European Commission

MODERNISING & SIMPLIFYING THE CAP

Economic challenges facing EU agriculture

#FutureofCAP

Agriculture and Rural Development

EUROPEAN COMMISSION
DIRECTORATE-GENERAL FOR AGRICULTURE AND RURAL DEVELOPMENT

MODERNISING AND SIMPLIFYING THE CAP

Background Document

Economic challenges facing EU agriculture

Contents

Commission européenne/Europese Commissie, 1049 Bruxelles/Brussel, BELGIQUE/BELGIË - Tel. +32 22991111
Office: L130

Disclaimer
The contents of this publication do not necessarily reflect the position or opinion of the European Commission.
Closing date: 11 December 2017

SCOPE

This document was developed by a team working within the Directorate General for Agriculture and Rural Development to provide background evidence and analysis on the predominantly economic dimensions of the global challenges facing EU agriculture. Related documents address the environmental and wider socio-economic dimensions for EU agriculture and rural areas. These papers form part of the preparatory stage of the Impact Assessment related to the modernisation and simplification of the Common Agricultural Policy (CAP). While a wealth of information is available, this review focuses on evaluations and other studies carried out for/by the EU Institutions, as well as data emanating from pan-EU or international sources.

Additional facts and figures are available on-line:
https://ec.europa.eu/agriculture/statistics/facts-and-figures_en

Challenges were selected according to their EU dimension, their magnitude and their relevance to the CAP. The document includes broader elements on Strengths, Weaknesses, Opportunities and Threats (SWOT).

On the basis this analysis, the paper identifies as the main economic challenges facing agriculture and rural areas:

- **pressures on farm income**
- **weaknesses in productivity and competitiveness**
- **imbalance in value chains**.

A glossary on the CAP is available on line:
https://ec.europa.eu/agriculture/sites/agriculture/files/glossary/pdf/index_en.pdf

1. ECONOMIC STRENGTHS, WEAKNESSES, OPPORTUNITIES AND THREATS FOR EU AGRICULTURE

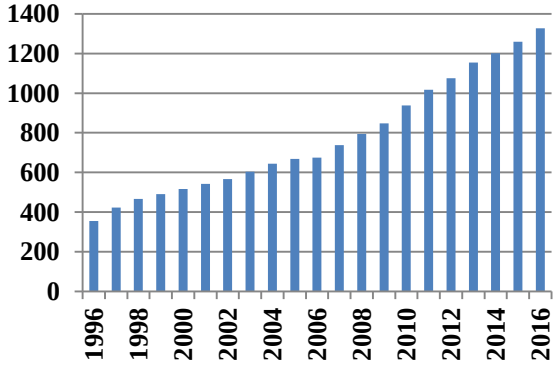
This section selects main economic Strengths, Weaknesses, Opportunities and Threats (SWOT) of EU agriculture. In this paper, strengths and weaknesses are inherent to EU agriculture itself, while opportunities and threats relate more to external drivers. This SWOT analysis helps identifying the economic challenges facing EU agriculture.

1.1. Strengths

A majority of European farmers are operating in a **favourable production environment**, with good agro-climatic conditions and most often high quality production factors (such as soils, skilled labour, inputs, developed logistics and infrastructures, or advanced research and innovation). They produce a wide range of **safe and high value foods**, with a high level of quality in terms of food safety, nutritional value, taste, cultural and heritage value, methods of production, thus responding to the trend in consumer demand pushing in such direction (the increasing number of products with Geographical Indications (GI, Figure 1) and a very dynamic organic sector[1] are just two examples of response to such trends).

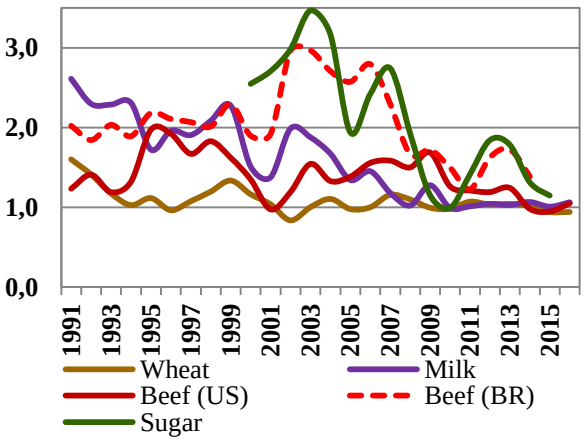
EU production and farming structures are highly diversified, allowing the sector to respond to different market and consumer demands. The market environment in which they operate is also very conducive, with a single market of a large and comparatively wealthy domestic consumer base, and expansion in foreign markets linked to population and income growth. A common approach towards supporting agriculture ensures fair conditions for EU farmers competing on the internal European market and globally.

Figure 1. Strong growth of number of Food PDO's and PGI's registered in the EU



Source: Statistical Annex, fact sheet on protected designations of origin (PDOs) – protected geographical indications (PGIs)

Figure 2. Gap between EU and world prices closing (ratio EU vs. world price)



Source: AGRI calculations based on European Commission AGRI and OECD data

For a number of primary key agricultural products, such as wheat, maize or milk, EU farm yields are well above global yields, although some pronounced differences exist between regions and farms. Long traditions for breeding programmes, integrated research and, in most Member States, development and well-functioning Agricultural Knowledge

[1] See for example Sanders et al. (2016) Distribution of value added of organic farming, DG AGRI external study or SDG indicator Area of organic farming

and Innovation Systems (AKIS) and a high level of organisation within the farming sector are contributing factors.

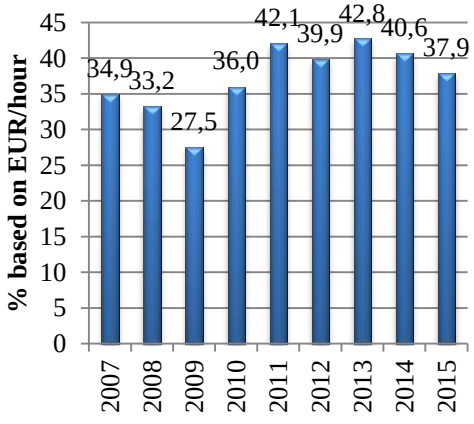
Many farmers operate in an **innovative food chain** which has the capacity to respond to changing demand trends due to its diversity in structures, technologies and products. EU food chains are **diverse and adaptive**, enabling them to meet the various consumers' expectations, helping some producers increase value added.

The success of EU agriculture is also shown by its record export performance, which in 2016 reached EUR 131 billion, and its **positive agro-food trade balance** (EUR 19 billion in 2016), a switch in trade position since the beginning of the current decade.[2] CAP reforms played an important role in this development, leading to better market orientation of agricultural production and increased competitiveness of EU producers. The closing of the gap between EU and world prices (see Figure 2) amply illustrates this. Many export oriented operators in the EU are in a position to keep their stand in international competition despite higher costs, thanks to their good non-price competitiveness assets and due to the reputation of high-standard EU products on global markets.

1.2. Weaknesses

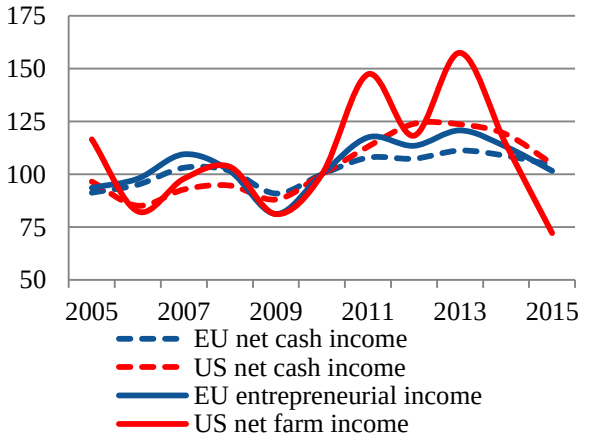
Income in the farming sector is generally **low** and below what can be achieved in other sectors in the economy (on average only 40% of average wages in the EU-28 economy, Figure 3a)[3]. Within the farming sector there are huge **differences** in income level between different regions, size classes and sectors[3]. Income is also quite **volatile**, with up to 20% of farmers experiencing income drops above 30% each year[3]. For several sectors (e.g. permanent crops, horticulture, granivores) swings are even larger[3]. With increased openness to world market and climate change expected to exacerbate, risks that this situation may not improve are significant. Of course this fact does not only characterise the EU. In fact, world wide farm incomes have come under significant pressure in recent years, and in this respect EU farm income is faring better than that in the US, where different farm policy choices were made (Figure 3b).

Figure 3a. Entrepreneurial income per family work unit compared to average wages in the economy EU-28



Source: Statistical annex Agricultural farm income

Figure 3b. Variability of EU versus US nominal farm income (2010=100)



Source: AGRI calculations based on ESTAT and ERS/USDA data

[2] https://ec.europa.eu/agriculture/sites/agriculture/files/trade-analysis/monitoring-agri-food-trade/2016- 12_en.pdf

[3] See Statistical Annex Agricultural farm income.

The EU's farm population is also **ageing**[4] as new entrants find it difficult to access capital and land, while prospects for reversing this trend are not promising given the overall demographic trends in the EU. There are also important **structural constraints**, with many small farms, limited land availability, and diverse land market, taxation and inheritance legislation within MS.

Years of low investments in research and development in the EU[5], coupled in some Member States with very weak AKIS, led to sub-optimal productivity growth rates. EU agricultural **productivity growth is slowing down** – averaging 0.8% annually in 2005-2015, compared with 1% per year in 1995-2005.[6] At the same time, EU **production costs** are relatively **high** in some sectors - especially owing to higher labour, land costs and environmental/sanitary standards. There are also significant **gaps in economic performance** between farmers, as highlighted by a very wide distribution of margins (spread).[3] Furthermore, EU farmers experience **some legal limitations** towards some innovations in comparison to competitors, following health/environmental assessment of risks and/or societal choices (e.g. GMOs).

Compared to most producers in third countries, EU farmers face **higher costs for compliance with legislation compared to competitors** in the fields of the environment, animal welfare and food safety. Even though low in reference to total cost of production, they still exert weight on farmers' profitability. Animal farms face the highest related costs, where pig and poultry farms pay 5 to 10% of production costs for compliance with legislation. Dairy, beef and sheep meat producers allocate 2 and 3% respectively and crop farms pay between 1 and 3.5% of their production costs for legislative compliance.

EU average production costs for wheat and beef across all types of farms, varying in size, location and productivity, tend to be higher than in other world regions (Figure 4, next page). For example wheat costs are lower in Argentina, Canada, Russia and Ukraine, whereas those in the US and Brazil amount to equivalent EU levels. For beef producers in the Americas prove to be more cost efficient, enabling their producers to dominate world markets. Also for sheep, poultry, milk and maize EU production costs tend to be higher compared to competitors[6].

In terms of producer prices, for several commodities the EU ranges among the pricier markets (e.g. beef, sugar). Consequently, world market prices might appear more favourable for producers in third countries who then might push for higher market shares. Likewise, if the difference exceeds transport costs and remaining import duties, the European market could increasingly become a target market for external suppliers and hence become more challenged domestically.

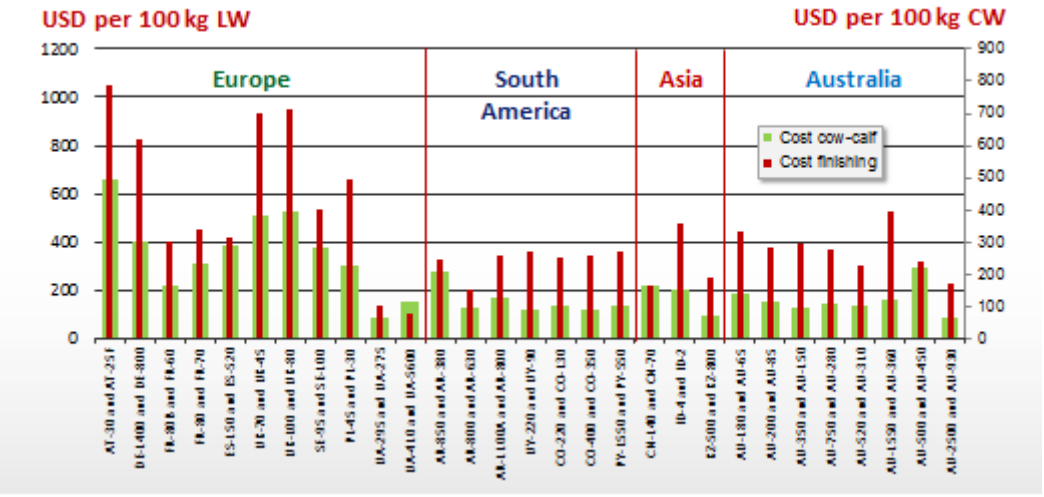
---

4 CAP context indicator C23.

5 The Europe 2020 strategy aims at improving the conditions for innovation, research and development, with in particular the ambition to increase public and private investment in R&D to 3 % of the GDP by 2020. According to recent Eurostat data (May 2016), the EU gross domestic expenditure on R&D as a percentage of GDP was stable at around 1.8 % between 2002 and 2007. It has increased to reach 2.03 % in 2014 but there are concerns that the Europe 2020 target of 3 % will not be reached. In Ecorys et al. (2016) Mapping and analysis of the implementation of the CAP.

6 See DG AGRI (2016) Productivity in EU agriculture – slowly but steadily growing. EU Agricultural Market Brief 10 or see Statistical Annex Production, yields and productivity.

Figure 4. Total costs of complete cycle farms[7] (2015)



Source: AgriBenchmark, Thünen Institut

There are clear **bargaining asymmetries** with limited power for individual farmers. Price transmission is also not always perfect, with **asymmetric price transmission** reaping gains from farmers. **Unfair trading practices** (UTP) tend to persist.[8] Across the food supply chain, many developments such as increased concentration and vertical integration (including retailer private label products) have led to profound structural changes throughout the EU.

In the upstream part of the supply chain, structural changes for agricultural producers have taken place but have been of a lesser magnitude and rate compared to downstream sectors. This can be explained by a reduced mobility of production factors, such as land, labour and capital as well as inelastic consumer demand. Although structural changes are taking place at a rapid pace, **concentration in the farming sector remains very low,** as the sector mainly consists of micro enterprises. At the EU level, the CR5 in 2010 accounts for 0.19% (ranging from 0.4% in Germany to around 9% in Estonia).[9] A calculation of the Herfindahl index (HHI), a similar measure of market concentration, results to 0.015 if only the largest 50 farms are considered.

While producers increasingly join forces in producer organisations (POs), wide differences remain across Europe as to the strength of such organisations. In some sectors and MS, **farmers are reluctant to cooperate** to protect their interests in some sectors and MS – e.g. because of a lack of trust, gaps in knowledge, or for historical/cultural reasons. Even in the fruit and vegetables sector, with a relatively high organisation rate, only half of the value of all marketable produce is marketed via **producers organisations (POs)** in 2015[10], compared with a CAP target of 60%. There are important **differences in PO membership** across the EU.

A recent study on POs in the dairy sector shows large differences in PO membership between MS depending on the level of organisation in the farm and downstream sectors

7 Farms producing both animals and their own feed

8 See Agricultural Market Task Force final report

9 CR5: Concentration ratio, the market share of the 5 largest firms in the industry, calculated in the case of farming on the base of the Farm Structural Survey 2010

10 Member States notifications

and the perceived (dis)advantages.[11,12] The annual marketable production of the 259 POs recognised for cow's milk would approximate 13% of total EU milk deliveries in 2015 and 37% of total EU milk deliveries outside of the cooperative circuits.[13]

Despite the existence of **cooperatives**, a specific form of producer organisation which often engages in processing activities,[14] agriculture is the least concentrated part of the chain.[15] A COPA-COGECA study[16] shows that EU cooperatives maintain a strong market presence in the EU food supply chain. Cooperatives hold substantial market shares in agriculture[17] in the Netherlands (83%), Finland (79%), Italy (55%), and France (50%). However, in the EU-13 Member States, history has created a negative image for farmer organisations which led to a very low degree of penetration of cooperatives (below 25% compared to 40% or above in the EU-15 Member States). Cooperatives account for a large share of farm product market in some sectors but not in others: the dairy sector is predominantly organised in cooperatives (55%), while sugar and meat sectors have fewer cooperatives (25% for sugar or pigmeat).[18]

The differences between sectors are mainly due to the characteristics of the product and the production process. In the dairy and fruit and vegetables sectors cooperatives have an important market share, partly due to the perishability of the product and thus the high transaction costs in trading this product. Also in wine and olive oil, cooperatives are well developed. In sectors like cattle, pigs and sheep, the animals are often sold under contracts to traders or non-cooperative slaughterhouses, although in some countries cooperatives continue to have substantial market shares in these sectors.

In some Member States and farm types, farmers are facing high debt levels. This can be partly linked to overinvestment (in machinery, buildings etc), especially prior to the financial crisis, but also to difficult access to finance given the low and volatile returns in the sector. The lack of liquidity in a volatile price and production environment poses a threat to otherwise viable farms.

More recently, Gross Fixed Capital Formation (GFCF) in agriculture in the EU-28, which measures how much of the value added is invested rather than consumed, faced a

---

11 For the dairy sector, given its specific nature, exemptions were made regarding general requirements for POs, as detailed in the Milk Package, CMO Regulation (EU) 1308/2013, being the only explicit sector derogation which allows recognized POs in dairy to engage in bargaining activities.

12 Wijnands et al (2017). Analyses of the Functioning of Milk Package provisions as regards Producer Organisations and collective negotiations. European Commission, Joint Research Centre, EUR 28762 EN, doi:10.2760/157364.

13 EC (2016) Report from the Commission to the European Parliament and the Council, Development of the dairy market situation and the operation of the "Milk Package" COM(2016) 724 final

14 In some sectors cooperatives have sought and received recognition as a POs (eg fruit and vegetables).

15 Cooperatives are often owned and financed by farmers, for whose benefits they were created, see in greater detail, https://ec.europa.eu/agriculture/sites/agriculture/files/external-studies/2012/support-farmers-coop/fulltext_en.pdf, page 8.

16 COPA-COGECA Report on Cooperatives 2014 http://zadruge.coop/upload_data/site_files/development-of-agricultural-cooperatives-in-the-eu_2014.pdf

17 https://ec.europa.eu/growth/sectors/social-economy/cooperatives_en

18 Bijman J. et al. (2012), Support for Farmers' Cooperatives. DG AGRI external study, https://ec.europa.eu/agriculture/external-studies/support-farmers-coop_en Support for Farmers Cooperatives Nov 2012, page 11 and page 13 http://ec.europa.eu/agriculture/sites/agriculture/files/external-studies/2012/support-farmers-coop/fulltext_en.pdf

decrease at an average annual rate of -2.1% between 2008 and 2014. In a number of MS net investments per farm were negative between 2010-2013.[19]

A recent study (FP7 – Flint) shows that innovators are few and far in between in the EU farm sector. On average, about 41% of the farms surveyed have introduced new products and processes within the last three years. However in all Member States except Finland, most farms innovate in processes that are not new to the market. The study also shows that larger and specialised farms are more likely to adapt and introduce changes in their operations than smaller, medium sized or mixed farms.

1.3. Opportunities

Trends in food demand and **exports** provide opportunities for further growth. **High consumer expectations** (e.g. traceability, food safety/health, animal welfare, environment protection) coupled with high EU standards offers opportunities for high value markets. On the **internal market**, a number of developments and changes in consumption patterns are also showing potential to improve farm economics. These relate for instance to the development of the **bio-economy**, the **green economy** and the **circular economy**.

A number of new opportunities is developing related to the increased consumer interest in **local food and short supply chains**. On average, about 15% of EU farms sell more than half of their production directly to consumers. However, these are mainly small farms (between 1 and 8 Economic Size Units - ESU), with only 3% of the farms above 100 ESU selling more than half of their production directly to consumers.

There are significant differences between Member States: while the share of farms involved in direct sales is nearly 25% in Greece, 19% in Slovakia and around 18% in Hungary, Romania and Estonia, it is less than 5% in Malta, Austria and Spain. In France, 21% of farmers sell their products within SFSC, and half of those producing vegetables and honey are involved in Short Food Supply Chains (SFSC).[20]

An ambitious programme of **trade negotiations** has increased **market access** for agricultural products, offering new outlets to EU farmers. **Demand growth** due to population growth, increased purchasing power and a shift in consumption patterns in many parts of the world should be expected to continue in coming years.

Globalisation is not without risks, but it also brings its merits, with worldwide increasing trade and the development of global value chains. Europe's opportunities for growth in the agricultural sector lie to a great extent in supplying third countries' markets with safe and quality products, ranging from commodities to food preparations. From the global perspective, demand growth will mainly take place in **emerging markets**, where the economies grow at a high pace and purchasing power reaches levels to allow for a more diversified food consumption pattern. Furthermore, demand for agricultural products will keep rising in countries with high population growth. Following this logic, promising target markets lie for example in India, China and South-East Asia. African markets may also become increasingly attractive in the future.

---

19 See Statistical Annex Agricultural capital and land value

20 Augère-Granier M.-L. (2016) Short Food Supply Chains and Local Food Systems of the EU, European Parliamentary Research Service.

Traditional export markets such as the United States or the Middle East are expected to remain key export markets due to the importance of their import needs that are not expected to decrease in the near future. Initiatives to dismantle unjustified Sanitary and Phytosanitary (SPS) requirements and remove other Non-Trade Barriers (NTBs) are a continuous effort, as part of the negotiation of Free Trade Agreements (FTAs) but also independently, and provide an important opportunity to further increase export opportunities for EU agricultural products.

When tariff cuts are implemented with a partner country as part of an FTA, the monitoring of SPS requirements gains in importance to ensure that such measures are not used as a way to block real market access. At the same time, the SPS policy in the EU remains an important element in safeguarding high EU standards that reflect societal preferences and expectations and that are not up for negotiation in trade agreements.

Technologies improving information, logistics and organization in the food chain can give another boost to EU food supply chains. Digitisation of agriculture and the further roll out of **precision farming** is also showing potential for cost reduction at the level of the farmer.[21]

As an example, economic savings of nitrogen fertilization using Variable Rate Application in Germany range between 10 EUR/ha and 25 EUR/ha, depending on the size of the field, with improvements on N efficiency by 10-15% reducing the application without impact on crop yield.

1.4. Threats

The increased opening of agricultural markets exposes EU farmers to more competition and makes them more directly dependent on worldwide market movements and trade developments. As regards the EU domestic market, **increased competition** for EU producers may be expected following the conclusion of bilateral FTAs where the EU is opening its market for higher quantities of reduced duty or duty free imports.

Specific vulnerable agricultural sectors, such as the beef sector but also sheep, rice, sugar and poultry, could come under substantial pressure with full trade liberalisation and unfettered competition with imports, as shown by the JRC-study on the cumulative impact of potential future FTAs on agriculture.[22]

Volatility is also growing, as dependency on other commodity markets, such as the energy market, increases. Severe **market disruptions** have to be expected to occur, given the increased pressure on natural resources, more extreme climatic events and potential outbreaks of animal and plant diseases and geo-political instability.

The rapid increase in **bilateral and regional trade agreements** across the world and the overall trend towards general trade liberalization might absorb parts of the competitive advantage the EU gains with individual bilateral FTAs.[23] The last decade has seen the **emergence of major players** on the global agricultural markets.

---

21 For boarder references see Schrijver et al (2016) Precision agriculture and the future of farming in Europe, Scientific Foresight Study, European Parliamentary Research Service.

22 Boulanger et al (2016) Cumulative free trade study, JRC report

23 See for example effect of Trans Pacific Partnership (TPP) on EU trade performance, in Boulanger et al (2016) Cumulative free trade study, report – Joint Research Centre (JRC)

The BRICS in particular have increased their global market share by 50% from 2000 to 2011-13. This reflects the investment of emerging developing countries in their agriculture in order to respond to the increase in global food demand. This is illustrated by the increase of the most market distorting parts of Producer Support Estimate (PSE) in China and Indonesia during recent years.[24] In comparison, the equivalent market distorting producer support in the EU was reduced from 63% in 1995-97 to 27% of total producer support in 2014-16.[25]

Some countries, like China, are also developing policies aiming at reaching self-sufficiency for some strategic commodities (e.g. rice). Latin American countries, especially Argentina and Brazil, are also investing in production for export and acquiring compliance with international hygiene standards. This implies that developed countries – the EU among them – are likely to become less dominant players on international agricultural markets over time.

Competitiveness on the world market may furthermore be highly influenced by **other factors** such as **energy prices** (or more broadly input costs), **available infrastructures, and exchange rates**. The EU is very well equipped concerning the various types of infrastructure necessary for the exportation of agricultural products. Although very difficult to predict, unfavourable developments are expected in the area of exchange rates for the time period between 2016 and 2026.[26] During this period the EUR is expected to appreciate against the currencies of major agricultural producers (Argentina, Brazil, Russia, New Zealand, US, China) between 1% and 5% annually. If this were to materialise, it would make European products comparably more expensive in the future.

Threats are also to be expected from **lack of consumer confidence** (due to fraud, gaps in controls, traceability issues), the **complexity of the supply networks**, with the growing length and complexity of the supply networks potentially decreasing the efficiencies of cooperation, making them more vulnerable to shocks, breakdowns in communication and misalignment of incentives. Diverse **price pressures** may also further materialize.

There are high concentration levels in both the food processing and food distribution sectors. The top three processing firms have a market share above 50% in many sectors. On the supply side, similar data on market concentration is not readily available at Member States level. Data at EU level suggests that the food production sector has a larger share of SMEs than the retail sector. At EU level, SMEs represent 49% of the turnover and 63% of total employment in the food supply sector. In terms of number of businesses, SMEs represent 99% of all operators in the food supply sector[27] and in 16 Member States micro-enterprises (10 employees or less) represent more than 50% of the operators.

---

[24] The percentage Producer Support Estimate (PSE, calculated by the OECD) indicates the proportion of the revenue an agricultural sector generates which originates from public support mechanisms. The most market distorting PSE refers to support mechanisms associated with red and amber box subsidies in the WTO terminology.

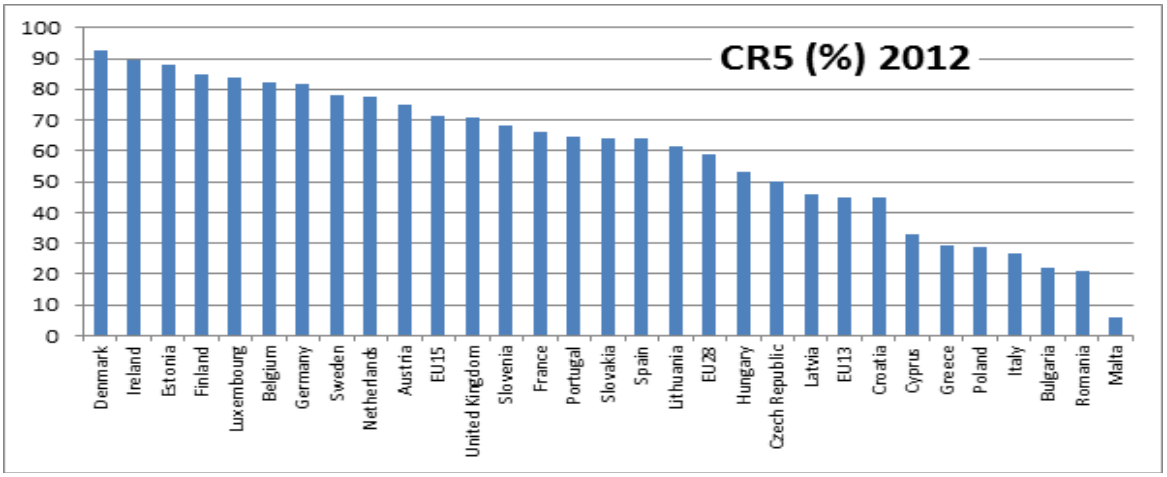
[25] OECD (2017), Agricultural Policy Monitoring and Evaluation 2017, OECD Publishing, Paris. http://dx.doi.org/10.1787/agr_pol-2017-en

[26] DG AGRI (2016). EU Agricultural Outlook Report.

[27] Figures from FoodDrinkEurope

The food distribution market is also highly concentrated. Food is mostly distributed through supermarkets, hypermarkets and discounters, which account for 54% of total edible grocery sales in the EU. In 2014, the share of the top five retailers exceeded 60% in 13 Member States.[28] Figure 5 below illustrates the market share of the five largest retailers in food markets.

Figure 5. Concentration ratio in the retail sector in the different Member States



Source: Planet retail, 2012

Concentration effects are not necessarily harmful. However, if increased market concentration is complemented by a lack of alternative trading partners or prohibitively high cost of switching trading partners, severe economic imbalances may occur. Such economic imbalances can be misused and lead to the development of unfair trade practices. In a survey undertaken on behalf of the UK Competition Commission, suppliers said that it was very difficult (61% of respondents) or fairly difficult (23%) to replace the customer from whom the lowest margins are received.

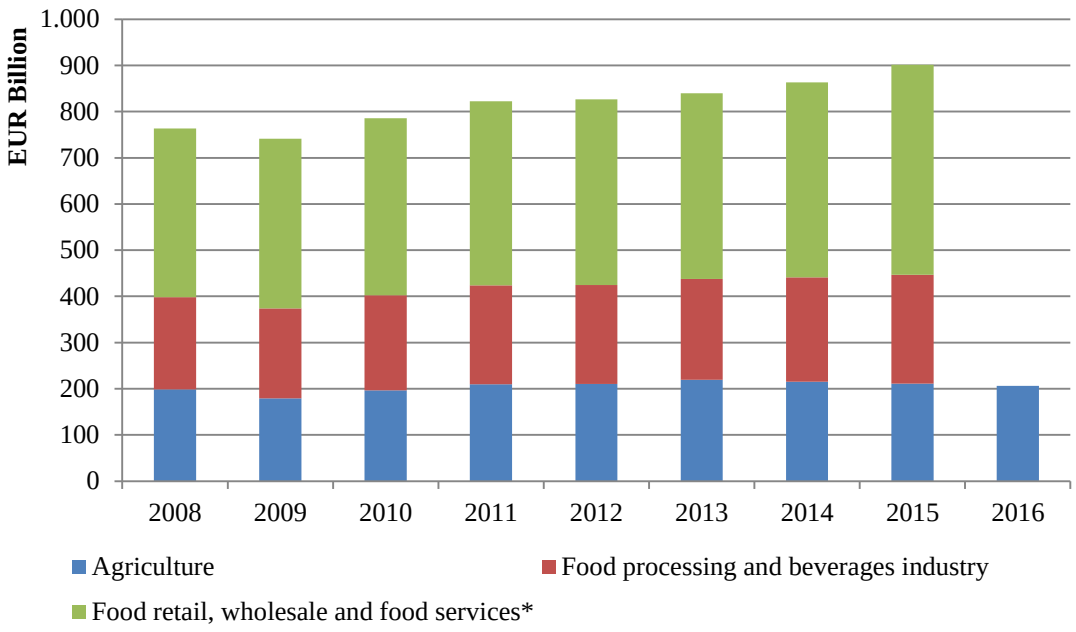
Lack of market transparency (Food Price Monitoring indices) is also an issue.[29] Market transparency can be defined as the availability of relevant market information (e.g. concerning prices, weather, production, trade, consumption and stocks) for all market participants. To support business decision-making in the supply chain, this information is required. For a full picture an understanding of the evolution of prices and value added at all stages of the supply chain would be useful. But farmers have rather limited (price) information concerning the downstream stages of the supply chain whereas the primary producer prices are transparent.

Figure 6 and Table 1 illustrate gaps, in 2017 data on value added for 2016 is only available for agriculture. A missing link is prices - and their evolution - between processors and their downstream partners. This kind of data could provide information about the value of the farmer´s product as it is being processed and marketed along the chain.

[28] European Commission Report 'The economic impact of modern retail on choice and innovation in the EU food sector', 2014 (http://ec.europa.eu/competition/publications/KD0214955ENN.pdf).

[29] Report of the Agricultural Markets Task Force (the AMTF report) November 2016, Part II, 4: Market transparency; https://ec.europa.eu/agriculture/sites/agriculture/files/agri-markets-task-force/improving-markets-outcomes_en.pdf

Figure 6. Distribution of value added in the EU food supply chain



Source: Statistical Annex on Food chain.

Table 1. Overview of availability of prices

	Means of prod.	Producer	Processor	Consumer
Absolute prices				
Indices for individual products				
Indices for aggregates				

Note: green = well covered; red = largely or fully absent.[30]

While Eurostat provides price indices and absolute prices at producer, processor and retail level, these are available only for few, aggregated food chains (e.g. 'milk, cheese and eggs' or 'meats'). Price indices at more disaggregated level are only available for a few products and mostly only at the farm gate level.

1.5. Challenges emerging from the SWOT

As a consequence of the above-mentioned weaknesses and threats, the EU farm income is under pressure in several ways:

Stagnation of total agricultural factor income: over the last 10 years (2005-07 to 2013-15), real total factor income did not grow in the EU-28[31]. The increase in real factor income per annual working unit (AWU, +3% per year) could only be realized due to a considerable outflow in labour force. In the next 10 years, the stagnation is **expected to continue**. Driven by stronger increases in costs compared to value of production, total agricultural income (in real terms) is expected to decline considerably (-14% by 2026).[32]

30 Agricultural Market Task Force final report.
31 Statistical Annex on Agricultural income
32 DG AGRI Agricultural Outlook 2016

Farmers' income volatility: Over the last 10 years, the total entrepreneurial income of the EU agricultural sector remained relatively stable within a 10% range around the 10-year average, except for 2 years.[33] In 2009, the EU income dropped by 23% compared to the average mainly driven by the dairy crisis and in 2013 it increased by 14%. However, the income volatility faced by individual farmers is higher (see previous section). The sectors facing the highest income volatility year after year are: horticulture (32%), granivores (32%), cereals (34%) and permanent crops (34%). In 2009 specialised dairy farmers experienced the highest losses with 50% of farmers having an income drop above 30%.

Stalled convergence of income within the EU: a considerable gap exists between factor income/AWU in the EU-15 and the EU-N13 (+14 600 EUR in PPS) and it is only closing slowly. The annual growth rate of EU-15 factor income is 3% compared to 7% in the EU-N13 between 2007-09 and 2013-15. Towards 2026, real agricultural income per AWU is expected to stabilise in the EU-15 at the 2014-2016 average, whereas in the EUN-13 it is expected to decrease by 5%, so the gap will remain substantial. This is mainly due to an expected slowdown in labour outflow in the EU-N13 compared to the past.

The capacity of farmers to embrace **new business opportunities**, innovations and technological developments are often hampered by lack of access to capital, knowledge and decision support and lack of digital infrastructure in rural areas. For precision farming, a focus group under the EIP-AGRI detected a number of issues which must be addressed to effectively increase uptake of precision farming in the EU, including better decision tools and support for farmers, need for better interoperability.[34]

As a consequence, strong pressures on income have an immediate negative impact on famers' **standard of living**, inducing cash-flow problems and limiting available income for **investments**. Certain farmers will go **out of business**. Where land is not re-used, **land abandonment** might follow. This could have negative impact on the local environment/economy. Finally, low income and entrepreneurial prospects make farming **less attractive to potential newcomers**.

2. DESCRIPTION OF RELEVANT CAP TOOLS

The CAP provides various instruments which address farm income challenges in a direct and indirect manner.

Direct payments support the **level of income** and generally allow reducing the income gap between agriculture and the other sectors of the economy. Even if this is not their first objective, direct payments contribute significantly to the risk coverage via the provision of a stable yearly income buffer. This is particularly important in the beef sector where direct payments represent between 60% and 70% of the income and for specialised cereal producers with a share of direct payments oscillating between 40% in good years and 85% in bad years.[35] With Direct Payments being the most important CAP instrument, more detailed information on the aim and performance of its elements (e.g Basic Payment Scheme, Young Farmer Scheme, Small Farmer Scheme) is given in chapter 4.

[33] Statistical Annex Agricultural and farm income
[34] EIP AGRI Focus Group (2015) Precision Farming
[35] Statistical Annex on Direct Payments

In addition, for **price risks**, in case of severe market disturbance, the **market safety net** (in the form of intervention prices significantly below normal market prices) helps stopping the price decline via supply withdrawal. Both direct payments and the market safety net (CAP Pillar I) help to cover (partly) for the consequences of risk event occurrences in EU agriculture: preventive (via the system of direct income support) or reactive (via the market safety net and the crisis reserve). Regarding the latter, the Common Market Organisation (CMO) contains general provisions concerning exceptional measures and the new reserve fund for crises in the agriculture sector. This reserve is an instrument designed to support the sector in the event of crises affecting production and/or distribution. However, if other funds are available, they can be used to finance the exceptional measures without the need to use the crisis reserve and cut farmers direct payments.

Risk Management in its turn implies a private, pro-active, individual or joint response at farm level. The concept of Risk Management was introduced in the CAP during the Health Check of 2009 by inserting the possibility to partly compensate farmers for the costs (premiums) they would face if they participate in insurance schemes or engage in mutual funds to cover themselves for losses related to production risks.

The 2013 reform shifted the funding of these measures (mostly) from the first to the second pillar of the CAP (Rural Development), however did not significantly change the initial intended policy choice. The aim remains to encourage more farmers to pro-actively engage themselves in private risk management schemes (insurance or mutual funds) covering for losses stemming from marketable production risks. However one novelty was introduced, mutual funds could also be set up (and be partly publicly supported) for the coverage of income losses (regardless of the type of the triggering risk event), and were re-labelled for this purpose as 'Income Stabilisation Tool', targeting **income variability** directly.[36] Changes agreed by European Parliament (EP) and Council in the Agricultural Omnibus[37] were introduced with the aim of enhancing the uptake of the tool.

In addition to the Risk Management Tool box mentioned above, current Rural Development Policy (Pillar II) provides a framework for supporting the **development** of farmers income. These interventions are programmed by Member States and regions in their rural development programmes (RDPs), notably under focus areas related to competitiveness, generational renewal, risk manangement, resource efficiency and diversification.[38] In addition to this, under the Rural Developement Policy agri-environment-climate measures (AECM) are offered which pay farmers for delivering a defined number of environment climate services. National evaluations linked to certain rural development programmes from 2007-2013 confirm that farmers also consider this a reliable source of income which adds to income stability.

Rural Development policy also funds specific **income support in Areas facing Natural Constraints (ANC)**. It is considered that this type of income support – where payments are calculated based on the degree of constraints, play an important role in keeping farmers on the land in areas where production is not viable in itself.

---

36 However, it's take-up is low, with only 2 MS and 1 region opting for it and no operational program yet. See DG AGRI Market Brief 12 on Risk Management

37 Preliminary Agreement reached by the EP and the Council on the agricultural part of the proposal on the Omnibus Regulation, further referred to as Agricultural Omnibus.

38 For the specific interventions being programmed to this end in the period 2014-2020 see Ecorys et al. (2016) Mapping and analysis of the implementation of the CAP - Study for DG AGRI

To **counterbalance the power** of downstream partners, the CAP also supports the use of written contracts between parties and the development of producer organisations (POs) or associations of producer organisations (APO). The EU legislator established a framework for Producer Organizations (POs) by setting rules on the recognition of POs in Member States and by making financial support available for setting up POs through the rural development policy pillar of the CAP. It also provides for certain derogations from competition law. Activities of producers within POs and APOs, such as production planning and sales negotiations, can help achieving the CAP objectives defined in Article 39 of the Treaty on the Functionning of the EU (TFEU). The Agricultural Omnibus further supports farmers' integration into POs and APOs by clarifying the conditions under which certain activities of POs and APOs, including contractual negotiations (sales negotiations of the PO/APO with other chain operators), are not subject to Article 101 TFEU. Based on the recommendations from the Agricultural Market Task Force (AMTF), DG AGRI is reflecting on a possible legislative proposal to tackle unfair trading practices in the food chain.[39] Following the recommendations of the AMTF, the Agricultural Omnibus enlarged the provisions on contracts by now giving farmers the right to ask for written contracts from their first purchaser (the right does however not apply to SME first purchasers), even if the Member State has not made the use of contracts compulsory.

The EU **promotion policy** (of EU farm products) is designed to open up new market opportunities for EU farmers and the wider food industry, as well as helping them build their existing business. Promotion policy rules set out how EU funding can be used for information and promotion initiatives in EU Member States and countries outside the EU. There are two kinds of promotion actions:

- those run by European trade or inter-trade associations and co-financed by the EU
- those run directly by the EU itself, such as diplomatic offensives by the Commissioner in non-EU countries to develop agri-food trade, participation in fairs and communication campaigns to promote EU farm products

Priorities for 2017 include promoting products with EU quality logos, products from Europe's outermost regions and organic production. Funding is also available to support sectors hit by market difficulties, such as dairy, beef and pig meat, while an extra budget is set aside to help the food and farming sector cope with any unexpected crises. A new element for 2017 is a fund for promotion programmes that increase awareness of sustainable agriculture and the role of agriculture in the EU's climate action.

There are **other initiatives outside the CAP** relevant to the sector's economic performance. In parallel to the support offered by the CAP, producers have other possibilities to mitigate and manage their business risks. In some Member States well established national or state-aid based schemes are already in place for insurances and mutual funds (such as hail insurances).

Also, **future markets** can be used to hedge price risks. This latter option, however, is limited to the main traded commodities and requires associated futures trading skills/capacity (most likely only interesting for cooperatives, producers organisations and big farms). For the potential and shortcomings of futures we refer to the recently published Brief on Managing risk in the dairy sector by means of futures and the final report of the AMTF. Other possibilities to mitigate market and business risks are the

[39] See Supply Chain Initiative

engagement in diversification activities, short supply chains, quality schemes, further up- and downstream integration in the chain, contract farming and alike.

In the negotiation of **trade agreements**, the EU aims to achieve real market access for EU agricultural and food products, including through the elimination of tariffs as well as the reduction or dismantling of non-trade barriers (NTB) and sanitary and phytosanitary (SPS) barriers. For imports from third countries, the EU's approach is to limit the liberalisation of imports of sensitive agricultural products in all trade negotiations, for example through setting tariff rate quotas.

Regarding **market transparency**, The European Commission collects relevant data for agriculture from Member States and disseminates this information in the form of production, trade and price data. Recently, milk, meat, sugar and cereals (crops) market observatories[40] have been set up at EU level which bring together the information in a one-stop-shop complementing it with data on world markets. In addition, the Commission draws up annual balance sheets (including use and stocks) and publishes forecasts each month for cereals and oilseeds and three times a year for sugar, olive oil, meat and dairy products. Eurostat has set up the Food Price Monitoring Tool to compare changes in food prices over time at the level of agricultural commodities, food industries and consumer goods.[41] At present, fifteen supply chains are covered. In the Food Supply Chain Initiative, measures to increase market transparency are also examined.

3. DRIVERS FOR THE CHALLENGES

The economic challenges identified by the SWOT analysis in chapter 1 identified can be grouped into **three main areas**:

- **pressures on farm income**
- **weaknesses in productivity and competitiveness**
- **imbalance in value chains**

This section discusses which drivers can be associated with these challenges, distinguishing between market failures, equity issues and behavioural biases. Policy achievements and shortcomings are addressed in the subsequent chapter.

3.1. Market uncertainties

High price volatility is driven by price uncertainties stemming from world price developments and market uncertainty linked to multiple causes, including macroeconomic unknowns (energy prices, currency fluctuations), geopolitical events, increased application of trade-restrictive measures by G-20 economies (almost 21 new measures per month in 2015-16 according to the WTO), sanitary crisis, pests and higher frequency of extreme weather events in the EU and in the world due to climate change.

Lower price levels in recent years, after years of higher price levels, have characterised agricultural and energy markets and the outlook is for prices above the pre-financial-crisis levels but lower than from 2007 to 2014; however, the uncertainty around this level remains high.

---

40 https://ec.europa.eu/agriculture/market-observatory_en

41 http://ec.europa.eu/eurostat/web/hicp/methodology/food-price-monitoring-tool

Total costs of production have increased by 13% in real terms between 2000-2002 and 2013-2015. Ways to mitigate this, such as adoption of cost-saving or value-adding approaches and farmers' integration in producer organisations, are insufficiently pursued. By contrast, **gross fixed capital formation (GFCF)[42] is falling** (the annual decline in the EU28 was 2.1% from 2008 to 2014).[43]

The margin squeeze in the share of costs in total value of production increased from 70% in 2000 to 76% in 2015, and is expeted to further increase to 79% towards 2026.[44] Any contemporary increase in costs or certain items in the total costs will hence have a more profound effect on the margin. This has been the case for energy and fertilisers costs that grew faster than the total costs, their share increasing from 10% to 13% of the total agricultural costs from 2000-02 to 2013-15.

Climate change is set to change production patterns and land use in some parts of Europe, introduce new pests and diseases and possibly increase the occurrence of catastrophic weather events. This is likely to have an impact on farmers' income, both negatively and sometimes positively (depending particularly on location), and may also affect the farm income distribution across the EU.

While frontrunners in the sector adopt the newest technology, for a large group of farmers **take-up of new technologies is limited,** increasing the income gap within the sector further. Currently, data does not exist at an aggregate level in the EU. However, work carried out by an European Innovation Partnership (EIP-AGRI) focus group suggests that small and medium sized farms are particularly confronted with this technology gap. Similarly, development capacity is also hampered by the low level of connectivity in rural areas (see Socio-Economic background paper). There are also links to **a fall in public investments in agricultural R&D.** In 2014, 1.8% of agricultural gross value added (EU-28) was spent on agricultural R&D, compared with 2.4% in 2009.

The **investment gap** in agriculture remains significant. As shown in EIP, a large share of farmers face difficulties to obtain investment loans. **For a majority of farmers, training levels remain low**.[45] 70% of EU farm managers have learned their profession through practical experience only. 20% have received a basic agricultural training, and only 9% a full training. Formal training is more commonplace among younger farmers, which marks an improving trend, but lack of training is nonetheless clearly still an issue.

The primary sector is fragmented. In the food supply chain, farmers are much more numerous than processors and retailers and their businesses are generally smaller.

There is a lack of market transparency. Aggregated price indices are available for a few selected supply chains; price indices at a more disaggregated level are less available, and only for a few products - mostly at the farm gate. This makes it more difficult to respond to market signals and negotiate with counterparts.

Price transmission along the supply chain is uneven.[46] Market shocks are fully transmitted to farmers, while price declines/rises are much more limited for processors and consumers.

---

42 This measures the proportion of value added which is invested rather than consumed.
43 Statistical Annex on Agricultural capital and land
44 DG AGRI Outlook on Agricultural Markets and Income 2016-2026
45 CAP Context indicator Training of farm managers
46 Statistical Annex on Food Chain, AMTF, other sources

There is a lack of vertical integration initiated by primary sector. Primary producers are only to a limited extent expanding downstream in the supply chain (i.e. into processing or direct sales) – and are thus under-using opportunities to increase their market power.

3.2. Equity issues

Several equity issues are also at play in the agricultural sector:

- The sector is dominated by elder farmers, reluctant to leave the sector while young farmers face credit constraints and difficulties to acquire land.[47] Farm managers are also predominantly male.
- Farmers residing in areas with natural constraints face difficulties to compete in the single market.
- The AKIS and Farm Advisory System (FAS) is not as developed in each MS.
- Although the role of direct payments in stabilising farm income is generally welcomed, the fact that 20% of farmers receive 80% of the payments sometimes prompts accusations of "unfairness". For a discussion on the way Direct Payments are distributed, see section 4.1.2.

3.3. Behavioural biases

Farmers are often reluctant to engage in joint initiatives such as POs, mutuals, income stabilisation tool. Some of the reasons:[48]

- *Independence and individualism*. Individualistic values and the need for independence entrenched in some cultures lead farmers to see their fellow farmers as natural competitors and may drive their reluctance to engage in formal forms of cooperation beyond helping each other in emergency situations
- *Lack of trust, lack of social capital*, along with *lack of communication* and mutual understanding between farmers have been shown to discourage farmers from engaging in collective actions.
- *Individual farm identity*. Farmers first and foremost identify with their own farm, and identification with other farmers as a collective identity is an often missing prerequisite to reach collaborative actions.
- *Lack of appropriate leadership* within groups of farmers sometimes precludes the setting up of formal collaboration networks.

There is also limited adoption of new technologies:[49]

- Farmers' decision to invest in new profit-enhancing technology is an exercise in decision-making under *uncertainty*, which lies at the heart of behavioural economics, meaning that behavioural factors are relevant. For one, farmers can exhibit a distorted perception about future economic returns compared to objective assessments.
- More specifically, behavioural biases such as *loss aversion*, come into play. If a technological innovation increases yields overall, but makes good harvests very good

[47] See also Court of Auditors Report (2017) EU support to young farmers should be better targeted to foster effective generational renewal. Report nr 10

[48] References fort his text part can be found in Annex based on a contribution of JRC

[49] References for this section can be found in Annex based on a contribution of JRC

and bad harvests particularly bad, farmers may well reject it. Farmers like to have the security that they will generate large enough returns to cover basic subsistence needs, and this becomes a driving force in their decision-making.

- *Risk aversion*, a similar bias, also exerts a negative influence in the uptake of production technologies, as does the perception by farmers that they might not have the adequate skills to handle new technology.
- Another relevant concept, in the face of sunk costs and uncertainty about the future payoffs, is the *option value* of waiting to invest in technology. Since farmers cannot recoup sunk costs, they adopt a wait-and-see approach to make sure the technology will reap rewards.
- Another relevant issue is *behavioural control*. Having control over their decisions with regard to technology adoption is an important driver for farmers, and suggests direct government intervention on these decisions might be counterproductive. Similarly, there seems to be a trade-off between farmers' cognitive ability and their receptiveness to advice with regard to technology adoption, with initial evidence suggesting cognitive ability plays a more important role.
- Finally, taking the focus away from individual farmers as units of analysis exposes behavioural drivers which may be anchored in a community or a social network, such as *social learning*, which plays a role in the passive transmission of knowledge about technological innovation.

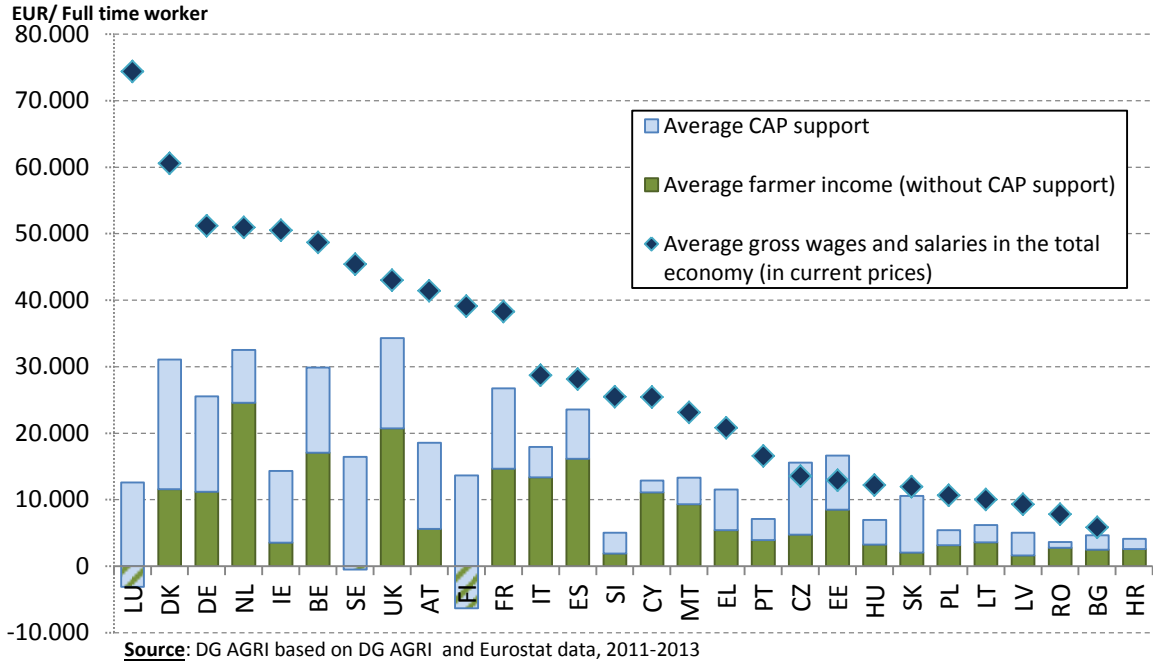
4. POLICY ACHIEVEMENTS AND SHORTCOMINGS TO ADDRESS THE CHALLENGES

This section describes successes and shortcomings of current CAP tools with respect to the challenges identified in previous parts.

4.1. Income level and volatility

When considering **income level**, farmers' incomes are **significantly below the average wage in the economy** in the large majority of Member States. Operating subsidies (covering not only direct payments, but also all rural developments measures which are not investments supports and possible national aids) **allow to compensate partially or totally this gap**. This contributes to achieving one of the Treaty's CAP objectives to ensure a fair standard of living for the agricultural community.

Figure 7. Comparison of farmers' income with average wages and share of income support[50]



Source: DG AGRI based on DG AGRI and Eurostat data, 2011-2013

Average CAP support *= operating subsidies per worker incl. support covering possible negative market income*

Average farmer income (without CAP support) *= entrepreneurial income per worker* **-** *operating subsidies*

Nota*: CAP support does not include investment support; average farmer income without CAP support in LU and FI was negative over the period considered - the negative income compensated by CAP support is hatched on the graph*

The analysis in the Mapping study of the factors that have influenced the implementation decisions in the 28 MS of the 2014 CAP reform reveals that, in many countries, the major concern was to **minimise the changes in support** provided to the agricultural sector compared to the previous CAP, with a view to maintaining its competitiveness.[51] This is in particular true for the decisions made under Pillar I. The "historical factor" has been a major driver, as in many cases the main objectives pursued by the Member States were to limit the impact of the changes on farmers' income and to maintain the balance between agricultural sectors or between regions. In certain cases the effects of the decreased amounts under the Basic Payment Scheme (BPS) were mitigated through the use of other Pillar I instruments, such as the Redistributive Payment or Voluntary Coupled Support (VCS).

The Mapping study also concludes that the Member States' implementation choices with respect to viable food production have been assessed as being in general **more tailored to local needs** than in the previous CAP. For agricultural income this was more apparent than for agricultural productivity. Under the new CAP, the targeting of Direct Payments has been strengthened, with the Member States' implementation choices having contributed to this: although compared to the previous CAP the total budget available has declined by about 1.8% for the entire programming period, a large proportion of the total budget is spent on Direct Payments. Despite the changes (reduced budget, redistribution), the CAP is expected to continue to have a positive impact on farm income. However, whether the distribution of income support will be sufficient to contribute to a fair income is left unclear.

[50] See Statistical Annex on Operating Subsidies

[51] Ecorys et al. (2016) Mapping and analysis of the implementation of the CAP - Study for DG AGRI

Regarding **income variability**, the study from Ecorys and WUR[52] concludes that for the design of agricultural risk management strategies, the interactions between direct payments and targeted risk management instruments will need to be carefully considered. There is room for improvement in terms of increasing complementarity, or even synergy, between targeted risk management instruments and other ex-post payments; for example, by delineating a credible boundary between marketable risks and non-marketable catastrophic risks. There are also further opportunities for Rural Development Programmes (RDPs) to foster cross-cutting priorities, such as knowledge exchange, and support to farm advisory services and producer organisations to address obstacles to the take-up of risk management instruments.

For the **CAP after 2020**, the Mapping study proposes to establish a more constraining framework on the Member States. This framework could, for example, include: (i) the obligation for Member States to design a national "Intervention Logic" integrating the combined effect of all policy measures, (ii) the obligation to set target indicators for all the components of the CAP, including for Pillar I, and (iii) requiring Member States to conduct an impact assessment on both Pillar I and Pillar II elements of the CAP. This should allow for better and more efficient programming without adding complexity.

After this more general assessment, the following sections describe successes and shortcomings of the current CAP from the perspective of the different instruments employed.

4.1.1. Direct payments

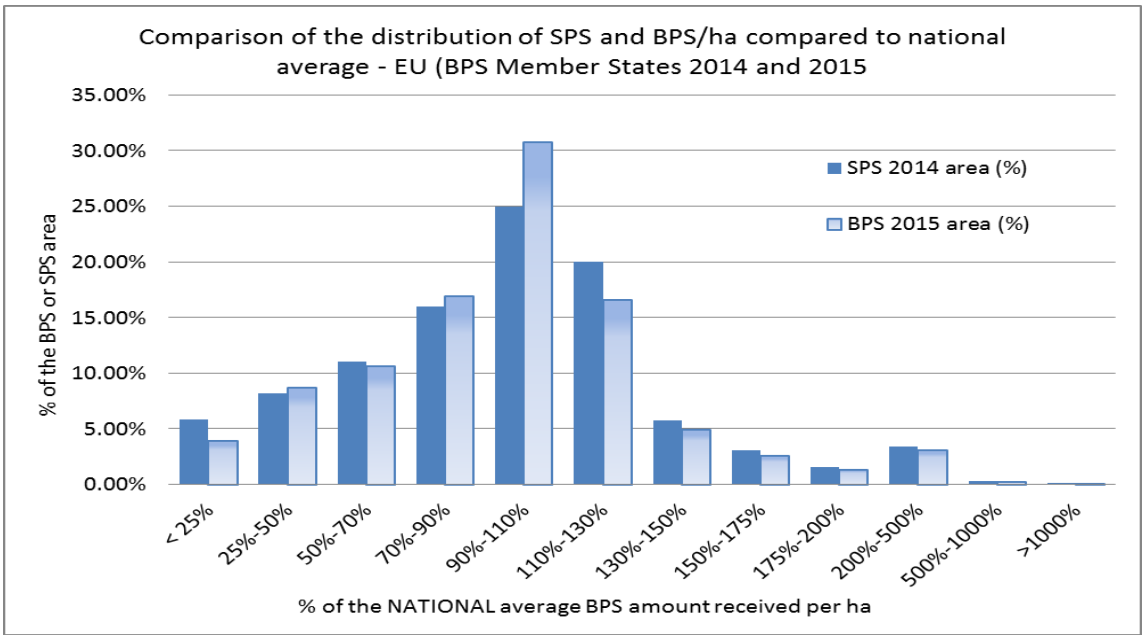
(a) Achievements

The 2013 reform introduced a new architecture of direct payments **to move towards a fairer distribution of income support.**

- In the 18 Member States applying the Basic Payment Scheme (BPS), the system has allowed moving away from historical references with a certain **convergence of direct payments per hectare** between Member States and within Member States (see figure 8 for 2015). By 2020, a higher convergence will have been achieved and 5 Member States out of 18 will have completely got rid of historical references.

[52] Ecorys and WUR (Forthcoming). Study on risk management in EU Agriculture. External study for DG AGRI

Figure 8. Comparison of the distribution of SPS and BPS/ha[53]



SPS: Single Payment Scheme (equivalent system as BPS before the 2013 reform)
BPS: Basic Payment Scheme
NB: the graph is based on CATS data for financial year 2016 covering mainly claim year 2015.
Source: CATS – DG AGRI.

- The **redistributive payment** has had some uptake with 10 Member States implementing it. Actual implementation by Member States also showed that the flexibility to target the small to medium size farms as opposed to the "micro"-ones could be an effective way to avoid the adverse effects such a tool might have on competitiveness.
- The 2013 reform has allowed to tighten the rule on **active farmers.** A limited number of companies, whose primary business activity is not agriculture and which would not need support, used loopholes to claim direct payments.
- In complement of the basic payments, 30 % of direct payment is allocated to recognize good farming practices done by farmer which contribute to enhance environmental performance, the so called **Greening**. These payments are also part of the income support and have an additional effect in synergy with the basic payments on income stability, but they also remunerate public goods provided by farmers. 76 % of the agricultural area are covered by the greening scheme which includes three compulsory practices: crop diversification, set up of ecological focus area (5 % of arable land) and maintenance of permanent grassland. These farming practices are simple, generalised and designed at EU level. They should prevent further deterioration of soil and biodiversity and maintain carbon stocks. Consequently, they will help the sector to be resilient to face the increased pressure on natural resources (part of some identified threats which impact price volatility and productivity). As a compulsory element, they should increase the level of environmental and climate conditions for CAP in articulation with AECM under RPDs. (See background document on climate and environmental challenges).

[53] See Statistical Annex on Direct Payments

Preliminary findings on the impact of greening indicate:

- a very low impact on production[54]
- the impact on production and on the economic viability of farms is further evaluated.[55] Preliminary analysis shows that the EFA measure had a very low impact on the area available for crop production, whilst the crop diversification measure led to a slight decrease in the area cultivated for cereals (mainly soft wheat and sometimes barley). However, the two measures together do appear to have led to a halting of the decline on the area under dry pulses, leguminous plants, in combination with other factors including VCS.

- Member States could choose to replace the standard direct payments by a simpler **scheme for small farmers**.

- Even if this is not their initial objective, **direct payments can act as a cushion against income variability**; this can be illustrated especially by looking at the trend in income and direct payments by type of farming over years.[56]
  - For specialists Cereals, Oilseeds and Protein crops (COP), income level is high but varies significantly over years. Operating subsidies, especially decoupled direct payments play a role of "cushion". Subsidies represent about half of the income.
  - For other fieldcrops and dairy, the pattern is similar, but with lower levels (lower income, lower share of support in income and lower variability).
  - Cattle farms have a low income but depend at about 90% on support for their income.
  - Sheep and goats farms have very low income, depending also for more than a half on subsidies.

(b) Shortcomings

Matthews argues that there are no specific challenges and no specific public goods for which the appropriate policy response is a uniform, fixed, decoupled payment per hectare and that there is a need to restructure direct payments to a set of targeted payments focused on well-specified objectives with a clear results orientation.[57]

The lessons learnt within DG AGRI from the first years of implementation also show some shortcomings of the current design of the direct payments:

- In a number of BPS Member States, the internal convergence process has not got rid of **differences** based on historical references which will still subsist in 2019. Differences can be significant and the problem of their justification – based on nearly 20 years old production decisions – remains.[58]

---

54 SWD(2016) 2018 final page 13-14 and 15.

55 Report for the evaluation study of the payment for agricultural practices beneficial for the climate and the environment.

56 See Statistical Annexes on Operating Subsidies and Direct Payments.

57 In Ragonnaud (2016). Research for AGRI Committee – CAP reform post 2020 – Challenges in agriculture, European Parliament – Part 1: The future of direct payments (by Alan Matthews).

58 See Statistical Annexes on Operating Subsidies and Direct Payments

- The **SAPS** (Single Area Payment Scheme) system is still used in 10 Member States but it is transitional. The two systems (BPS and SAPS) should be harmonised in a single system (without jeopardising the compatibility of the direct payments with the WTO Green Box requirements).

- The **Active Farmer** provision that resulted from the 2013 political compromise has been criticised. Its implementation is considered as complex and burdensome and there are doubts on its effectiveness. Nevertheless, the objective – namely to exclude beneficiaries whose business is not agricultural or is only marginally so – remains important to further improve the performance of the CAP. The provision has been simplified in the Agricultural Omnibus. As part of the simplification, Member States who consider that the difficulties and the administrative costs of implementing the list of negative activities outweigh the benefits will be able to discontinue the application of that list or to reduce the number of criteria. Member States will also have the possibility to use national fiscal or social registries.

  The level of the **minimum requirements** a beneficiary must comply with to be granted direct support has not been discussed in the previous reform and is set at a relatively low level. One could question how a payment of 100 EUR or 200 EUR can make an efficient contribution to the annual income of a farmer. On average at EU level, half of the direct payments beneficiaries receive less than 1250 EUR per year (around 100 EUR/month). It corresponds to 4% of the total direct payments envelope.[58]

- The **current system of reduction of payments** applies only to the basic payment (on average 54% of total direct payments) and **the obligation in terms of reduction percentage is set at a very low level**.[59] For 2015 the product of the reduction (including capping) has amounted to EUR 98 Million, which represents only 0.44% of the basic payment expenditures. Even in Member States implementing capping, this product has remained generally low[38,] with the exception of Hungary, where the product of reduction and capping (set at 176 000 EUR) represents nearly 7% of the envelope (lower than initially estimated by HU).

- The **Young farmer payment** represents in practice in the first year **only about 0.6% of the actual payments** (low execution rate). About 4.1% of basic payment applicants benefit from the young farmer payment in the EU. The EU allocated 9.6 billion EUR to young farmers in 2007-2020 to foster generational renewal in agriculture.

- The European Court of Auditors (ECA) has recently recommended to improve the intervention logic of generational renewal support by reinforcing the needs assessment and making explicit and quantifiable the expected results of the policy instruments.[60] ECA has further proposed to improve the targeting of measures, as well as the monitoring and evaluation system.

---

59 Five percent reduction on amounts above EUR 150.000 of BPS/SAPS, with the possibility to deduct salaries before applying the reduction.

60 Court of Auditors (2017). EU support to young farmers should be better targeted to foster effective generational renewal. Report nr 10.

- The **Voluntary coupled support** targets sectors in difficulty, but constraints of the Basic Act limit the degree of freedom that Member States have to support the concerned sectors to overcome such difficulties. Choices made by MS for implementing VCS in some sectors also raise questions on effectiveness of supporting sectors in difficulty, especially with respect to their impact in making these sectors more competitive and less support-dependant.

- The **Small farmer scheme** is mostly limited to an administrative simplification for small farmers (no cross-compliance controls and no greening), but the other initial objective to provide these farms with a lump-sum to help boost their development has almost (if not completely) disappeared. The scheme is actually very complicated to implement for administrations (application and financing).

Different studies[58, 61] show that direct payments can be more or less **capitalized into land prices** according to different factors. The drivers of land values are numerous and CAP support is only one of them: agricultural commodity prices and agricultural productivity, urban pressure, different national land market regulations, duration of rental contracts, different levels of land taxes… According to Swinnen et al., *"CAP subsidies have an impact on land values but the impact varies importantly accross countries and appears relatively modest compared to other factors, in particular where land prices are high".*[62] According to the different studies, the SAPS is more capitalised into land values than the SPS/BPS. In the BPS Member States, it is less capitalised especially where there are less entitlements than land and where entitlements can easily be traded without land. Econometric studies show that between EUR 0.15 and 0.32 per additional EUR of SAPS is capitalized in the land rental prices, while between EUR 0.06 and 0.94 per additional EUR is capitalized into land values in EU-15.

In a nutshell, the flatter the payment, the more easily it can be capitalized into land values. The more differentiated the payment according to the farmer, the less is the potential of capitalization into land values. But land values are also very much influenced by other factors (agricultural productivity, urban pressure, land regulation, taxation, inheritance laws).

The distribution of direct payments, and especially the 80/20 ratio, remains a question of debate. In 2015, first year of implementation of the last CAP reform, **20% of farmers received around 80% of direct payments.**

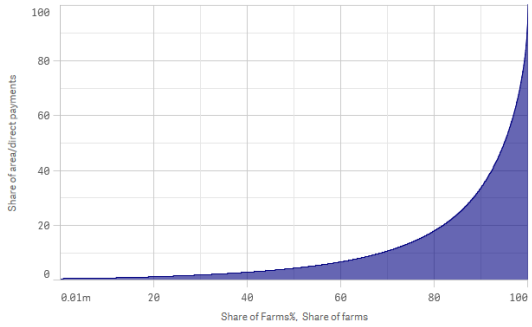
---

61 Ciaian et al. (2016). The Impact of the 2013 CAP Reform on the Decoupled Payments' Capitalization into Land Values in the EU. JRC-report.
Swinnen J. Ciaian P, Kancs d'A., Van Herck K., Vranken L. (2013). Possible effects on EU land markets of new CAP direct payments. European Parliament study.
Swinnen J. Ciaian P, Kancs d'A. (2008). Study on the functioning of land markets in the EU Member States under the influence of measures applied under the Common Agricultureal Policy. Final report. Centre for European Policy Studies (CEPS).

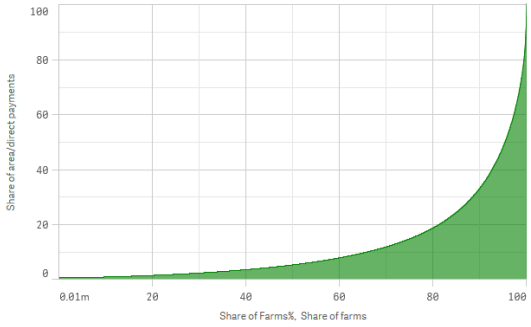
62 Swinnen J. Ciaian P, Kancs d'A. (2008). Study on the functioning of land markets in the EU Member States under the influence of measures applied under the Common Agricultureal Policy. Final report. Centre for European Policy Studies (CEPS).

Figure 9. Distribution of direct payments versus distribution of land across farmers

The distribution of direct payments, EU 2015



The distribution of land, EU 2015

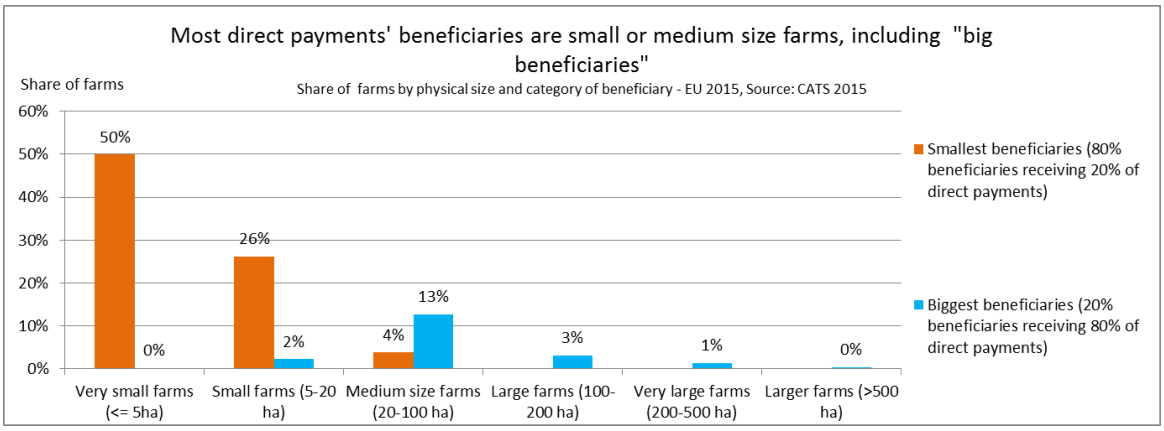


Source: CATS – DG AGRI.

- This "uneven" distribution raises concerns of **economic efficiency** and **social equity in the public debate**. However it is mainly driven by the **concentration of land** and the nature of the support which is largely area-based. Direct payments are not more concentrated than land: 20% of the largest farms in the EU concentrate 80% of agricultural land. These 20% largest farms also account for 80% of total agricultural production, based on standard output.
- Alternatives to area-based distribution keys for direct payments are sometimes also proposed (e.g. per farm or per AWU) to allow for a fairer distribution of the support towards the objective of a viable farm income. Mahé and Bureau for example argue for the establishment of a ceiling on Basic payments per unit of family labour or per member of farm cooperatives, in proportion to Member States Gross National Product per capita (in combination with a more coherent risk management approach).[63]
- These alternatives come with disadvantages as well, such as the difficulty to target certain objectives (eg the environmental one), scope for opportunistic behaviour (atomisation of farms, exageration of number of AWU etc), and lack of reliable data sources.
- In fact the 80/20 ratio reflects the **"inclusive" character of direct payments** rather than an "exclusive" one, as **about half of beneficiaries are very small ones**, with less than 5 ha or receiving less than 1250 EUR per year. The 20% biggest beneficiaries are those who receive more than (roughly) 5000 EUR. The majority of them have between 20 and 100 ha, and only very few have more than 500 ha. They are thus in majority **family-type farms**, and only a minority are large "industrial farms".

63 In Ragonnaud (2016). Research for AGRI Committee – CAP reform post 2020 – Challenges in agriculture, European Parliament – Part 2: The future of market measures and risk management schemes (by Louis-Pascal Mahé and Jean-Christophe Bureau).

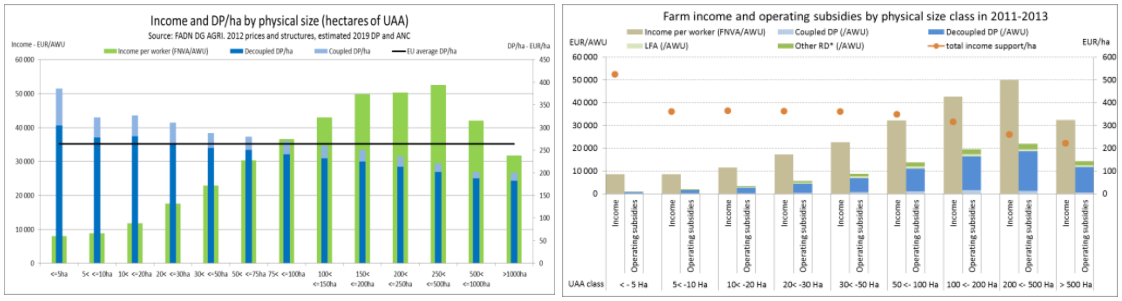
Figure 10. Small versus big beneficiaries according to farm size



- The distribution of direct payments shows disparities **across Member States**, highlighting differences in the level of **fragmentation** (more or less high number of very small beneficiaries) and the diversity of **sectors** (arable farming vs. livestock and permanent crops activities). Direct payments are more concentrated on big beneficiaries in SK, CZ, PT, EE, HU, BG and RO. They are less concentrated in LU, NL, FR, FI, IE, BE and AT. In BG, DE, ES, LT and UK, if all direct payments were granted as a national flat rate, they would be more concentrated than now. In the other Member States, the ratio would stay close to 80/20 anyway.

- In the current policy framework, certain policy tools allow a better distribution and targeting of direct payments, mainly the redistributive payment, the reduction of payment and capping, the minimum requirements, but also some measures under coupled support and, to a limited extent, the small farmer scheme. Member States also have the possibility to differentiate the unit rate by region to accommodate specific situations.
- In this respect, it is worth noticing that **direct payments per hectare decrease with increasing farm size** while the income per worker increases. Furthermore, direct payments per hectare are on average **higher for types of farms with low average income.**

Figure 11. Income and DP/ha by physical size (hectares of UAA)[64]



64 See Statistical Annex on Direct Payments

4.1.2. Payments for Areas facing Natural Constraints

The payments for Areas facing Natural Constraints (ANCs) make up around 16 % of all Rural Development payments. The ANC payments are granted annually per hectare of agricultural area, programmed, and can be differentiated taking into account the severity of the constraint and the farming system. Budget allocations for the ANCs measure vary between RDPs. France allocates 36% of total public contribution to the measure, Ireland 35%, Finland 32% and Luxemburg 30% while Spain and Italy have only allocated 7% as regards Belgium, Flanders has not programmed the measure at all while Wallonia has allocated 9% of the budget. Netherlands and Estonia have not allocated any funding for this measure. In this context it should be highlighted that many Member States do not pay the full compensation of costs incurred and income foregone (only partial compensation).

An additional decoupled area-based income support payment for areas with natural constraints is available under Pillar I. The introduction of such payment in areas designated under Pillar II (up to 5% of annual national ceiling) is optional for Member States. Unlike under Pillar II, Member States may restrict Pillar I ANCs payments to certain sub-areas of the designated ANCs areas, on the basis of objective and non-discriminatory criteria, whereas Pillar II ANCs payments have to cover the entire designated area.

- The new Pillar I scheme for areas with natural constraints allow Member States to achieve a more equitable distribution of income throughout their agricultural area by targeting a part of income support to farmers whose farming activity and the income derived from it is permanently limited by natural constraints.

- Currently, only Denmark and Slovenia have notified such schemes. Meanwhile, nearly all Member States pay ANCs payments under Pillar II.

4.1.3. Market safety net

Evaluations in the sector of cereals[65] and dairy products[66] have concluded that safety nets have been efficient in halting price decrease in times of crisis. Concerning cereals, "the reforms made to intervention *(*note: in the mid – 2000s*)* were both effective and efficient" and "the objective of ensuring that intervention operates as a safety net at times of market need has been effective and has achieved greater cost efficiency. It is also coherent with the broader objective of promoting market orientation".[66] In the dairy sector, public intervention has been considered to be efficient for milk price stabilisation and dairy product price stabilisation.[67] However, the evaluation acknowledges that lower safety nets have increased the probability of higher volatility transmission from world markets to the domestic one. With regards to private storage, suspicions of deadweight concerning cheese were mentioned.[67]

A more recent study[67] commissioned by the French authorities questions the efficiency of market safety nets in the dairy sector after quotas' period expired. The study also acknowledges the risk that market safety nets stimulate production beyond the absorption capacity of domestic and export markets and recommends linking market safety nets with

65 Evaluation of measures applied under the CAP to the cereals sector, LMC, 2012

66 Evaluation of CAP measures applied to the dairy sector, WUR, 2011

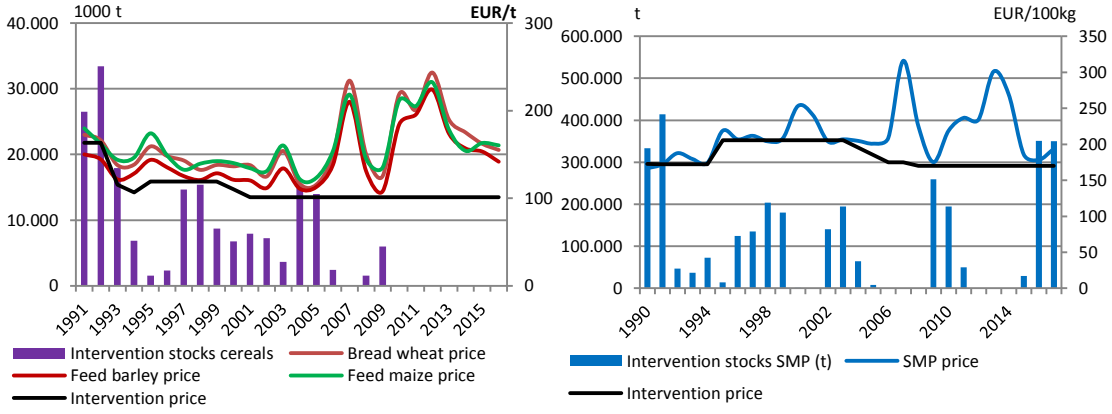
67 Etude sur les mesures contre les déséquilibres de marché : quelles perspectives pour l'après quotas dans le secteur laitier européen?, Trouvé A, Dervillé M et al., 2016

supply limitation measures. Private storage aid is considered to be efficient for balancing markets in the short term; but in the longer term there are more questions on the efficiency of the tool and it can even result in negative side effects (speculation at the time of releasing product on the market).

During the ***previous Impact Assessment*** on CAP (2013), the European Commission examined whether reference thresholds represent an effective market safety net. In the context of a reform with the objective to maintain the competitiveness of EU agriculture and continued market orientation, providing a safety net for farmers in case of strong market disruptions was considered necessary, at the condition it did not lead to unsustainable public stocks. Market safety nets should not blur the market signals for producers (not allowing them to adapt their supply to demand), result in higher prices affecting the competitiveness of EU agriculture or in the building of persistent public stocks.

Reference thresholds are subject, according article 7 of the CMO to "*review by the Commission, taking account of objective criteria, notably developments in production, costs of production (particularly inputs), and market trends*". Concerning costs, after the low prices and costs in 2009 (ample supply and the effect of the economic crisis), both prices and costs have risen sharply until 2012 (year of production shortage), after which prices declined (mainly due to good cropping conditions) while operating costs stabilized, putting some pressure on margins. Since 2009 operating costs increased by around 30%. Other farm costs, such as depreciation, wages and rents have also increased over this period. Concerning production and market trends, in cereals and dairy, there are signs that both production and competitiveness of EU has been increasing: the EU is able to export some 20% of its soft wheat production to third countries and also for barley, competitiveness on the export market is important (about 18% of production is exported). The EU is likely to become the first world exporter of dairy products according to the Medium term outlook 2016.

Figure 12. Intervention in cereals (left) and SMP (right)



Source: DG AGRI

Some ***modelling work*** carried out on dairy markets in 2015 showed that increasing intervention price levels has several effects: a moderate increase (+10%) would not result in a strong increase of the use of intervention, but would literally not have any impact on price levels.[68] A stronger increase would result in probable developments of persistent

[68] Hélaine S, Santini F, Araujo enciso SR, Dillen K, Perez Dominguez I (2016) A stochastic approach of the assessment of EU intervention mechanisms for dairy products

public stocks, delay structural adjustment of the supply with only a slight domestic price upwards impact and reduced exports, to the advantage of the competitors of the EU. More recent work (unpublished yet) shows that the removal of public intervention would have implied higher price volatility for the dairy sector (lower price in 2016 due to oversupply solved through decreased production and increased consumption and exports, higher in 2018-19, due to the need to inject the public stocks back to the market).

The modalities under which intervention is organised could be improved and give ***more flexibility*** to adapt to the market conditions. Predefined periods during which public intervention may occur do not necessarily coincide with those periods when the market situation requires it. Such predetermined periods were relevant when public intervention was to be triggered in the event of domestic market situation, but with more open agricultural markets, such situation is likely to occur any time during the year.

Where market disturbance requires so, **exceptional measures** laid down by articles 219 to 222 of Regulation 1308/2013 may be enacted. This has been the case in order to face the market disturbance in consequence of the Russian ban particularly for the dairy, pigmeat and fruit and vegetables sectors, as well as in front of animal health issues such as the avian Influenza and the African Swine Fever. Such recent experience shows that the use of exceptional measures should be strictly limited to the needs due to conjonctural event and that as soon as possible structural measures should be addressing the causes and/or the adaptation. There is also a reserve for crises in agricultural sector which may help addressing situations that goes beyond normal market developments. Such reserve has not yet been used and has the disadvantages to be deducted from the direct payments envelope (farmers not in crisis see their direct payments reduced if the crisis reserve is activated).

4.1.4. Insurance[69]

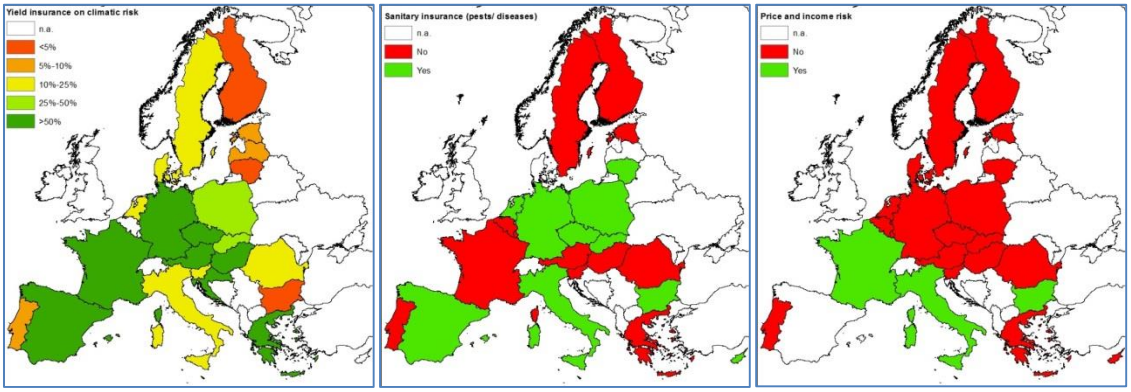
Currently, on average there is a rather limited uptake in the EU (e.g. around 20% for crop insurance). In the current 2014-2020 programming period, only nearly 208 000 agricultural holdings (<2%) are potentially benefitting from support under the European Agricultural Fund for Rural Development (EAFRD) for insurance schemes. Main obstacles are the high premia (especially for multi-peril insurance, where available), high loss threshold to trigger compensation (30%) and lack of farm-level data and information, leading to information asymmetry.

With the Agricultural Omnibus, the threshold to trigger compensation has been lowered from 30% to 20%, while aid intensity rates have been increased from 65% to 70%.

Possible avenues to improve uptake and implementation include, inter alia, increasing further the aid intensity rates; making the provision of other types of subsidies conditional upon the subscription of an insurance instrument; foster awareness and knowledge (but subsidies might inflate premia and cross-subsidise private insurance companies).

[69] Various sources for sections 4.1.4 to 4.1.6: DG AGRI (2017). Market Brief 12 Risk management in the EU; Ecorys et al. (2017). Risk Management in the EU. External study, DG AGRI. Workshop on Risk Management

Figure 13. Map of crop insurance covering climatic risks (right), pests and diseases (middle), price, revenue or income risks (right)



Source: Ecorys et al. Risk management in the EU. DG AGRI external study (soon to be published)

4.1.5. Mutuals/income stabilisation tool (IST)

The difference compared to insurance is that mutual funds require farmers' collective engagement and common ownership (no risk transfer to private party). Currently, only 4 RDP's (FR, IT, PT, RO) have programmed mutual funds, while only 3 MS (ES, HU, IT) have programmed IST. However, private pilot initiatives have started and developed over the past few years.

Main obstacles relate to the lack of a tradition of cooperation in a number of Member States, which implies lack of solidarity; limited capital availability, especially in the start-up phase; need of a high level of financial management expertise and considerable administrative capacity; uncertain "return on investment" (e.g. possible bankruptcy); for some sectors (low volatility, high percentage of DP), limited interest; lack of income data at individual farm level.

The legislative amendments to the Rural Development Regulation introduced with the Agricultural Omnibus-package are expected to address some of these obstacles and facilitate uptake and implementation. It will be possible to use public funds to supplement the annual payment into the fund of the farmer and/or contribute to the initial capital stock. A sector-specific IST has been added to the toolkit, targeting farmers of a specific sector and activated by a drop of income exceeding 20%. Moreover, indexes may be used to calculate the annual loss of income of the farmer (both general and sector-specific ISTs). Finally, as in the case of insurance support, aid intensity rates have been increased from 65% to 70%.

4.1.6. Other issues to consider regarding risk management tools

Interaction with other CAP tools, such as the restructuring and modernisation aid as well as diversification schemes (bio-energy etc.)

Some other policy tools also offer potential, such as **financial instruments**, which might intervene to address liquidity issues in crisis situations. Also savings and taxation policy, a Member State competence, could be adapted to allow savings in good years to be used to cover liquidity issues in bad years.

Budgetary aspects should also be considered. Generally speaking, risk mitigating support schemes are resource intense while certain risk management tools (i.e. mutual funds) create irregular and unpredictable budget demands for the funds.

Successive CAP reforms created more open agricultural markets (with more volatility due to increased interlinks between European and world markets) which encourage market participants to develop private risk management tools. More market oriented CAP (with the safety-net which become measure of the last resort) permitted to progressively develop **futures markets** for commodity type agricultural products (grains, oilseeds and recently skimmed milk powder).[70] Public support for futures markets remains indirect through education, training and reducing information asymmetry (market transparency)[71]. CAP provided insufficient training and professional qualification activities on risk management, including futures and other derivatives contracts.[72]

The lack of understanding of how hedging works persists and hedging activity is still confused with speculation. The existing support (safety net and direct payments) decreases incentives to adopt on-farm risk management tools.[73] Also ad-hoc market intervention measures may interfere with the development of private sector risk management tools.[73] Futures markets needs price transparency to develop. Moreover, for certain products and in certain circumstances futures contracts require price indices for the purpose of settlement. For some agricultural products the current price reporting mechanism is not adapted for this purpose.[74]

4.2. Productivity and competitiveness

CAP instruments relevant to improving productivity and adding value are available mainly through **RDPs** – e.g. support for investment, training and advice, innovation, new business models, supply chain organisation etc. These instruments are not always used to their maximum effect and have to compete with other measures for financial resources. The same applies to quality schemes, where the lack of coherence in various EU and non-EU schemes adds complexity and hinders take up and performance.

Meanwhile, various CAP instruments – including the **CMO Regulation** – help farmers add value and to integrate within POs, but these instruments have had a lower impact than intended due to legal uncertainties over the derogations from competition rules provided for by the CMO Regulation.

At the same time, the **Farm Advisory Service (FAS)** only covers a limited proportion of the advisors able to foster innovation and in several Member States, the Agriculutral Knowledge and Innovation System is not functioning well.

4.2.1. Productivity/efficiency gains

The effect of pillar II payments on productivity and efficiency remains a question of debate, also in the scientific literature. Minviel and Latruffe (2014) analysed 195 results about effect of subsidies, extracted from a set of 68 studies carried out from 1972 to 2014.[74] The authors found an interesting result - aggregating all subsidies received by

[70] DG AGRI (2017). Market Brief 11. Futures in the dairy sector

[71] Cordier, J., 2014, p.14

[72] Bardaji, I., Garrido, A., Blanco, I., et al., 2016, p. 94

[73] Agricultural Market Task Force (2016) Final report, p. 24

[74] Minviel, J. J., & Latruffe, L. (2014, June). Meta-regression analysis of the impact of agricultural subsidies on farm technical efficiency. In presentation at the EAAE 2014 Congress 'Agri-Food and Rural Innovations for Healthier Societies', August (Vol. 26).

farmers into total subsidies increases the probability of a negative effect of subsidies on farms' technical efficiency and for instance, when isolated, investment subsidy is positively related to farms' technical efficiency.

Minviel and Latruffe (2014) point that public subsidies may improve technical efficiency if they are used to update the farm's productive capacity through replacement investment or net investment in advanced technologies. Also, public subsidies may enable farmers to achieve scale economies through investments. However it should be also taken into account, that the effects of public investments may not accrue immediately as there is a lag connected with adjustment costs.

A recent JRC-study suggests that regions receiving higher Pillar II payments for physical capital investments, human capital development or agro-environmental measures increase productivity.[75] On the other hand, payments related to rural development do not have significant impact on productivity. The results do not change among the Member States, date of access to the European Union (i.e. EU-15 or EU-13 Member States), spatial characteristics (i.e. being in the south, north or east) or size of the countries (i.e. big or small economies).

Investment support under EAFRD

During 2014-2020, investment schemes and business development support focus on restructuring and modernisation of farms. The link between investments and improved resilience is evident and confirmed by national evaluations of the EAFRD investment measure.

These evaluations provide evidence that investment grants helped scale up and speed up farm modernisation and restructuring (evaluation in Sweden) and that farms receiving investment grants performed 300% better in terms of income development compared to a control group (evaluation in Austria).

Although investments are shown to have a positive effect on on and off farm incomes (depending on the nature of the investment project); the effectiveness of the instrument on the overall productivity of the EU farm sector is hampered by the fact that it is not widely available. In the 2014-2020 period only some 2.5 percent of EU farms can expect to receive an investment grant. The effectiveness of the grant in generating farm based growth potential may also be impeded by the lack of integration with business development advice.

Training and advice under EAFRD

Economic resilience is also closely linked to increasing knowledge and innovation on farms, with the latter helping farmers to control costs and improving business planning. RDPs support training, peer-to-peer learning, advisory sessions, and exchange schemes. The tools are there but allocation of budget to these activities remains a constraining factor and interlinkages are missing. To illustrate this: the EAFRD target is to support 1.3 million advisory sessions over seven years. Even if we assume that these will only be farms, this translates into only **benefiting 2% of all farms on an annual basis**.

[75] Dudu, H., Kristkova, S. Z, Impact of CAP Pillar II Payments on Agricultural Productivity, EUR 28589 EN, Publications Office of the European Union, Luxembourg, 2017, ISBN 978-92-79-68723-5, doi:10.2760/802100, JRC106591

Innovation under EAFRD

The European Innovation Partnership "Agricultural Productivity and Sustainability" aims to promote a resource efficient, economically viable, productive and competitive agriculture and forestry sector through funding innovative projects and networking. More info about the EIP instruments supporting productivity can be found in the Socio-economic document section 3.

Financial instruments

Access to finance for restructuring and modernisation **could be increased by a further development of new and innovative financial instruments.** This is both in line with recommendations in the Cork Declaration and the Commission priority to boost investments in the real economy.

4.2.2. Promotion of market driven production models

The increasingly volatile markets also call for further efforts on diversification of farm operations and sources of revenue. Rural development policy is used to help farmers develop new markets for organic, quality, bioenergy production, waste management, short supply chain, local processing as well as non-agricultural activities.

Geographical Indications (GIs)

There are currently nearly 4900 GIs protected in the EU (December 2017). 3367 GIs are registered directly by the EU while another 1531 are protected through bilateral agreements.

Recent data concerning the dairy sector in France have confirmed a positive contribution towards the generation of direct jobs on the farms and in the workshops where the Protected Designations of Origin (PDO) are manufactured and matured. Specific know-how and production conditions required by PDOs generate 2.8 times more direct jobs per litre of milk produced than France's dairy industry as a whole. Adding to this, French PDO milk is worth 20% more than conventional milk and in the majority of cases GIs command a price premium. Case studies related to PDO and PGI cheese production in Savoie and Rocamadour display similar findings.

The EU is **renowned** for its high quality food products having specific characteristics or farming attributes that distinguish them in the marketplace, and particularly those labelled under registered geographical indications (GIs). The quality and diversity of the Union's agricultural production is one of its important strengths giving a competitive advantage to its producers and making a major contribution to its living cultural and gastronomic heritage.

Quality schemes can **benefit the rural economy**. This is particularly the case in disadvantaged areas, in mountain areas and in the most remote regions where the farming sector already takes a significant part of the economy and production costs are high. They can create value for local communities through products that are deeply rooted in tradition, culture and geography. GIs reflect by definition a strong association between a product and its territorial origin and their production cannot be relocated to other places. They support rural development and promote new job opportunities in production, processing and other related services.

An EU case study assessing the added value of GIs (2013) showed that GI products generally received a **higher margin** than the corresponding standard product; with the price premium sufficiently high to offset higher costs.[76] However, the extent of the margin varied. EU study (AND International 2012) on the value of production of GIs revealed a price premium of 2.23 times the price of a comparable product (1.55 in the case of food while wine and spirits are higher, with 2.75 and 2.57 respectively).

Eurobarometer Surveys have shown that **communication and information efforts** are still very much needed as GIs are not widely recognized among consumers. The latest Eurobarometer Survey has shown a considerable increase of consumer knowledge however the current 20% figure (people who can recognise or distinguish the EU logo for a Protected Designation of Origin) can still be improved. Lack of knowledge is also observed amongst producers and suppliers.

Support for farmers entering quality scemes is available under Rural Development but it is not widely programmed and only has limited financial allocation.

Organic production

The European organic farming sector is characterised by **continuous growth**. In 2015, the organic area accounted for an average share of 6.2 % of the total agricultural area. Between 2000 and 2015 the organic area in EU Member States more than doubled. In the EU, retail sales in 2014 were valued at €23.9 billion. Since 2008, demand growth is around 7-8% per year. This represents approximately 2% of the turn-over of the EU food and drink industry (2011). The EU is second largest single market for organic products in the world after the US.

Regarding distribution of value added along the chain, it was found that, in particular for the unprocessed products, the organic farmers' share of the price formation represents a proportion of between 9 % and 62 % of the retail prices compared to between 6 % and 40 % in the conventional supply chains. This would indicate that, in general, **more added value is created in organic compared to conventional chains**, but the price difference does not consider increased costs and therefore only represents an approximate indication of the added value.

There is evidence that the growth of **demand** for organic products in the EU **outpaces** the growth of organic food **supply** suggesting that there are inefficiencies in the market – farmers are not converting fast enough.[77]

Administrative burden and lack of clear and harmonised rules prevented new farmers to join the scheme; therefore, the almost finalised reform of the organic sector will possibly help a faster increase of cultivated surfaces.

The results indicate that organic producers get higher farm gate prices than conventional but the producers' share of added value remains relatively low. Analysis based on the Farm Accountancy Data Network (FADN) shows that net margins per unit of production are higher but so is labour input so net market receipts per labour unit are lower. Higher subsidies partly compensate.

[76] Arete (2013) – Study on assessing the added value of PDO/PGI products. Final Report to the Directorate-General for Agriculture and Rural Development, Brussels.

[77] Saunders et al. (2016). Value added in organic farming. DG AGRI External study.

Support for organic farming is granted under the EAFRD. In the 2014-2020 programming period, a specific budget has been earmarked to organic farming support. This includes support to help farmers convert to organic farming on a projected level of over 2 million hectares. The choice of support for organic farming diverges between Member States - also as the measure competes with other measures for financial allocations with DK, GR, SE, DE, CZ and AT spending more than 10% of the total EAFRD envelope and RO, PT, LU, IE, UK and MT spending below 4% and NL not programming organic farming support.

Promotion

The new promotion policy, which benefits from a more substantial budget, is intended to act as key **for opening up new markets and to diversify trading partners**. The **2016 promotion exercise** is successfully following its course as the final beneficiaries are starting their campaigns in the first quarter of 2017. The selected campaigns show a more diverse and **broader outreach than ever**. Indeed, they cover 32 third countries, compared with 23 the previous year. To note that programme proposals should indicate output, result and impact indicators (cf. Regulation (EU) 2015/1831) as well as the expected return on investment (ROI) of the programme. For example, the evaluation results for Colombia and Mexico show that 92% of the Business developers (BD) were satisfied or very satisfied with their participation in the mission and that 72% of BD thought that their business might grow as a result of the High Level Mission.

Bioeconomy

The bioeconomy encompasses the production of renewable biological resources and the conversion of these resources and waste streams into value added products, such as food, feed, bio-based products and bioenergy. It is operated by the sectors of agriculture, forestry, fisheries, food and pulp and paper production, as well as parts of chemical, biotechnological and energy industries. The sectors are worth EUR 2 trillion in annual turnover and account for more than 22 million jobs and approximately 9 % of the workforce (2012).

The manufacture of food, beverages and tobacco was the main contributor to the EU-28 bioeconomy turnover in 2014 (51%). Its turnover increased by EUR 98 billion over the 2008-2014 period. It is followed by agriculture (17% of the EU-28 bioeconomy turnover), which experienced a turnover increase of EUR 26 billion.

Over the period 2008-2014, almost all sectors of the bioeconomy in the EU experienced labour productivity gains (in terms of turnover per person employed). Agriculture and the manufacture of food, beverages and tobacco accounted for three quarters of the jobs and two thirds of the turnover of the European bioeconomy.

The biomass-producing sectors, i.e. agriculture, forestry and fisheries, tended to be the most labour-intensive sectors of the European bioeconomy; this was particularly the case with agriculture and the fishing sectors, which employed more than 20 persons per million euros of turnover. However, the highest growth of turnover per person employed was registered in the most labour-intensive sectors. These were, in decreasing order, forestry, agriculture and the manufacture of bio-based textiles.

Rural development policy under the second pillar promotes the development of renewable energy sources in rural areas (Focus area 5C). In their RDPs, managing authorities have programmed activities under this focus area, which is planned to

generate a total investment of EUR 2.6 billion for renewable energy production. This amount could be further leveraged by the use of financial instruments.

Several measures can be used by managing authorities to promote bioeconomy-related innovation in agriculture and forestry. Among these, the co-operation measure allows for the preparation of project plans and the running of operational groups (OG) projects of the EIP-AGRI. Some operational groups have been already launched in domains relevant to the bioeconomy. A number of RD measures can also be used to promote the new pathways of a knowledge-based bioeconomy including investments, knowledge transfer, demonstration plants and areabased payments.

On the other hand, the uptake of this Focus Area in the RDPs is still rather low in the programming period 2014-2020. Out of the 115 regional or national RDPs, 76 RDPs have programmed activities here (in 23 out of 28 MS). Despite the possibilities offered within Pillar II of the current CAP there is little evidence that significant additional uptake of targeted activities in the field of the bioeconomy will occur under the current policy. One issue which is hampering appropriate development of bioeconomy interventions and the associated monitoring and reporting capacity is the fact that support for bioeconomy remains scattered over several priorities and focus areas, not necessarily forming part of a wider growth strategy for value chains. The influx of knowledge from research into projects funded under EAFRD is also mainly done via the EIP-AGRI and is expected to incentivise a number of OGs on biomass applications.[78]

4.3. Producers' position in the chain

Rural development policy offers support for setting up various forms of co-operation and collective action, as well as for raising farmers' awareness of the benefits of such co-operation. However, very limited funds are allocated to these types of activities and administrative burden is also hampering the uptake of these measures. The Common Market Organisation (CMO) offers product-specific support for multiple supply-related, marketing-related or innovation-related measures managed by POs recognised by MS. Finally, the CMO Regulation provides regulatory support by allowing certain derogations from competition rules, but there have been legal uncertainties as to the exact parameters of such derogations.[79]

As regards ability of POs and APOs to fulfill the missions assigned to them, the European Court in its judgment of 14 November 2017 clarified that that under certain conditions the competition rules do not apply to members of recognised POs and APOS concentrating volumes, coordinating a pricing policy and exchanging sensitive information within such POs/APOs. Such behaviour is subject to a proportionality test - which means that, for the competition rules not to apply, the practices must seek to achieve, and be strictly proportionate to the objectives assigned to the POs/APOs concerned.

---

78 E.g. The H2020 Thematic Network "Enabling" is upscaling biomass production and pre-processing for bio-based value chains, while "Panacea" is about the Non-food Crops' penetration path and "Agriforvalor" about valorisation of biomass side-streams from agriculture and forest.

79 The European Court of Justice clarified in a judgement of 14 November 2017 in case C-671/15 that under certain strict conditons practices by producers ***within*** a recognised PO or APO might escape the EU competition provisions, as long as they are limited to intra-PO behaviour and seek to and strictly are proportionate to the objectives which the POs have been assigned to fulfill. Agreements between POs and or APOS or with entities which are not recognised fall under the competiton rules.

In the Agricultural Omnibus, the newly formulated Article 152 CMO states that POs can be recognised if they integrate one activity (such as transport, storage, quality control…) of their producer members and carry out this activity themselves. Under certain conditions such recgonised POs and APOS are allowed to conduct – in derogation from Article 101 (1) TFEU – activities of production planning, placing of the members' products on the market, production cost optimisation and contractual negotiations. In order to rely on such derogation, the PO must concentrate supply and place the products of its members on the market and exercise the integrated activity in a genuine manner. Articles 169, 170 and 171 CMO which provided the possibility of contractual negotiations for the olive oil, beef/veal and certain arable crops sector, have been deleted in favour of a horizontal approach to all agricultural sectors.

While the above developments clarified a number of questions as regards the relation between agriculture and the competition rules, further reflections might be merited to improve the efficient and fair functioning of the agri-food chain, including supporting the creation and work of POs. Recognised POs and APOs can be a useful tool to enable farmers to improve their sustainable competitiveness and strengthen their bargaining position in the food value chain. Overcoming farmers' atomisation is particularly important to create similar competitive situation in the European Union.

Several studies have been carried out in the past to see how Unfair Trading Practices (**UTPs)** are best tackled in the food chain, notably in terms of governance (eg through private regulatory systems, national or EU-wide legislation) and scope (through general principles or specific regulation of determined practices; addressing the practices themselves and/or the enforcement of rules on UTPs). The purpose of the announced impact assessment on a possible legislative proposal is precisely to summarise the state of the art in literature on such issues, eg how to tackle some basic elements of UTPs.

On **market transparency** the AMTF report provides a series of recommendations on how to deal with the issue.[80] They include:

- introduction or enhancement of mandatory price reporting as a means to increase the transparency of prices especially in the meat, fruit and vegetables and dairy sectors,
- review and improvement of the definition and standardisation - and thus the comparability - of the collected market data,
- forum for better communication and exchange of information between Member States collecting market data and other food chain observatories,
- dissemination of market information in readily accessible (internet-based) and user-friendly formats (such as DG AGRI market dashboards);

Measures to increase market transparency are also examined in the Food Supply Chain Initiative.

Recent scientific research suggests that a **lack of knowledge about prices and costs** at the different stages of the chain may undermine farmers' trust in the supply chain.[81] One manifest current shortcoming is information on prices at other stages than primary

[80] The AMTF report, p. 18.
[81] The AMTF report, p. 16.

production (eg processing stage). A system in which processor prices are also reported would provide redress and allow insight into price transmission and formation along the whole chain. Such an approach could make it possible to link the value of a primary product to the price it eventually fetches further downstream.

A further meaningful step would be to extend market transparency all the way downstream to the retail stage. The market orientation of agriculture requires a better understanding the demand for agricultural products. Current information regarding product use and consumption is limited. A **better understanding of the various trends in consumer demand** would help identify areas where further added value can be generated - e.g. in terms of local, organic, free-range, GMO-free or antibiotic-free production, as well as animal welfare standards and broad quality labels.

ANNEX:

References for the section on behavioural biases, based on a contribution from the Joint Research Centre

Barham, B. L., Chavas, J.-P., Fitz, D., & Schechter, L. (2017). Receptiveness to Advice, Cognitive Ability, and Technology Adoption: An Economic Experiment with Farmers. http://doi.org/http://dx.doi.org/10.2139/ssrn.2603484

Bocquého, G., Jacquet, F., & Reynaud, A. (2014). Expected utility or prospect theory maximisers? Assessing farmers' risk behaviour from field-experiment data. European Review of Agricultural Economics, 41(1), 135–172. Retrieved from http://dx.doi.org/10.1093/erae/jbt006

Conley, T., & Udry, C. (2001). Social Learning through Networks: The Adoption of New Agricultural Technologies in Ghana. American Journal of Agricultural Economics, 83(3), 668–673. Retrieved from http://www.jstor.org/stable/1245097

Emery, S. B. (2015). Independence and individualism: conflated values in farmer cooperation? Agriculture and Human Values, 32(1), 47–61. http://doi.org/10.1007/s10460-014-9520-8

Emery, S. B., & Franks, J. R. (2012). The potential for collaborative agri-environment schemes in England: Can a well-designed collaborative approach address farmers' concerns with current schemes? Journal of Rural Studies, 28(3), 218–231. http://doi.org/http://dx.doi.org/10.1016/j.jrurstud.2012.02.004

Feder, G., & Slade, R. (1984). The Acquisition of Information and the Adoption of New Technology. American Journal of Agricultural Economics, 66(3), 312–320. Retrieved from http://dx.doi.org/10.2307/1240798

Jarosz, L. (2000). Understanding agri-food networks as social relations. Agriculture and Human Values, 17(3), 279–283. http://doi.org/10.1023/A:1007692303118

Kahneman, D., & Tversky, A. (1979). Prospect Theory: An Analysis of Decision under Risk. Econometrica, 47(2), 263–291. http://doi.org/10.2307/1914185

Kebede, Y., Gunjal, K., & Coffin, G. (1990). Adoption of new technologies in Ethiopian agriculture: The case of Tegulet-Bulga district Shoa province. Agricultural Economics, 4(1), 27–43. http://doi.org/http://dx.doi.org/10.1016/0169-5150(90)90018-V

Klandermans, B. (2002). How Group Identification Helps to Overcome the Dilemma of Collective Action. American Behavioral Scientist, 45(5), 887–900. http://doi.org/10.1177/0002764202045005009

Klandermans, B., Sabucedo, J. M., & Rodriguez, M. (2004). Inclusiveness of identification among farmers in The Netherlands and Galicia (Spain). European Journal of Social Psychology, 34(3), 279–295. http://doi.org/10.1002/ejsp.197

Lynne, G. D., Franklin Casey, C., Hodges, A., & Rahmani, M. (1995). Conservation technology adoption decisions and the theory of planned behavior. Journal of Economic Psychology, 16(4), 581–598. http://doi.org/http://dx.doi.org/10.1016/0167-4870(95)00031-6

Marra, M., Pannell, D. J., & Abadi Ghadim, A. (2003). The economics of risk, uncertainty and learning in the adoption of new agricultural technologies: where are we on the learning curve? Agricultural Systems, 75(2–3), 215–234. http://doi.org/http://doi.org/10.1016/S0308-521X(02)00066-5

May, D. E., & Tate, G. J. (2011). Exploring economic and social-psychological factors in explaining farmers' willingness to participate in cooperative alliances. International Journal of Strategic Business Alliances, 2(4), 329–346. http://doi.org/10.1504/IJSBA.2011.044860

Mills, J., Gibbon, D., Ingram, J., Reed, M., Short, C., & Dwyer, J. (2011). Organising Collective Action for Effective Environmental Management and Social Learning in Wales. The Journal of Agricultural Education and Extension, 17(1), 69–83. http://doi.org/10.1080/1389224X.2011.536356

Moscardi, E., & de Janvry, A. (1977). Attitudes toward Risk among Peasants: An Econometric Approach. American Journal of Agricultural Economics, 59(4), 710–716. http://doi.org/10.2307/1239398

Prager, K. (2015). Agri-environmental collaboratives for landscape management in Europe. Current Opinion in Environmental Sustainability, 12, 59–66. http://doi.org/http://dx.doi.org/10.1016/j.cosust.2014.10.009

Purvis, A., Boggess, W. G., Moss, C. B., & Holt, J. (1995). Technology Adoption Decisions under Irreversibility and Uncertainty: An "Ex Ante" Approach. American Journal of Agricultural Economics, 77(3), 541–551. http://doi.org/10.2307/1243223

Schmidt, M. C., Kolodinsky, J. M., Desisto, T. P., & Conte, F. C. (2011). Increasing farm income and local food access: A case study of a collaborative aggregation, marketing, and distribution strategy that links farmers to markets. Journal of Agriculture, Food Systems, and Community Development, 1.

Smith, J., & Mandac, A. M. (1995). Subjective versus Objective Yield Distributions as Measures of Production Risk. American Journal of Agricultural Economics, 77(1), 152–161. Retrieved from http://dx.doi.org/10.2307/1243897

Sutherland, L.-A., & Burton, R. J. F. (2011). Good Farmers, Good Neighbours? The Role of Cultural Capital in Social Capital Development in a Scottish Farming Community. Sociologia Ruralis, 51(3), 238–255. http://doi.org/10.1111/j.1467-9523.2011.00536.x

van Winsen, F., de Mey, Y., Lauwers, L., Van Passel, S., Vancauteren, M., & Wauters, E. (2016). Determinants of risk behaviour: effects of perceived risks and risk attitude on farmer's adoption of risk management strategies. Journal of Risk Research, 19(1), 56–78. http://doi.org/10.1080/13669877.2014.940597