

# The Food Supply Chain

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Contact: DG Agriculture and Rural Development, Unit Farm Economics

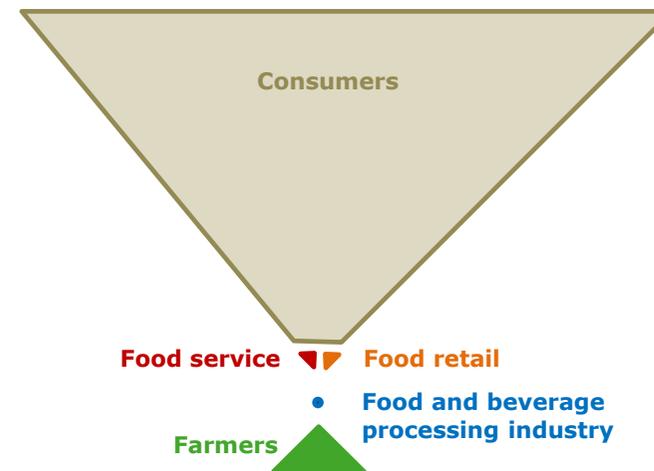
Tel: +32-2-29 91111 / E-mail: [AGRI-C3@ec.europa.eu](mailto:AGRI-C3@ec.europa.eu)

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## 1. Actors of the Food Supply Chain

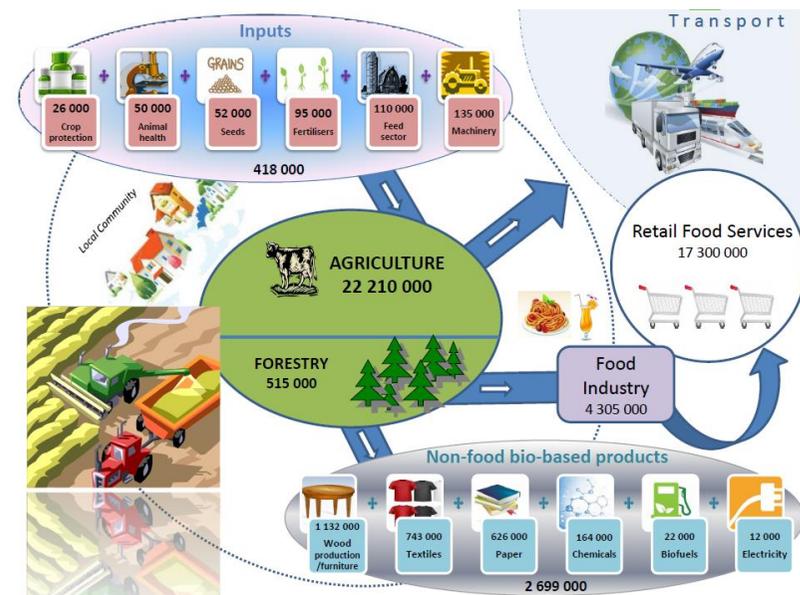
- The number of actors in the food chain varies greatly at each level. In the EU, around 11 million farms produce agricultural products for processing by about 300 000 enterprises in the food and drink industry. The food processors sell their products through the 2.8 million enterprises within the food distribution and food service industry, which deliver food to the EU's 500 million consumers.
- Primary agriculture still provides work for roughly 22 million people (both full time and part time). Furthermore, together with food processing, food retail and food services, agriculture makes up a sector providing nearly 44 million jobs in the EU.
- The majority of the over 15 million holdings/enterprises in the food chain are small or medium sized. For agriculture, 70% of all farms in the EU-28 were smaller than 5 ha and only 2.7% were over 100 ha in 2010.
- But if small businesses or enterprises characterise all stages of the food chain, concentration in the food processing industry and retail sectors is much higher than in the agricultural sector. The market share of the top five firms (or C5 concentration ratio) in the EU food industry was at an average of 56% in 2012 in 14 of the EU's Member States. At the same time, in 13 Member States the share of the top five retailers exceeded 60%.
- As a land-based activity, agriculture is facing physical, logistical, economic and regulatory limits to concentration. At the EU level, the C5 concentration ratio in agriculture in 2010 accounted for 0.19%. At Member State level this ratio ranged from 0.4% in Germany to around 9% in Estonia.
- Concentration helps achieve economies of scale but also reduces the number of players downstream in the food chain, endowing them with higher bargaining power when negotiating with their counterparts. Higher bargaining power is not problematic in itself, but its abuse is at the basis of unfair trading practices in the food chain.

**Figure 1: Synthetic and approximate representation of the food chain in the EU by actors involved**



Source: DG Agriculture and Rural development based on Eurostat; the number of holdings/enterprises per food chain stage and number of consumers are represented by the size of each shape.

**Figure 2: Number of persons employed in farming, forestry and related industries**



Sources: JRC, *The Bioeconomy in the EU in numbers*, 2015; Eurostat, *Structural Business Statistics*, 2015; \* Full- and part-time jobs; Eurostat, *Farm Structure Survey*, 2013 (provisional). In the case of input figures: industry sources.

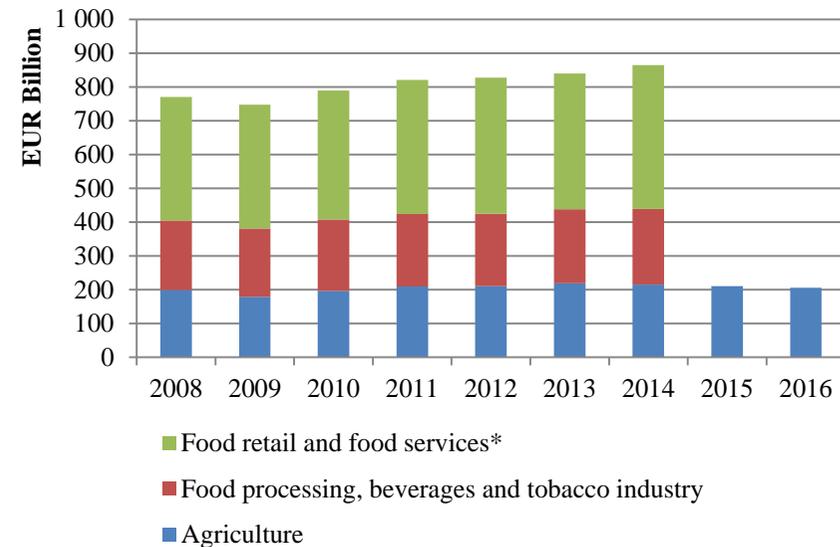
## 2. Distribution of Value Added

- While the largest number of businesses is involved in agriculture, the share of value added belonging to agriculture in the whole food chain remains at about 25%, with the exception of crisis year 2009.
- Value added in agriculture has decreased from 2014 onwards (in 2016 4% lower).
- Following the increasing consumer demand for convenience products, the processing and the retail stages have added additional features and services to the basic agricultural product, thus expanding their total value added in the food chain. The value added of agriculture has not increased to the same extent as that of other food chain actors, especially compared to the retail sector. Factors explaining this evolution are linked to increasing input costs due to competition for scarce resources as well as the limited possibilities for farmers to add value to the basic product or to get remunerated for it.

## 3. Price Transmission

- Though food represents a declining share of the household budget, since 2007 food prices grew faster than prices for other goods, driving up overall inflation.
- Several factors contribute to this evolution: the increasing global demand for food, the slowdown in productivity growth in agriculture (related to scarce natural resources and land) as well as increasing input prices, the growing link between agriculture and price trends in other commodities (e.g. energy), etc.
- Two more recent issues related to price transmission in the food chain are of concern: price volatility and asymmetric price transmission. In terms of price volatility (price variation through time at every step of the food chain) for different food products, there would appear to be a clear smoothening effect downstream in the food chain. This is essentially caused by the fact that raw material represents only a small share of the cost of the final food product.

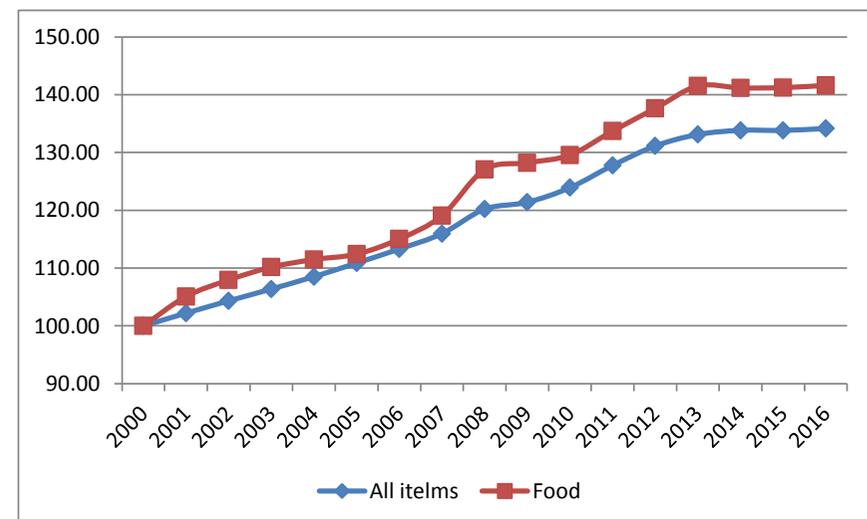
**Figure 3: Distribution of gross value added per food supply stage in the EU**



Source: Eurostat, Economic Accounts for Agriculture (aact\_eaa01) and Structural Business Statistics (sbs\_na\_sca\_r2, sbs\_na\_dt\_r2 and sbs\_na\_1a\_se\_r2).

\* EU-27 data for 2008-2010; EU-28 data for 2011-2012.

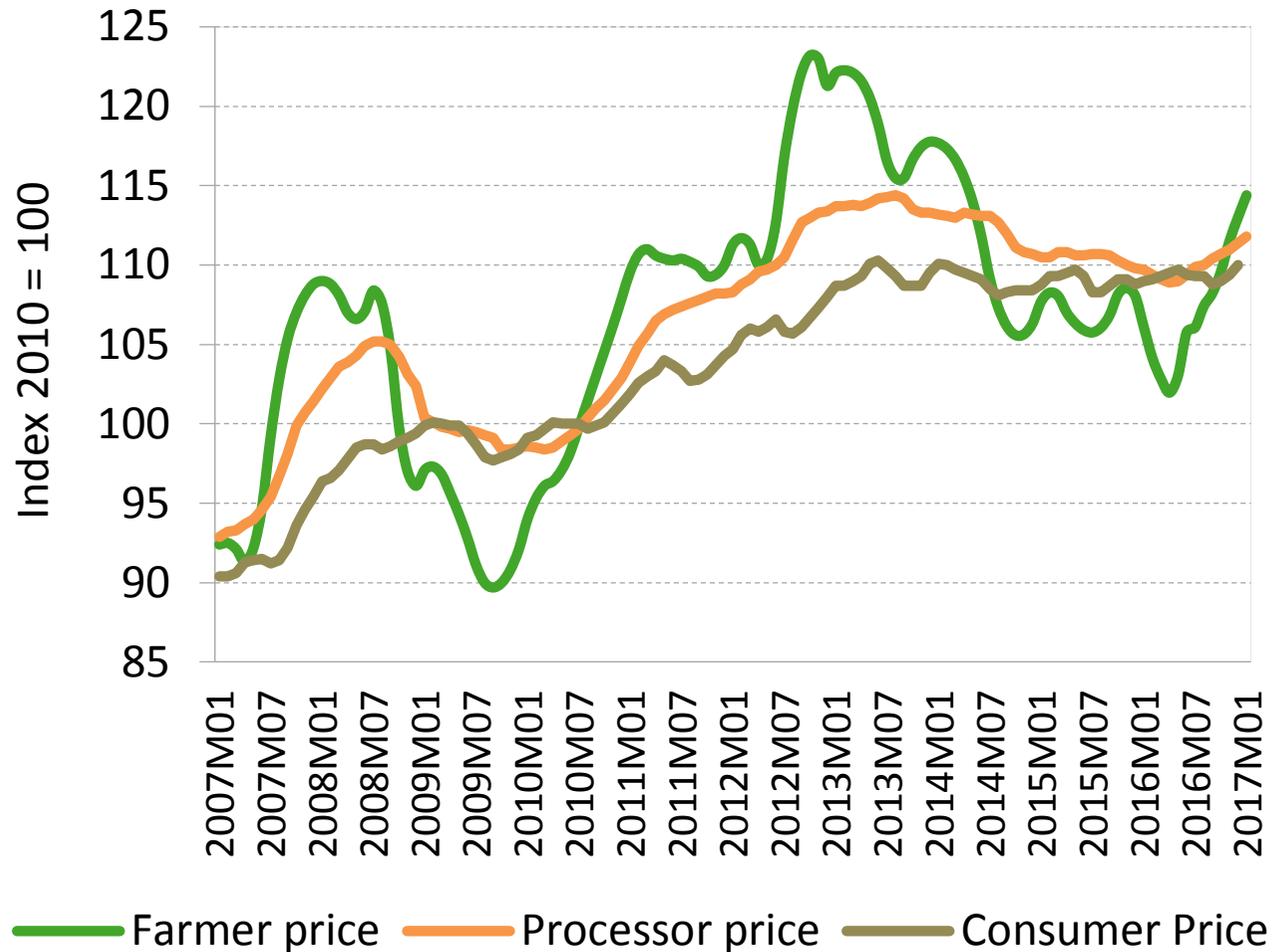
**Figure 4: Consumer price index for food and all items in the EU-28**



Source: Eurostat, Harmonised Index of Consumer prices

- Consumer prices for certain products (e.g. wheat to bread and oils and fats food chains) tend to rise only slightly in response to raw material price increases, which should be good news for consumers. However when prices for raw materials fall, consumer prices tend to remain unaffected by this change. This phenomenon is known as asymmetric price transmission.

Figure 5: Food supply chain index for EU-28 (2007-March 2017)



Source: Eurostat, Food Prices Monitoring Tool (prc\_fsc\_idx) and DG Agriculture and Rural Development based on data provided by the Member States.