.html> accessed on 31st July 2017
- 349 <https://business-humanrights.org/en/morocco-fairfood-calls-for-living-wage-at-european-supermarkets-tomato-suppliers-ahold-tesco-sainsburys-respond> accessed on 4th June 2017
- 350 WageIndicator, Estimating Living Wage Globally, European Conference on Living wages, Berlin, November 2013
- 351 USDA, Retail Foods in Germany, 2015
- 352 Eurostat data (2004-12) analysed in 'The economic impact of modern retail on choice and innovation in the EU food sector', European Commission, September 2014
- 353 USDA Foreign Agricultural Services, The German Food Retail Market, 2012
- 354 Euromonitor International, Fresh Food in Germany, 2012
- 355 USDA Foreign Agricultural Services, 2012
- 356 Planet Retail, European Grocery Retailing, May 2014
- 357 USDA Foreign Agricultural Services, The German Food Retail Market, 2015
- 358 European Commission, The economic impact of modern retail on choice and innovation in the EU food sector, September 2014
- 359 USDA Foreign Agricultural Services, The German Food Retail Market, 2014
- 360 CBI, Product factsheet Coffee in Germany, 2016
- 361 CBI, Product factsheet Coffee in Germany, 2016
- 362 CBI, Product factsheet Coffee in Germany, 2016
- 363 BASIC, Who's got the Power?, December 2014 op. cit.
- 364 Technoserve-IDH, Colombia: A business case for sustainable coffee production, 2014  
BASIC, Who's got the Power?, December 2014 op. cit.
- 365 CBI, Product factsheet Tea in Germany, 2016
- 366 CBI, Product factsheet Tea in Germany, 2016
- 367 CBI, Product factsheet Tea in Germany, 2016
- 368 Oxfam-ETI, Understanding wage issues in the tea industry, 2013
- 369 CBI, Product factsheet Cocoa in Germany, 2016
- 370 CBI, Product factsheet Cocoa in Germany, 2016
- 371 CBI, Product factsheet Cocoa in Germany, 2016
- 372 CBI, Product factsheet Cocoa in Germany, 2016
- 373 CBI, Product factsheet Cocoa in Germany, 2016
- 374 BASIC, The dark side of chocolate, 2016, op. cit.
- 375 CBI, Product factsheet Rice in Europe, 2016
- 376 CBI, Product factsheet Frozen cultured Viannamei shrimp in Europe, 2015
- 377 Responsible and Inclusive Business, A Case study of the shrimp Value Chain, 2015 op. cit.
- 378 CBI, Product factsheet Frozen tuna in Europe, 2017
- 379 ILO, Migrant and Child Labor in Thailand's Shrimp and Other Seafood Supply Chains, 2015 op. cit.
- 380 European Fruit Juice Association, Liquid Fruit Market Report, 2016
- 381 Global 200 & Christliche Initiative Romero, Squeeze Out, 2016 op. cit.
- 382 Euromonitor International, Fresh Food in Germany, 2012
- 383 European Commission, DG Comp Merger Registry, Chiquita Brands International/ Fyffes merger procedure, 2014

- 384 USAID - ACED Project, End market study for fresh and dried fruits in Germany, 2012
- 385 In addition to the HACCP imposed by European legislation, most German retailers require products to have lower Maximum Residue Limits of pesticides than the EU legislation and require producers to be GlobalGAP certified (USAID - ACED Project, 2012)
- 386 European Commission, DG Comp Merger Registry, Chiquita Brands International/ Fyffes merger procedure, 2014
- 387 Given the strong inflation and devaluation that Ecuador suffered throughout the 1990s, we have chosen the first 3 years following the dollarization of the country (2000-2002) to give a more representative picture of the price transmission along the chain.
- 388 INCAE, Analisis de la estructura salarial en la industria bananer en Ecuador, 2012
- 389 'Make Fruit Fair', Banana value chains in Europe and the consequences of Unfair Trading Practices, 2015
- 390 Barrientos and Visser, South African horticulture: opportunities and challenges for economic and social upgrading in value chains, 2012
- 391 Oxfam International : Bouquets and beans from Kenya, 2013 op. cit.
- 392 R. Velarde, Derechos laborales en el sector de la agro-exportacion, Universidad Catolica Sede Sapientae, 2014 and S. Newett, Report on avocado orchard visits in Peru, Department of agriculture and fisheries of Queensland, 2015
- 393 Fairfood, The fruits of their labour: the low wages behind Moroccan tomatoes sold in European supermarkets, August 2014
- 394 USDA, Retail Foods in Netherlands, 2016
- 395 Ibid.
- 396 Ibid.
- 397 SOMO, Eyes on the price: International supermarket buying groups in Europe, 2017
- 398 CBI, Product factsheet Coffee in Netherlands, 2016
- 399 CBI, Product factsheet Coffee in Netherlands, 2016
- 400 CBI, Product factsheet Coffee in Netherlands, 2016
- 401 BASIC, Who's got the Power?, December 2014 op. cit.
- 402 Technoserve-IDH, Colombia: A business case for sustainable coffee production, 2014  
BASIC, Who's got the Power?, December 2014 op. cit.
- 403 CBI, Product factsheet Tea in Netherlands, 2016
- 404 CBI, Product factsheet Tea in Netherlands, 2016
- 405 CBI, Product factsheet Tea in Netherlands, 2016
- 406 Oxfam-ETI, Understanding wage issues in the tea industry, 2013
- 407 CBI, Product factsheet Cocoa in Netherlands, 2016
- 408 CBI, Product factsheet Cocoa in Netherlands, 2016
- 409 CBI, Product factsheet Cocoa in Netherlands, 2016
- 410 CBI, Product factsheet Cocoa in Netherlands, 2016
- 411 BASIC, The dark side of chocolate, 2016, op. cit.
- 412 CBI, Product factsheet Rice in Europe, 2016
- 413 CBI, Product factsheet Frozen cultured Viannamei shrimp in Europe, 2015
- 414 Responsible and Inclusive Business, A Case study of the shrimp Value Chain, 2015 op. cit.
- 415 CBI, Product factsheet Frozen tuna in Europe, 2017
- 416 ILO, Migrant and Child Labor in Thailand's Shrimp and Other Seafood Supply Chains, 2015 op. cit.
- 417 FoodNews, Global Outlook, 2017
- 418 Global 200 & Christliche Initiative Romero, Squeeze Out, 2016 op. cit.
- 419 Make Fruit Fair, Banana value chains in Europe and the consequences of Unfair Trading Practices; 2015



- 420 European Commission, DG Comp Merger Registry, Chiquita Brands International/ Fyffes merger procedure, 2014
- 421 INCAE, Analisis de la estructura salarial en la industria bananer en Ecuador, 2012
- 422 'Make Fruit Fair', Banana value chains in Europe and the consequences of Unfair Trading Practices, 2015
- 423 Barrientos and Visser, South African horticulture: opportunities and challenges for economic and social upgrading in value chains, 2012
- 424 Oxfam International : Bouquets and beans from Kenya, 2013 op. cit.
- 425 R. Velarde, Derechos laborales en el sector de la agro-exportacion, Universidad Catolica Sede Sapientae, 2014 and S. Newett, Report on avocado orchard visits in Peru, Department of agriculture and fisheries of Queensland, 2015
- 426 Fairfood, The fruits of their labour: the low wages behind Moroccan tomatoes sold in European supermarkets, August 2014
- 427 USDA, United Kingdom Food Retails, 2014
- 428 Ibid.
- 429 Kantar, United Kingdom Country Report, 2013
- 430 USDA, United Kingdom Food Retails, 2014 op. cit.
- 431 CBI, Product factsheet Coffee in UK, 2016
- 432 CBI, Product factsheet Coffee in UK, 2016
- 433 CBI, Product factsheet Coffee in UK, 2016
- 434 BASIC, Who's got the Power?, December 2014 op. cit.
- 435 Technoserve-IDH, Colombia: A business case for sustainable coffee production, 2014  
BASIC, Who's got the Power?, December 2014 op. cit.
- 436 CBI, Product factsheet Tea in UK, 2016
- 437 CBI, Product factsheet Tea in UK, 2016
- 438 CBI, Product factsheet Tea in UK, 2016
- 439 CBI, Product factsheet Tea in UK, 2016
- 440 Oxfam-ETI, Understanding wage issues in the tea industry, 2013
- 441 CBI, Product factsheet Cocoa in UK, 2016
- 442 CBI, Product factsheet Cocoa in UK, 2016
- 443 BASIC, The dark side of chocolate, 2016, op. cit.
- 444 CBI, Product factsheet Rice in Europe, 2016
- 445 CBI, Product factsheet Frozen cultured Viannamei shrimp in Europe, 2015
- 446 Responsible and Inclusive Business, A Case study of the shrimp Value Chain, 2015 op. cit.
- 447 CBI, Product factsheet Frozen tuna in Europe, 2017
- 448 ILO, Migrant and Child Labor in Thailand's Shrimp and Other Seafood Supply Chains, 2015 op. cit.
- 449 European Fruit Juice Association, Liquid Fruit Market Report, 2016
- 450 Global 200 & Christliche Initiative Romero, Squeeze Out, 2016 op. cit.
- 451 Make Fruit Fair, Banana value chains in Europe and the consequences of Unfair Trading Practices; 2015
- 452 European Commission, DG Comp Merger Registry, Chiquita Brands International/ Fyffes merger procedure, 2014
- 453 Denis Loeillet, CIRAD, Contribution to the world banana forum: The international banana market - From one world to the other, February 2012
- 454 European Commission, DG Comp Merger Registry, Chiquita Brands International/ Fyffes merger procedure, 2014
- 455 Ibid.

- 456 Cf. Groceries Market Investigation, Competition Commission, April 2008: "Price flexing" within a national market is a recognised technique, which is condemned as being an "unfair practice" (However, international price flexing is not regulated by any international authority).
- 457 Grocer Magazine's Weekly "Grocer 33", May 2002
- 458 Banana Link, Collateral Damage: How price wars between UK supermarkets helped to destroy livelihoods in the banana and pineapple supply chains, November 2006
- 459 INCAE, Analisis de la estructura salarial en la industria bananer en Ecuador, 2012
- 460 'Make Fruit Fair', Banana value chains in Europe and the consequences of Unfair Trading Practices, 2015
- 461 Barrientos and Visser, South African horticulture: opportunities and challenges for economic and social upgrading in value chains, 2012
- 462 Oxfam International : Bouquets and beans from Kenya, 2013 op. cit.
- 463 R. Velarde, Derechos laborales en el sector de la agro-exportacion, Universidad Catolica Sede Sapientae, 2014 and S. Newett, Report on avocado orchard visits in Peru, Department of agriculture and fisheries of Queensland, 2015
- 464 Fairfood, The fruits of their labour: the low wages behind Moroccan tomatoes sold in European supermarkets, August 2014
- 465 Agriculture and Agri-food Canada, Modern grocery retailing in the United States, 2013 and Bord Bia, US Food & Beverage Market overview, 2014
- 466 Ibid.
- 467 Statista, Market share of U.S. food and beverage purchases in 2016, by company - <https://www.statista.com/statistics/240481/food-market-share-of-the-leading-food-retailers-of-north-america/> accessed on 28<sup>th</sup> May 2017
- 468 Brown Brothers Harriman, The Continued Rise of Premium Coffee in the U.S.: Will It De-Commoditize Coffee?, 2016
- 469 Brown Brothers Harriman, The Continued Rise of Premium Coffee in the U.S.: Will It De-Commoditize Coffee?, 2016
- 470 Food & Water Watch, Grocery Goliaths: how food monopolies impact consumers, 2013
- 471 International Trade Centre, The Coffee Exporter's Guide, 2013
- 472 BASIC, Who's got the Power?, December 2014 op. cit.
- 473 Technoserve-IDH, Colombia: A business case for sustainable coffee production, 2014  
BASIC, Who's got the Power?, December 2014 op. cit.
- 474 Agri-Food Canada: American eating trends report: Tea, 2012
- 475 Food & Water Watch, Grocery Goliaths: how food monopolies impact consumers, 2013
- 476 Oxfam-ETI, Understanding wage issues in the tea industry, 2013
- 477 FBP, Market Analysis of Confectionery in the US, 2016
- 478 Food & Water Watch, Grocery Goliaths: how food monopolies impact consumers, 2013
- 479 BASIC, The dark side of chocolate, 2016, op. cit.
- 480 USITC, Rice: Global competitiveness of the US Industry, 2015 op.cit.
- 481 USITC, Rice: Global competitiveness of the US Industry, 2015 op.cit.
- 482 Food & Water Watch, Grocery Goliaths: how food monopolies impact consumers, 2013
- 483 <http://www.seafoodhealthfacts.org/seafood-choices/overview-us-seafood-supply> accessed on 3rd June 2017
- 484 <http://www.seafoodhealthfacts.org/seafood-choices/overview-us-seafood-supply> accessed on 3rd June 2017
- 485 Food & Water Watch, Grocery Goliaths: how food monopolies impact consumers, 2013
- 486 Responsible and Inclusive Business, A Case study of the shrimp Value Chain, 2015 op. cit.
- 487 <http://www.seafoodhealthfacts.org/seafood-choices/overview-us-seafood-supply> accessed on 3rd June 2017
- 488 <http://www.seafoodhealthfacts.org/seafood-choices/overview-us-seafood-supply> accessed on 3rd June 2017

- 489 Food & Water Watch, Grocery Goliaths: how food monopolies impact consumers, 2013
- 490 ILO, Migrant and Child Labor in Thailand's Shrimp and Other Seafood Supply Chains, 2015 op. cit.
- 491 FoodNews, Global Outlook, 2017
- 492 Global 200 & Christliche Initiative Romero, Squeeze Out, 2016 op. cit.
- 493 E. Evans & F. Ballen, University of Florida, Food and Resource Economics Department, The US Banana market, February 2012
- 494 Denis Loeillet, CIRAD, Contribution to the world banana forum, 2012 op. cit.
- 495 Denis Loeillet, CIRAD, Contribution to the world banana forum, 2012 op. cit.
- 496 INCAE, Analisis de la estructura salarial en la industria bananer en Ecuador, 2012
- 497 'Make Fruit Fair', Banana value chains in Europe and the consequences of Unfair Trading Practices, 2015
- 498 Veneto Promozione S.c.p.A, Overview of the South African Retail Market, 2013
- 499 Gauteng Province, The Retail Industry on the rise in South Africa, 2012
- 500 Nortons Inc, Grocery retail sector market inquiry, 2016
- 501 PWC, South African retail and consumer products outlook 2012-2016, 2012
- 502 Veneto Promozione S.c.p.A, Overview of the South African Retail Market, 2013 op. cit.
- 503 BASIC, Who's got the Power?, December 2014 op. cit.
- 504 Technoserve-IDH, Colombia: A business case for sustainable coffee production, 2014  
BASIC, Who's got the Power?, December 2014 op. cit.
- 505 Oxfam-ETI, Understanding wage issues in the tea industry, 2013
- 506 BASIC, The dark side of chocolate, 2016, op. cit.
- 507 ILO, Migrant and Child Labor in Thailand's Shrimp and Other Seafood Supply Chains, 2015 op. cit.
- 508 Barrientos and Visser, South African horticulture: opportunities and challenges for economic and social upgrading in value chains, 2012
- 509 Oxfam International : Bouquets and beans from Kenya, 2013 op. cit.
- 510 USDA, Retail Foods in Thailand, 2016
- 511 Ibid.
- 512 Ibid.
- 513 Oxfam-ETI, Understanding wage issues in the tea industry, 2013
- 514 BASIC, The dark side of chocolate, 2016, op. cit.
- 515 ILO, Migrant and Child Labor in Thailand's Shrimp and Other Seafood Supply Chains, 2015 op. cit.
- 516 Global 200 & Christliche Initiative Romero, Squeeze Out, 2016 op. cit.
- 517 DBS Groups Research, Industry Focus: ASEAN Grocery Retail, 2015
- 518 Ibid.
- 519 Ibid.
- 520 Ibid.
- 521 Oxfam-ETI, Understanding wage issues in the tea industry, 2013
- 522 BASIC, The dark side of chocolate, 2016, op. cit.
- 523 ILO, Migrant and Child Labor in Thailand's Shrimp and Other Seafood Supply Chains, 2015 op. cit.
- 524 Global 200 & Christliche Initiative Romero, Squeeze Out, 2016 op. cit.

# ACKNOWLEDGEMENTS

This report has been jointly produced by the whole team of BASIC (Bureau for the Appraisal of Societal Impacts for Citizen information).

In BASIC, Christophe Alliot was the lead author of the final report and led the research team. Sylvain Ly provided key strategic guidance throughout the study on the research methodology, the management of the project, and the global analysis. Matthias Cortin and Hugo Segre played an invaluable role in gathering and analysing the extensive quantitative data required for this study, and Marion Feige-Muller for the qualitative data and analysis.

Excellent additional help was received from Dorra Salami who made her internship in BASIC during the whole project, Lise Duval who helped define the research methodology and control the quality of the research, and Pierre-Marie Aubert from IDDRI (Institute for Sustainable Development and International Relations) who provided key guidance on future projections.

Important support and key inputs were also provided by several people in partner organisations, in particular Oxfam International, Oxfam national teams in the UK, the Netherlands, Germany the USA, Thailand and Indonesia, CLAC (Coordinadora Latino-Americana de Comercio justo), CIRAD and Banana Link.

## Oxfam Research Reports

Oxfam Research Reports are written to share research results, to contribute to public debate and to invite feedback on development and humanitarian policy and practice. They do not necessarily reflect Oxfam policy positions. The views expressed are those of the author and not necessarily those of Oxfam.

For more information, or to comment on this report, email [XXX research contact or author email if needed]

© Oxfam International Month 20XX

This publication is copyright but the text may be used free of charge for the purposes of advocacy, campaigning, education, and research, provided that the source is acknowledged in full. The copyright holder requests that all such use be registered with them for impact assessment purposes. For copying in any other circumstances, or for re-use in other publications, or for translation or adaptation, permission must be secured and a fee may be charged. Email [policyandpractice@oxfam.org.uk](mailto:policyandpractice@oxfam.org.uk)

The information in this publication is correct at the time of going to press.

Published by Oxfam GB for Oxfam International under ISBN XXX-X-XXXXX-XXX-X in Month 20XX.  
Oxfam GB, Oxfam House, John Smith Drive, Cowley, Oxford, OX4 2JY, UK.

# OXFAM

Oxfam is an international confederation of 20 organizations networked together in more than 90 countries, as part of a global movement for change, to build a future free from the injustice of poverty. Please write to any of the agencies for further information, or visit [www.oxfam.org](http://www.oxfam.org)

Oxfam America ([www.oxfamamerica.org](http://www.oxfamamerica.org))  
Oxfam Australia ([www.oxfam.org.au](http://www.oxfam.org.au))  
Oxfam-in-Belgium ([www.oxfamsol.be](http://www.oxfamsol.be))  
Oxfam Canada ([www.oxfam.ca](http://www.oxfam.ca))  
Oxfam France ([www.oxfamfrance.org](http://www.oxfamfrance.org))  
Oxfam Germany ([www.oxfam.de](http://www.oxfam.de))  
Oxfam GB ([www.oxfam.org.uk](http://www.oxfam.org.uk))  
Oxfam Hong Kong ([www.oxfam.org.hk](http://www.oxfam.org.hk))  
Oxfam IBIS (Denmark) ([www.ibis-global.org](http://www.ibis-global.org))  
Oxfam India ([www.oxfamindia.org](http://www.oxfamindia.org))  
Oxfam Intermón (Spain) ([www.intermonoxfam.org](http://www.intermonoxfam.org))  
Oxfam Ireland ([www.oxfamireland.org](http://www.oxfamireland.org))  
Oxfam Italy ([www.oxfamitalia.org](http://www.oxfamitalia.org))

Oxfam Japan ([www.oxfam.jp](http://www.oxfam.jp))  
Oxfam Mexico ([www.oxfammexico.org](http://www.oxfammexico.org))  
Oxfam New Zealand ([www.oxfam.org.nz](http://www.oxfam.org.nz))  
Oxfam Novib (Netherlands) ([www.oxfamnovib.nl](http://www.oxfamnovib.nl))  
Oxfam Québec ([www.oxfam.qc.ca](http://www.oxfam.qc.ca))  
Oxfam South Africa ([www.oxfam.org.za](http://www.oxfam.org.za))

Observer:

Oxfam Brasil ([www.oxfam.org.br](http://www.oxfam.org.br))