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NAT

Evaluation of the impact of the current CAP on the agriculture of developing countries

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This report was written by Alan Matthews and Rossella Soldi (Progress Consulting S.r.l., Italy).

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List of acronyms

ACP	African, Caribbean and Pacific
AD	Anti-Dumping
BPS	Basic Payment Scheme
CAP	Common Agricultural Policy
CIS	Commonwealth of Independent States
CMO	Common Market Organisation
CN	Combined Nomenclature
CoR	European Committee of the Regions
EC	European Commission
EP	European Parliament
EU	European Union
EUR	Euro
FADN	Farm Accountancy Data Network
FAO	Food and Agriculture Organization of the United Nations
FFMP	Full-fat milk powder
FTA	Free trade agreement
HS	Harmonised System
LDCs	Least Developed Countries
MFN	Most Favoured Nation
MSs	Member States
NGOs	Non-governmental organisations
OECD	Organisation for Economic Co-operation and Development
PCD	Policy Coherence for Development
SCM	Subsidies and Countervailing Measures
SFP	Single Farm Payment
SITC	Standard International Trade Classification
SMP	Skimmed milk powder
SPS	Single Payment Scheme
SSA	Sub-Saharan Africa
TRQ	Tariff Rate Quota
UAA	Utilised agricultural area
USD	United States dollar
USITC	United States International Trade Commission
VCS	Voluntary Coupled Support
VDCs	Vulnerable Developing Countries
WAEMU	West African Economic and Monetary Union
WMP	Whole milk powder
WTO	World Trade Organization

Executive Summary

The terms of reference for this study ask for an evaluation of the impact of current CAP subsidies on the price of EU food produced and exported to developing countries. This research is meant to contribute to the current debate on how the proposed reform of the Common Agricultural Policy (CAP) may minimise its impact on developing countries coherently with EU development cooperation's objectives. As developing countries are increasingly heterogeneous, the focus of this study is on developing countries facing particular problems of food insecurity. In this study, these 'vulnerable' developing countries (VDCs) comprise the Least Developed Countries, the countries of Sub-Saharan Africa, and the African, Caribbean and Pacific countries that are signatories to the Cotonou Agreement with the EU.

The first aspect investigated is whether CAP subsidies lead to countervailable subsidies or dumping where the former refers to price suppression and lost sales by other countries, and the latter to export sales below the cost of production in the EU. Literature review provides the evidence that CAP subsidies continue to have a production-stimulating effect despite the reform path of the CAP in recent decades. Decoupled direct payments, but also coupled direct payments and productivity-enhancing investments under Pillar 2, are mainly responsible for this effect. EU agricultural production is greater and so are net exports as a result. The best recent estimates suggest that the magnitude of this effect at the aggregate level is relatively small and that EU production is around 5%-6% higher than it might be in the absence of CAP subsidies. However, there are several factors influencing the degree of this increase and the fact that other EU non-agricultural policies may offset any potential CAP effects that increase agricultural production cannot be ignored.

Then, to better understand the role of the EU in the global agri-food trade and exports to VDCs, three case study products related to milk powders, chicken meat, and processed tomato products, are examined. The EU is one of a number of exporters supplying imports of the case study products to the VDCs, where the most important importers are countries in West Africa and, in the case of chicken meat, also South Africa. The EU supplies around 35% of whole milk powder (WMP) imports by VDCs and nearly all of their full-fat milk powder (FFMP) imports, though its share in skimmed milk powder (SMP) imports is lower at 15%, with New Zealand and the US being other major suppliers. The importance of the EU as a supplier of chicken meat exports to VDCs varies by country but has been growing, and the EU now accounts for almost half (46%) of total imports in the main VDC import markets, with the remainder supplied by Brazil and the US. In the case of tomato paste, the EU (and particularly Italy)

has been squeezed out of these markets by Chinese competition, and the EU now accounts for around 12% of their total imports. Most EU exports of these products are sold to non-VDCs although VDC markets have been growing in importance in the case of chicken meat (now accounting for almost half of total EU exports of that product) and FFMPs.

This report assesses the extent to which CAP subsidies have influenced the price of EU exports to these markets and encouraged growth in these exports. The conclusions vary by product. In the case of milk powders, recent export growth has been mainly affected by the elimination of milk quotas in 2015 which has allowed an expansion in EU dairy product exports despite a fall in world market prices. This was a once-off change and in itself does not reflect any change in CAP subsidy policy. However, coupled and decoupled payments to farmers result in higher EU milk production than would otherwise be the case in the absence of these payments, both through the direct stimulus to production and the possible indirect support where farmers use even decoupled payments to subsidise their production costs. Higher EU milk production allows higher production of dairy products (M'Barek *et al*., 2017) which has the effect of lowering world market prices. Because the EU competes on the world market with other exporters of these products, this negative price impact will be limited but not negligible. The report finds that, despite direct payments to milk producers, the EU is losing market share in WMP and SMP exports, and that the main growth in milk powder exports to VDCs has been FFMPs. FFMPs exploit a technological innovation that allows more expensive butter fat to be replaced by cheaper vegetable fat, resulting in a milk powder that can be sold at a considerably lower price than competitive conventional milk powders. The availability of FFMPs intensifies the competitive pressure on local milk production from imported milk powder. This innovation evolved independently of CAP subsidies and would not be reversed if CAP subsidies were to disappear.

In the case of chicken meat exports, there is no evidence that CAP subsidies have depressed the price of chicken meat from the EU to VDCs. If anything, the price of broiler meat in the EU is higher than that of other exporting countries, in part due to higher feed costs and higher environmental, animal welfare and food safety standards. High import tariffs are necessary to prevent a substantial increase in imports from these exporters into the EU. These import barriers reduce EU consumption of chicken meat and reduce the global supply of dark meat which is exported to VDCs. Despite these cost disadvantages, the EU is a significant and increasing exporter of chicken meat, and especially frozen chicken parts. Half of these exports now go to markets in the VDCs. This trade is based on distinct differences in consumer preferences for different types of chicken meat in the EU and export markets. Even if these exports are not the result of CAP subsidies, local poultry producers find it difficult to compete with

these cheap imports and stronger measures to develop the local industry are required.

In the case of EU exports of tomato paste there is a potential effect of CAP subsidies on the price of exports of this product but in practice this appears not to be significant. Many EU countries maintain coupled support for processing tomatoes under the Voluntary Coupled Support (VCS) scheme. Furthermore, the fact that the decoupled payment is paid to growers on the basis of the Single Farm Payment (SFP) historic model means that it could still be interpreted as a coupled payment. Farmers may assume that their future payment will depend on maintaining their current level of output and behave accordingly. Both these effects can stimulate the production of tomatoes and lower the cost of raw material to the processors of tomato paste. However, the economic evidence, taking account of the various factors that influence the pass-through rate to the price of tomato paste, suggests that in practice the impact on the price of tomato paste is insignificant (Barker, 2015). Offsetting factors include the power of Producer Organisations to influence contract prices through collective bargaining as well as the limitations in importing tomatoes for the production of tomato paste. The report notes that a legal analysis can arrive at a different conclusion, as shown by the imposition of anti-dumping duties on certain Italian exporters of processed and preserved tomato products by Australia.

Based on the above findings a number of suggestions for future CAP support policy are proposed. They range from the need for greater disciplines on coupled support payments, to market management measures that do not destabilise prices for VDC producers, to the need of completion of the full convergence process of direct payments, the phasing out of decoupled payments for income support, and the creation of a platform allowing stakeholders from VDCs to be involved in a dialogue on Policy Coherence for Development (PCD) and agri-food trade issues.

This report consists of four parts in addition to this summary. Part 1 is a literature review of previous studies on the impact of CAP subsidies on the price of EU food produced and exported to developing countries. It frames the study's objectives within a policy and international trade context, discussing the various effects CAP subsidies have on production and competition. Part 2 analyses EU exports of agri-food products to developing countries, and VDCs in particular, also through the lens of three case studies for milk powder, chicken meat and processed tomato products. Part 3 reports on the main findings drawn from the previous literature review and statistical analyses and Part 4 concludes by considering possible EU policy responses to adverse competitive impacts caused by EU exports to VDCs.

Part 1 Review of the previous studies on the impact of current CAP subsidies on the price of the EU food produced and exported to developing countries

1.1 Introduction

The Commission's 2019 Policy Coherence for Development (PCD) report includes the following passage (EC, 2019a): **"*The EU is a major importer of commodities and exporter of valuable agriculture and food products. Its practices therefore have a noticeable impact on food systems outside the EU, including in developing countries*.** *The proposals for a reformed CAP for 2021-2027 therefore build on previous policy reforms in that it confirms market orientation as a fundamental CAP principle to minimise the risk of creating distortions in global agricultural markets. The proposals remove export subsidies, continue with direct support to farmers which is largely decoupled from production decisions and restrict market measures to times of crisis (and even then, price support for farmers is set at levels that are generally well below normal market conditions, reducing EU surpluses and bringing EU prices more into line with global prices). In line with this, the proposals for a reformed CAP include an explicit reference to the EU commitment to PCD in the explanatory memorandum thereby, indicating that a reformed CAP will take into account the EU development cooperation's objectives of poverty eradication and sustainable development in developing countries. Particular attention will be given to ensure that EU support to its farmers has minimal or no trade distorting effects."* (bolding in original)

The impact of the CAP on developing countries has long drawn the attention of activist campaigners, international organisations and academic researchers. These groups pointed out the lack of policy coherence between the implementation of the CAP and its frequent adverse impacts on food security and agricultural development in developing countries (Matthews, 1985; Oxfam, 2002; Fritz, 2011; De Schutter, 2011; Meijerink and Achterbosch, 2013; Matthews, 2017; Blanco, 2018). The concerns raised by critics of the policy incoherence of the CAP have changed over time. The classical criticisms of the CAP were that the high level of protection afforded to EU farmers particularly for sensitive products damaged the interests of some developing country exporters of products such as sugar, cotton and rice (while recognising that some privileged exporters benefited from preferential access to the EU market at low or zero rates of duty, such as certain banana and sugar exporters), while the use

of export subsidies to clear surpluses from the EU market damaged local producers in import markets because they then faced subsidised competition. In both cases, the main complaint was that CAP subsidies depressed world market prices to the detriment of both developing country exporters and producers in importing countries. EU tariff protection on sensitive products remains extraordinarily high, despite the changes implemented at the end of the Uruguay Round. However, the EU no longer uses explicit export subsidies and the largest share of the CAP budget is now spent on decoupled income support.

A significant change in critical perspectives on the CAP occurred following the 2008 food price crisis. International organisations reported that the sharp and sudden peaking of food prices in 2008-09 and later in 2011 led to a significant rise in the numbers of undernourished. While it is now clear that several factors coincided to contribute to the spike in food prices, activist groups and some international organisations pointed specifically to biofuel mandates which were blamed for diverting food crops to fuel uses and driving up the price of food. Many groups called (and still call) for the rescinding of biofuel mandates on the grounds that they put upward pressure on global food prices and cause increased hunger and undernutrition in low-income countries. While biofuel mandates are not the responsibility of agricultural policy, the concern voiced that developed country policies were driving food prices up was the opposite to the traditional criticism that developed country agricultural policies drove food prices down (Swinnen, 2011). It was an important reminder that consumer as well as producer interests should be considered in the food security debate.

The biofuel issue has had longer-term consequences for the debate on the CAP and developing countries. Even if biofuels help the EU meet its greenhouse gas reduction targets (a contested issue) biofuel production in the EU typically takes place on cropland which was previously used for other agriculture such as growing food or feed. Since this agricultural production is still demanded, it may be partly displaced to previous non-cropland such as grasslands and forests in non-EU countries (this process is known as indirect land use change). More generally, there is now greater awareness of the external footprint of EU demand for agri-food imports and the possible negative impacts in exporting countries of supplying these imports (De Schutter, 2011). Much of this concern has focused on the consequences of palm oil imports for biodiesel and soybean imports for animal feed which have contributed to deforestation in exporting countries (DG ENV, 2013). A recent Swedish study calculated that one-sixth of all emissions resulting from the typical diet of an EU citizen can be directly linked to deforestation of tropical forests (Pendrill *et al.*, 2019). Another concern is that access to the EU market both for biofuel and food imports may lead to land grabbing and human rights abuses (Borras Jr *et al.*, 2016). Compared to classical criticisms of the CAP, these concerns focus on the consequences of EU

consumption and associated animal feed requirements rather than the production of agri-food products. They also focus on the potential negative impacts of EU imports from developing countries rather than on the more traditional concern with the impact of EU exports on developing countries.

1.2 Scope of the study

The terms of reference for this study ask for an evaluation of the **impact of current CAP subsidies on the price of EU food produced and exported to developing countries**.

Current CAP refers to the CAP regulations for the 2014-2020 programming period. The way in which farmers in the EU are supported under the CAP has evolved significantly under successive CAP reforms, from support provided to market prices in the period 1968-1994, to support provided to products through partially-coupled direct payments in the period 1994-2005, and since 2005 to support provided to producers mainly through decoupled hectare-based direct payments. Direct payments now account for 72% of the CAP budget. This transition is not complete; elements of the instruments introduced in the earlier CAP periods continue to co-exist with decoupled direct payments. Market prices can be supported by safety-net intervention, and Member States (MSs) have the possibility to use a proportion of their direct payments envelopes to make coupled payments to products under specified conditions. Farmers are also supported under the CAP rural development pillar. Total rural development spending, including non-farm spending, accounts for 22% of CAP spending. The remaining 6% relates to market support measures spending and other spending.

CAP subsidies are payments to farmers from the CAP budget. EU farmers also benefit from border protection for some sensitive commodities through high tariffs. For some commodities where this protection is effective, EU domestic prices are higher than world market prices. This study does not seek to evaluate the impact of agricultural trade policy on developing countries but instead is confined to the impacts of support paid through the CAP budget. Still, the role played by import protection cannot be ignored. Export subsidies are an intermediate policy instrument, in that they are a border measure but funded in the past from the CAP budget. Export subsidies were used to support EU market prices and farm incomes by compensating exporters for the difference between the price of agricultural commodities on the EU market and world market prices. The EU ceased paying export subsidies in 2015 and has implemented the prohibition on the use of export subsidies agreed at the WTO Nairobi Ministerial Council in the same year. Therefore, the use of export subsidies and their

possible impact on the price of EU food exported to developing countries, although a hugely important issue in the past, is no longer relevant for this study. Another issue not addressed is any implicit subsidy to EU agricultural production due to the incomplete or absence of efforts to fully internalise the costs of damage to the environment, to natural resources and to human health, what economists call negative externalities. The focus of this report is on CAP domestic subsidies. Because of their importance in the overall CAP budget, the principal focus will be on the impact of decoupled direct payments.

The study is required to evaluate the impact of CAP subsidies on **the price of food** produced in and exported by the EU. Here there are two issues to be considered within an international trade context (Box 1). One is whether CAP subsidies stimulate EU production resulting in adverse effects on other countries, for example, because of fewer import opportunities or greater exports by the EU. Greater EU supply is likely to lower both the EU and the world market price of food and thus affect the price of EU food exported to developing countries. A second potential mechanism is that CAP subsidies allow EU products and exports to be sold at below their cost of production, a form of dumping. This would mean that EU products are exported at prices below what they would otherwise be in the absence of these subsidies. It has been alleged that CAP subsidies do encourage dumping resulting in unfair competition with producers in developing countries. Whether these mechanisms exist and, if so, how important they might be is evaluated in section 1.3 below.

Box 1. WTO rules on unfair trade

The legitimacy of international competition depends on competition being 'fair'. International trade rules recognise two cases of unfair trade where governments are entitled to protect local producers from unfair competition. One is where an exported product benefits from a specific subsidy that gives it an unfair advantage over domestic producers. The other situation is where a company exports a product at a price lower than the price it normally charges on its own home market and is said to be 'dumping' the product. The WTO's Subsidies and Countervailing Measures (SCM) Agreement and Anti-Dumping (AD) Agreement govern how countries determine if countervailable subsidies or dumping exist and the measures they can take against them.

Subsidies are widely used by governments to achieve desired objectives. The SCM Agreement applies to specific subsidies. A specific subsidy is defined as one available only to an enterprise, industry, group of enterprises, or group of industries in the country that gives the subsidy. Non-specific subsidies are those granted according to certain objective criteria or conditions that are strictly adhered to, and eligibility is automatic, and are deemed to be non-actionable. Article 8 of the Agreement envisaged a set of 'non-actionable' subsidies that could not be challenged, such as certain R&D support, assistance to disadvantaged regions or payment for environmental upgrading, but this Article has now lapsed and is no longer relevant. Specific subsidies are either prohibited

(e.g. export subsidies) or are deemed actionable if they cause adverse effects to the interests of another WTO member. Adverse effects include injury to the domestic industry producing the like product, nullification or impairment of benefits accruing to another member, or serious prejudice to the interests of another member. Where a country claims it suffers adverse effects, it can ask the subsidising member to take appropriate steps to remove the adverse effects or to withdraw the subsidy. Serious prejudice can arise where a subsidy displaces or impedes the imports of a like product into the market of the subsidising country, where it displaces the exports of another member from a third country market, or where it leads to significant price suppression or lost sales. A country can either use the WTO's dispute settlement procedure to seek the withdrawal of the subsidy or the removal of its adverse effects, or it can launch its own investigation based on procedures set out in the SCM Agreement to decide whether subsidised imports hurting domestic producers exist and the appropriate level of countervailing duties that should be applied.

Under the WTO Agreement on Agriculture, domestic agricultural subsidies that were within a country's level of commitments (in the case of 'amber box' and 'blue box' subsidies) or that were notified in the 'green box' benefited from a 'due restraint' or 'peace' clause for a period of time. Under the peace clause, compliant agricultural subsidies could not be challenged and 'green box' subsidies could not be subject to countervailing duties. Since the end of the implementation period in 2004, the peace clause no longer applies. The consistency of any agricultural subsidy with the SCM Agreement can be challenged and countervailing duties can be imposed on any agricultural subsidies including 'green box' subsidies.

The other recognised case of unfair competition is dumping. Dumping exists when the export price of a product falls below its 'normal value'. The AD Agreement provides for various ways to calculate a product's 'normal value'. The main one is based on the price in the exporter's domestic market. When this cannot be used, two alternatives are available: the price charged by the exporter in another country, or a constructed value calculation based on the combination of the exporter's production costs, other expenses and normal profit margins. The agreement also specifies how a fair comparison can be made between the export price and what would be a normal price (adjusting for differences in transport costs, selling costs etc.). Under WTO rules, anti-dumping measures can only be applied if the dumping is hurting the industry in the importing country. Typically, an anti-dumping action means charging extra import duty on the particular product from the particular exporting country in order to bring its price closer to the 'normal value' or to remove the injury to domestic industry in the importing country.

The final aspect of the terms of reference is that the study should focus on EU food produced and exported **to developing countries**. Developing countries are increasingly heterogeneous. Several developing countries have emerged as significant and competitive agricultural exporters in recent years (some South American and Asian countries). Others have small populations and high export earnings from commodities (e.g. oil-exporting countries). This study pays particular attention to what might be called 'vulnerable' developing countries facing particular problems of food insecurity. For practical purposes this group is defined as consisting of the Least Developed Countries (as officially defined

by the United Nations), the countries of Sub-Saharan Africa, and the African, Caribbean and Pacific countries that are signatories to the Cotonou Agreement with the EU. This makes a total of 83 countries. Reference is to Annex I for the list of these vulnerable developing countries (VDCs).

1.3 Examining the impact of CAP subsidies on EU exports to developing countries through literature review

Previous literature has assessed the impact of CAP subsidies on developing countries using a variety of different approaches and methodologies. Three broad approaches can be identified: macro-level modelling studies, micro-level case studies and studies examining the effects of specific CAP policy instruments. These are discussed in Box 2.

Box 2. Classification of studies examining the impact of CAP subsidies on developing countries

Macro-level modelling studies are popular among international organisations and academic researchers. Examples include M'Barek *et al*. (2017) and Boysen *et al*. (2016). They make use of complex economic models to assess the impact of CAP policies on production, trade, domestic and world market prices, and economic welfare in developing countries. CAP impacts are usually measured relative to 'no policy' or a free market counterfactual scenario. The results of these models are very sensitive to the values used for key parameters, for example, supply and demand elasticities that measure the response of farmers and consumers in both developed and developing countries to changes in prices, or trade elasticities that measure how easy it is to substitute imports from one country for another in response to relative price changes, or the size of the impact of a particular policy instrument (e.g. decoupled payments or rural development investment aids) on production. Because the outputs of these models depend on the assumptions the modeller makes regarding these input parameters, the results of macro-models do not provide proof of the impact of the CAP but they can provide a useful consistency framework to discuss these potential effects.

Micro-level case studies of the impact of exports of a specific EU product on livelihoods of producers in one or more developing countries have often been conducted by development NGOs as part of their efforts to campaign for CAP reform to mitigate or eliminate its adverse effects on developing countries. Examples include studies of the impact of EU milk exports to West Africa (Choplin, 2016, 2019), EU chicken exports to Africa (Goodison, 2015) and tomato paste exports to Ghana (Paasch, 2008). Often using personal testimonies by affected farmers, these studies seem often more realistic than the results of modelling studies. The weakness of the case study approach is that it can be difficult to demonstrate the causality between CAP policies and the competition faced by local producers because the method, of its nature, does not allow the construction of a counterfactual. Another possible criticism is that the focus of these studies on producer

livelihoods sometimes ignores the potential benefits to low-income consumers of low-priced imports and thus fails to account for potential trade-offs arising from policy reform.

Analysis of the potential effects on production and prices of specific CAP policy instruments is a third approach popular among academic and activist researchers. Examples include the evaluation of the impact of eliminating decoupled payments by Mittenzwei *et al*. (2012) and the production impact of coupled payments in the sugar beet sector by Smit *et al*. (2017). This discussion often takes place in the context of the WTO Agreement on Agriculture's well-known classification of agricultural policies into red (prohibited), amber, blue and green boxes with different disciplines applying to each. Whether the CAP policies notified in the green box are as production-neutral as required to fit this classification has been a particular focus of analysis.

Our literature review is structured around the two main concepts related to 'unfair' trade introduced in Box 1: whether CAP subsidies lead to price suppression and lost sales by other countries (**countervailable subsidy**), and/or whether they lead to export sales below the cost of production in the EU (**dumping**).

1.3.1 Do CAP domestic subsidies stimulate production?

In the case of price suppression, the question refers to whether CAP subsidies result in larger EU production (and thus potentially exports) than might exist in the absence of these subsidies. Where subsidies stimulate EU production and possibly exports, world market prices will be reduced to below the level they otherwise would reach, with potentially adverse impacts on developing country producers as a result. Most attention is focused in what follows on decoupled direct payments because these are the dominant subsidy paid to farmers in the EU. However, the potential impacts of coupled payments, rural development payments, market management instruments, risk management instruments and export promotion policy are also reviewed.

► Decoupled direct payments

EU agricultural income is heavily dependent on the direct payments received under the CAP. On average across the EU, Pillar 1 direct payments in 2011-2015 accounted for 27% of agricultural factor income; when Pillar 2 payments such as agri-environment payments and compensatory payments for farming in areas facing natural constraints are added, the total rises to 38%.[1] For the period

[1] Figures are from DG AGRI 'Share of direct payments and total subsidies in agricultural factor income', accessed 24 March 2019. Agricultural factor income represents the income generated by farming which is used to remunerate borrowed/rented factors of production (capital, wages and land rents), and own production factors

2014-2018, total support including national payments as a share of agricultural factor income amounted to 35%, while expressed as a share of family farm income, the share amounted to 57%.[2] For individual countries the percentages can be higher, and for individual enterprises within countries (e.g. beef farming) the percentages can be higher still (DG AGRI, 2018d). Direct payments make up the majority of this support and it may seem to be evident that support of this magnitude must influence the capacity of the EU agricultural sector to produce. However, evidence on the size of any stimulus effect is not easy to come by.

Truly decoupled payments do not affect the marginal incentive to produce. But there are a number of mechanisms whereby even decoupled payments might be expected to encourage additional production compared to the absence of such payments, although the literature generally suggests that the magnitude of these effects is small (Rude, 2008; Moro and Sckokai, 2013). Payments that are decoupled in a static and riskless world are no longer production neutral in a dynamic and risky world. The mechanisms include: maintaining and improving farmer wealth, leading to higher investment and changing attitudes to risk (insurance and wealth effects); increased access to credit where imperfect credit markets exist; farmer expectations about future programme eligibility and payment basis affecting current production decisions; slowing or accelerating farm consolidation; conditional requirements on the receipt of direct payments such as cross-compliance which impinge on farmers' production decisions; and the cumulative impact of payments when they are given on top of other mechanisms of producer support such as border protection through tariffs (Gasperin and Doporto Miguez, 2009).

Critics also point out that the EU's decoupled payments may not fulfil the criteria necessary to satisfy the conditions of the WTO green box. These criteria require, *inter alia*, that the amount of such payments in any given year shall not be related to, or based on, the type or volume of production (including livestock units) undertaken by the producer in any year after the base period; the amount of such payments in any given year shall not be related to, or based on, the factors of production employed in any year after the base period; and no production shall be required in order to receive such payments. Decoupled payments in the EU arguably remain coupled to agricultural area as farmers must show they have eligible hectares to get their payments, while eligibility also depends on farmers showing that they carry out "*a minimum activity, defined by Member States, on agricultural areas naturally kept in a state suitable for grazing or cultivation*" which suggests there is a continued link to

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(own labour, capital and land). Agricultural entrepreneurial income (also called family farm income) in the EU agricultural accounts deducts the costs of paid labour, paid interest and paid rent.

[2] Matthews, A., 'The dependence of EU farm income on public support, 20 April 2016, accessed 24 March 2019.

production (Bertholot, 2018; Swinbank and Tranter, 2005). A possible EU challenge at the WTO to the recent decision by the US Department of Commerce to impose countervailing and anti-dumping duties on imports of Spanish ripe olives in large part because of the decoupled payments received by Spanish olive growers may clarify some of these issues (Box 3).

Box 3. The US Spanish olives case on subsidies

Question marks have been raised over the EU's notification of its decoupled direct payments in the WTO green box and its coupled payments in the blue box. However, there has been no legal determination of these issues because no other WTO member has challenged the EU's notifications and no member has attempted to show that they have suffered an adverse effect due to these subsidies. This may change as a result of the decision of the US Department of Commerce to impose countervailing and anti-dumping duties in 2018 on the import of Spanish ripe olives (US Department of Commerce, 2018). The EU has initiated a dispute on this issue at the WTO, and a panel was formed in June 2019 to hear the dispute (WTO, 2019a).

The US action is in response to a complaint by domestic producers of ripe olives that Spanish ripe olives were unfairly subsidised because olive growers received CAP subsidies in the form of direct payments as well as through several other measures. The exporters, supported by the European Commission, argued that direct payments were not a subsidy to olive production as they were not linked to the production of olives. They also argued that there was no evidence of 'pass-through' of any benefit that olive growers might have received to the processors of ripe olives and therefore no subsidy to the exporters. To the contrary, the US Department of Commerce found that the subsidies olive growers received were crop specific and were passed on to the processors and exporters. Recalling that green box subsidies are actionable under the SCM agreement and give rise to a countervailing duty if there is a finding of adverse effect, in this case, it was found that there was material injury to the domestic industry (USITC, 2018).

Some commentators have warned that this finding represents a direct attack by the US on the principle of decoupled subsidies. The European Parliament (EP) claimed that "*the decision calls into question, in an unfair and arbitrary manner, all the EU's farming support programmes and could potentially affect all recipients of payments under the CAP*" (EP, 2018). However, the reasoning used in the case was quite specific. The US Department of Commerce accepted evidence that the Basic Payment received by olive growers in the 2014-2020 period was linked to the Single Payment Scheme (SPS) payment they received in the 2005-2013 period. In turn, the grant amount provided to olive farmers under the SPS was based on the average grant amount olive farmers received in 1999 through 2002 under the Common Organization of Markets in Oil programme. This grant amount provided in 1999 through 2002 was based on the type of crop grown and the production value created from the crop. Therefore, the Department of Commerce concluded that the annual grant amount received by olive growers under the Basic Payment Scheme in 2016 was based on annual grant amounts that were crop specific, as they were directly related to the grant amount only olive growers received under Common Organization of Markets in Oil program. What attracted the Department's criticism was not direct payments per se, but rather that Spain has continued to use the historical basis for determining the value of the Basic Payment to farmers. It is this link with the past,

rather than the nature of decoupled payments in themselves, which was the foundation for the US finding that Spanish ripe olives were subsidised.

The EU complaint has several strands (WTO, 2019b). It first claims that the Basic Payment is not a specific subsidy within the meaning of the SCM Agreement, thus reiterating its view that decoupled payments by their nature are not specific within the meaning of the SCM Agreement and thus cannot be the basis for countervailing action. It also claims that the Commerce Department did not perform a pass-through analysis to confirm that any subsidy to growers did benefit exporters (which the Commerce Department defends on the basis that this is not necessary under US law). Finally, it claims that the injury determination undertaken by the USITC was flawed in several respects. The findings of this dispute could help to clarify some of the legal issues around the trade-distorting effects of decoupled direct payments. In the absence of legal clarification whether the EU's decoupled direct payments are trade-distorting or not, the focus in this study is on economic assessments to see what insights they provide.

Where they exist, the production effects of decoupled payments will be smaller than those of coupled payments and much smaller than market price support. Because of the difficulties in imagining a fully decoupled policy, the OECD suggests it makes more sense to discuss the production impacts of direct payments in terms of the 'degree of decoupling', compared to the production effects of a fully coupled policy usually taken to be market price support (OECD, 2001).

Potential production effects also depend on the obligations farmers must follow for eligibility for these payments. In the EU, eligibility for direct payments depends on farmers observing cross-compliance conditions. While many of these are statutory obligations which farmers must follow in any case, others go beyond legal requirements in restricting what farmers may do or oblige them to implement specific farming practices. Thus cross-compliance raises farmers' costs and offsets some of any production stimulus from decoupled payments. The greening payment introduced in the 2013 CAP reform can be viewed in this context as 'enhanced' cross-compliance as it requires farmers to observe additional requirements to be eligible for 30% of the CAP Pillar 1 payments. It is worth underlining how little growth in agricultural output has occurred in the EU since the introduction of decoupled direct payments after 2005. In 2018, EU agricultural output was less than 10% higher than in 2005, and some of this was catch up in the new MSs – in the EU15 output was just 8% higher 13 years later.[3]

[3] For a more complete evaluation of the production effects of EU decoupled direct payments, also taking into account the potential impacts on technical efficiency, production growth and farm structures, see Matthews, Salvatici, and Scoppola (2016).

► Coupled direct payments

Most, but not all, CAP Pillar 1 payments are decoupled. The 2013 CAP reform altered the framework for coupled direct payments. The list of sectors eligible for coupled support payments is greatly expanded to cover nearly all agricultural production. Total coupled support is limited to 8% of each Member State's direct payments ceiling, or exceptionally to 13% in some countries. These percentages can be increased by up to 2 percentage points if this support is used for protein crops. In the original Direct Payments Regulation (Regulation (EU) No 1307/2013), all voluntary coupled payments within these ceilings should comply with a number of conditions, as follows: i) coupled support should only be granted to those sectors or to those regions of a Member State where specific types of farming or specific agricultural sectors that are particularly important for economic, social or environmental reasons undergo certain difficulties; ii) coupled support should only be granted to the extent necessary to create an incentive to maintain current levels of production in the sectors or regions concerned; iii) coupled support should take the form of an annual payment and should be granted within defined quantitative limits and be based on fixed areas and yields or on a fixed number of animals. Limits should reflect the production levels in the targeted region or sector in at least one year in the period of 5 years that precedes the year of the decision about coupled support.

The above conditions were intended to ensure that future coupled payments would qualify as blue box payments under the WTO Agreement on Agriculture disciplines on domestic support. The Omnibus (Agricultural Provisions) Regulation (EU) 2017/2393 significantly relaxed these conditions by removing the constraint that coupled support may only be granted to the extent necessary to create an incentive to maintain current levels of production in the sectors or regions concerned. Furthermore, the limitation that coupled payments should be granted within defined quantitative limits (in turn, set at the maximum yields, area or number of animals reached in one of the previous five years) was removed. Instead, coupled support is now defined as a production-limiting scheme that shall take the form of an annual payment based on fixed areas and yields or on a fixed number of animals and shall respect financial ceilings to be determined by MSs for each measure and notified to the Commission. The consequence of these changes is that coupled support can now be given even where it leads to an increase in production beyond historical levels.

The use of this voluntary instrument by MSs shows a very varied pattern (DG AGRI, 2018a). Nine MSs opted to use less than the standard 8% ceiling while eleven MSs have the maximum percentage of 13% with 9 of these also using all or part of the additional 2% available in case of support to the protein crops sector. Three older MSs (Belgium, Portugal and Finland) were given permission

to exceed the 13% limit. Germany is the only MS not to provide coupled support. In total, around 10% of CAP Pillar 1 direct payments are now coupled (excluding cotton payments) which is a small increase compared to the end of the Health Check period in 2012. Beef and dairy are the most supported sectors, with smaller amounts going to other sectors such as sheep and goats, protein crops and fruit and vegetables.

Coupled support provides a direct incentive to farmers to maintain and even increase production and is thus classified as trade-distorting support under the WTO Agreement on Agriculture. However, if the support is linked to production limitations, it can be notified as blue box support which is exempt from any disciplines on the amount of support that may be granted. As discussed above, the changes introduced in the Omnibus Regulation remove any limit on where this production limitation can be set and allow coupled payments to be used to support increases in production.

Literature estimating the production effects of current coupled payments in the EU is relatively sparse. In its impact assessment of the CAP post 2020 proposals, the Commission examined the production and price effects of coupled payments for dairy, beef and sugar beet producers. It found that coupled payments increased beef production by 2.4% and lowered beef prices by 3.2%, and increased sugar production by 2.8% and lowered sugar prices by 3.9%. However, counter-intuitively, it found that coupled payments to dairy cows lowered milk supply by 0.7% and slightly raised milk prices by 1.4% (EC, 2018). Smit *et al.* (2017) examined the production impact of coupled payments to sugar beet, which account for around 9% of all coupled payments in the EU. They estimated that these payments increased sugar beet production in the EU by 1.3% and as a result sugar beet prices in the EU were lowered by around 4.5%.

► Market intervention measures

The CAP continues to make use of various instruments to support domestic prices during low periods in the price cycle. These include intervention arrangements at safety-net levels for some commodities, private storage aid, market withdrawal of fruits and vegetables undertaken by producer organisations, and temporary planning of supply during market crises. Intervention expenditure was at relatively low levels by 2005 and had virtually ceased by 2013. However, because of difficult market conditions for fruits and vegetables, pigmeat and dairy products since the end of 2014 and because of the Russian ban on imports of certain EU agricultural products and of global market conditions, expenditure on intervention measures has increased again in recent years.

The conventional view is that domestic policies to stabilise agricultural markets destabilise international markets (Josling *et al*., 2010). For example, with respect to the milk market, it has been argued that insulating EU milk producers from the worst effects of price declines sustains EU milk production and subsequent exports at levels which would not be the case in the absence of this range of safety-net interventions (Curtis, 2011). This view was developed in the context of the variable import levy and export subsidy system used by the EU to stabilise domestic prices. Support provided through minimum support prices, intervention prices and other forms of administered prices usually relies for effectiveness on border measures, but the use of administered prices can by itself distort production and trade. The WTO Agreement on Agriculture therefore includes support through administered prices in the sum of certain trade-distorting domestic support that is subject to a limit.

► Pillar 2 payments

Most criticism of the CAP for distorting global agricultural markets focuses on its farm income support and market management measures financed by Pillar 1 (as well as the high import protection which is formally a part of EU trade policy rather than the CAP). However, expenditure on Pillar 2 rural development measures now makes up almost one-quarter of CAP expenditure so it should not be overlooked. The measures supported by Pillar 2 include support for knowledge transfer, investment aids, regional assistance programmes, environmental programmes, forestry, risk management and locally-led job creation initiatives in rural areas. Half of Pillar 2 spending goes on agri-environment and climate actions, with the remainder divided between competitiveness measures, general rural development and food chain actions. All expenditure on these measures is notified as green box expenditure in the EU's WTO notifications but they may still have some production and thus trade impacts.

In some cases (e.g. agri-environment measures) the impact is likely to reduce EU production relative to a non-policy benchmark. In other cases (support for knowledge transfer and innovation, measures to improve physical and human capital) the measures are likely to strengthen the EU's production capacity even if they are exempted from being counted as part of WTO trade-distorting domestic support. On balance, model estimates suggest that rural development expenditure reduces agricultural productivity principally because the significance of the agri-environment measures outweighs measures such as investment aids and knowledge transfer which might be expected to increase productivity (Schroeder, Gocht and Britz, 2015).

► Risk management measures

Risk management tools are designed to help farmers meet either production and/or price risks. Farmers normally try to mitigate normal risks themselves (weather fluctuations, pests and diseases, normal price volatility) through diversification, the use of technology, or use of market-based instruments such as forward selling or contracting. For well-known reasons, there is often inadequate provision of market-based risk management insurance instruments both for production and market risks. In other countries, such as the US, Canada and Australia, significant government support is provided to subsidise either production (yield) insurance or income/revenue stabilisation schemes. The EU has begun to move cautiously in this direction.

Risk-related policies have the potential to distort production and trade. Where risk is reduced, farmers will tend to expand risky production activities at the expense of diversification and other risk management activities. Overall resources employed in agriculture are also likely to expand when policy measures make farming less susceptible to risk. Empirical evidence suggests that the production impacts of risk reduction measures are likely to be small. For example, the extensive farm safety-net in the US consisting of loan rates and counter-cyclical payments was estimated to be equivalent to an increase in average price support for US agriculture by mostly less than 0.5% (OECD, 2011).[4] Production impacts are enhanced if, for political economy reasons, risk-related policies are used as a politically convenient vehicle for farm income support (Tangermann, 2011).

The 2013 CAP reform moved risk management into Pillar 2 of the CAP.[5] The risk management toolkit in Pillar 2 now contains three instruments: i) financial contributions to premiums for crop, animal and plant insurance against economic losses to farmers caused by adverse climatic events, animal or plant diseases, pest infestation, or an environmental incident; ii) financial contributions to mutual funds to pay financial compensations to farmers, for economic losses caused by adverse climatic events or by the outbreak of an animal or plant disease or pest infestation or an environmental incident; and iii) an income stabilisation tool, in the form of financial contributions to mutual funds, providing compensation to farmers for a severe drop in their income. In each case, the Rural Development Regulation sets out conditions limiting the extent of support that can be provided which are based on the policy criteria for

[4] This is confirmed by the relatively few EU studies on the topic. For example, Garrido, Bielza, and Sumpsi (2003) in an econometric study estimated that a 35% increase in subsidies to yield insurance in Spain had about the same effect on cereal production as a 1% increase in cereal prices.

[5] There are also risk management tools in the fruits and vegetables, and wine, sectors in the CMO Regulation.

notification as green box measures under the WTO Agreement on Agriculture. These conditions were relaxed in the Omnibus (Agricultural Provisions) Regulation in 2018 in order to make these schemes more attractive to farmers.

Although CAP support for agricultural risk management is increasing, the share of CAP funds being spent on crisis and prevention measures continues to be very low, less than 2% of the Pillar 2 funds and 0.4% of the total CAP budget in the 2014-2020 period (Bardají and Garrido, 2016). In consequence, the distortion implications are limited. Furthermore, with a given overall amount of budgetary resources for rural development programmes, the farm income safety nets at the Member State level under Pillar 2 displace other Pillar 2 policies which may have even greater production-stimulating effects.

► Export promotion policy

The reduction in EU market price supports has slowly aligned EU market prices with world market prices for a growing number of agricultural products, thus improving the competitiveness of EU products on world markets. The EU is now the largest global agri-food exporter. Promoting agri-food exports and finding new markets has been an important objective of the Commissioner for Agriculture and Rural Development Phil Hogan since he took up the position, and he has led trade missions to a number of third countries, including in Asia and Latin America.

The CAP also provides funding to support the promotion of agri-food exports. A new promotion policy came into force in December 2015.[6] This increased the annual promotion budget from EUR 61 million in 2013 to EUR 200 million by 2019, introduced a greater focus on third countries as well as several measures to simplify and make the scheme more attractive for exporters. Whereas one-third of expenditure was earmarked for export markets under the previous policy, this share has now been increased to two-thirds of a larger budget. Annual work programmes set out the total budget with specific allocations for different types of actions targeting different thematic priorities and geographical areas. For example, in the 2016 work programme which disbursed EUR 111 million in promotion grants, EUR 4.69 million was reserved for information and promotion campaigns targeting the Middle East and Africa. Four projects were approved under this heading, including Greek olives to Saudi Arabia and the United Arab Emirates, Croatian sheepmeat and cheese to Qatar and the United Arab Emirates, Lithuanian beer to South Africa, and Polish fruit to Algeria and

[6] Regulation (EU) No 1144/2014 of the European Parliament and of the Council of 22 October 2014 on information provision and promotion measures concerning agricultural products implemented in the internal market and in third countries.

Egypt. As the intention of this programme is to promote the export of high-quality and thus high-priced rather than bulk EU agri-food products, LDCs/SSA countries are unlikely to figure as target countries for this promotion budget. If this were to change, the impact of this expenditure should be evaluated through a PCD lens.

1.3.2 Do CAP domestic subsidies permit dumping?

A second mechanism whereby the prices of EU agri-food exports can be affected by CAP subsidies is by the export of EU produce at prices below the costs of production in the EU, analogous to dumping. To the extent that dumping is shown to occur for this reason, a corollary is that EU production will be higher than it otherwise would be in the absence of CAP subsidies. In this situation, dumping would also be associated with price suppression. Nonetheless, it is analytically useful to keep the two types of effect distinct.

Recall that, under WTO rules, dumping is defined as a situation in which the export price of a product is lower than its selling price in the exporting country. Where it is demonstrated that the dumped imports are causing injury to the competing industry in the importing country, the importing country can impose anti-dumping measures to provide relief to domestic industries injured by imports. The country's imposition of an anti-dumping duty is determined by the dumping margin - the difference between the export price and the domestic selling price in the exporting country. By adding the dumping margin to the export price, the dumped price can be rendered a 'fair' trade price (see Box 1).

A number of authors have alleged that EU export prices are affected by dumping (Bertholot, 2018; Oxfam Deutschland, 2009). Bertholot points out that the move to greater market orientation in EU agricultural policy means that EU producer prices are now close to world market levels. With export subsidies eliminated, export prices are usually similar to domestic prices (adjusting for marketing costs and quality differences) so that dumping in a narrow sense does not occur. However, he argues that, in the absence of decoupled payments, producer prices would be higher and that, at the lower prices, neither export prices nor 'normal' prices cover the costs of production of EU farmers. Therefore, in his view, all products produced on land that benefits from direct payments are effectively subsidised and if exported are effectively dumped. In this section, reference to dumping refers to this wider notion where export sales take place at below the costs of production.

Costs of production on EU farms are analysed in the Commission's Farm Accountancy Data Network (FADN). Costs of production per product cannot be directly obtained from the farm accountancy data which are collected on a per

farm basis. However, the FADN Unit has built several models to estimate costs and margins for different products: arable crops, milk and beef, and permanent crops. These models allocate farm costs to a particular product using different ratios. The net economic margin assesses the residual revenue (profit or loss) obtained from production, after remuneration of all production factors including imputed family factors (opportunity costs for family factors).[7] FADN reports show that the net economic margin for the production of various products in the EU is consistently negative although the size of the negative margin varies over time (for milk see DG AGRI, 2018b; for beef see DG AGRI, 2013; for cereals see DG AGRI, 2016). The European Milk Board also publishes costs of production data for milk production in several important milk-producing countries using a similar methodology and reaches the same conclusion (EMB, 2018). The FADN data refer to average costs of production across all producers. There are significant differences in costs of production across individual farms, depending on their production scale, type of production, farm-specific factors and management expertise. In 2016, the FADN report estimated that 9% of the EU28 dairy farms achieved a positive net economic margin, representing 15% of the milk production of EU dairy farms (DG AGRI, 2018b).

The fact that market prices do not cover the production costs of most farms in the EU when full opportunity costs of family labour and land are included implies that the farm-specific factors of production are unable to earn a comparable return to similar factors of production in non-farm activities. In the case of family labour on farms, it is a signal that the use of labour in farming activities is less productive relative to its use in other economic sectors. The fact that resources in agriculture, on average, are unable to earn the 'going rate' in the rest of the economy is an indicator that further movement of labour out of agriculture into the non-farm sector in Europe will continue for some time to come and a signal that further structural adjustment of the agricultural sector is required.

Where a charge of dumping might be justified is if government direct payments are used by farmers to 'subsidise' their farming activity thus enabling them to remain in farming despite low market returns. From an economic perspective this is not a rational thing to do, but farmers may have personal reasons to want to continue doing what they are used to do. Direct payments play an ambiguous role. On the one hand, direct payments are capitalised into the value of land and variable inputs, thus raising farmers' costs of production and making it more difficult to show a profit at market prices alone. If direct payments were

[7] Since 2008, imputed costs for unpaid family factors have been estimated (family labour costs and own capital costs). The methodology for estimating the opportunity costs of family labour, land and capital is explained in DG AGRI, 2018b.

eliminated, land rents and the prices of variable inputs would fall, enhancing the profitability of farms at market prices. On the other hand, this offsetting effect will always only account for a proportion of the direct payments. There is still a net gain to farm income from the payments, even if it is less than the full value of the payments themselves.

Supporters of decoupled payments can argue that there is no requirement that farmers use these payments to subsidise their farming activity. Farmers will receive the payments even if they cease production because it is unprofitable at market prices. Farmers may also choose to subsidise their production from other income such as pension income or from off-farm employment. But even where it is the farmer's decision how to use the decoupled payment, the availability of the payment increases the financial capacity of farmers to subsidise their farming if they wish, not least because the beneficiary must remain an active farmer to continue to be eligible for the payment. This likely contributes to the fact that observed costs of production are higher than market prices on most farms.

Does the evidence that producer prices do not cover the full opportunity costs of the resources employed in EU agricultural production mean that agri-food products exported from Europe are dumped as a result? If we take a strict definition of dumping (see Box 1) to mean that export prices are lower than domestic prices, now that export subsidies are abolished this is no longer the case. However, taking a wider definition to mean that dumping occurs when costs of production are greater than the export price, there is *prima facie* evidence that this is the case. The adverse effect occurs because the CAP subsidies help to maintain more resources in agricultural production in the EU than would otherwise be the case, thus resulting in price suppression on world markets.

1.3.3 The magnitude of the effect of CAP subsidies

This literature review has documented the potential impact of CAP subsidies on domestic and export prices through mechanisms that may attract additional resources into the EU agricultural sector. On the one hand, decoupled and coupled payments as well as rural development support can support agricultural production. On the other hand, the support to farm income provided by direct payments means that many farms remain in production even though market prices are insufficient to cover their production costs if the full opportunity costs of their family labour input as well as land and capital are included. A third mechanism affecting domestic prices, namely, high import protection for sensitive products, is not explicitly considered in this study.

To assess the size of these potential impacts requires the use of model-based analyses. Model studies have the advantage that they can compare the observed situation of farm production in the EU with CAP subsidies in place with a counterfactual situation where these subsidies are removed. However, model studies also suffer from limitations that need to be kept in mind when interpreting their results (Box 4).

Box 4. Modelling decoupled payments in empirical models

A basic problem facing any empirical attempt to model the impact of the CAP and agricultural trade policy on production and trade is how to model decoupled direct payments. Should they be modelled as a lump-sum transfer to farm households, as area payments, or as something else? If treated as a lump-sum payment to households, then CAP payments have no impact at all on farmers' production decisions, either in terms of input use (demand for land) or output supply (particularly yields). However, lump-sum payments are not capitalised into land prices which is not consistent with the empirical evidence.

CAP Pillar 1 direct payments can also be modelled as area payments, i.e. a subsidy to land. In this case, if the land area is fixed, all of the payment will be capitalised into land values, but there will still be no effect on overall agricultural output. If the land area under cultivation can be increased in response to the extra demand for land created by the area-based subsidy, then output will also increase, with the extent of the increase determined by the extent to which non-land inputs can be substituted for land. For many analysts, this assumption is also too extreme bearing in mind the various ways in which even decoupled payments are expected to affect production incentives and the empirical evidence which shows that capitalisation of direct payments into land values is only partial and incomplete. Other analysts assume that some share of the decoupled payments accrues also to labour and capital employed in agriculture and thus affects production levels in the EU.

The problem is that choosing the appropriate degree of decoupling is largely an *ad hoc* decision, given the lack of agreement in the literature as to what the correct value is. Most modelling studies simply make an assumption about the degree of decoupling and the empirical results reflect this assumption rather than providing evidence about it.

One careful study (Mittenzwei, Britz, and Wieck, 2012) concluded that the elimination of EU direct payments would lead to a 5% reduction of land use of agriculture, with a consequent drop in agricultural output and net exports. In other words, there is a production response to decoupled direct payments, but it is small. This finding is supported by more recent work undertaken for DG AGRI as part of the impact assessment of its legal proposal for the CAP post 2020. DG AGRI commissioned a number of model simulations for different designs of the CAP (EC, 2018). One of these simulations examined what might happen to EU agricultural output, incomes and trade if the CAP were abolished and no subsidies were paid to EU farmers. The results are reported in the Joint

Research Centre SCENAR 2030 study which fed into the impact assessment (M'Barek *et al.*, 2017). These results are also useful in providing an order of magnitude of the production effects due to CAP subsidies.

Two specific scenarios modelled (the Liberalisation&Productivity - Lib&Prod - scenario and the NoCAP scenario) illustrate what would be projected to happen if the EU's agriculture-specific support policies would be abolished by 2030. In both scenarios, both decoupled and coupled direct payments are abolished. While the EU's tariff barriers are left in place, both scenarios assume ambitious implementation of all free trade agreements (FTAs) currently under discussion.[8] The main difference between the two scenarios relates to expenditure on Pillar 2 rural development measures. Pillar 2 spending is maintained in the Lib&Prod scenario but redistributed away from agri-environment-climate measures (payments to areas facing natural constraints and agri-environment payments) in favour of investments in physical and human capital. The significance of these changes is to reduce the importance of productivity-restraining measures (such as agri-environment-climate measures) and to increase the importance of measures with a positive productivity effect, such as support for investments and human capital formation. In the NoCAP scenario, Pillar 2 expenditure is also eliminated along with Pillar 1 subsidies.

The production impacts of CAP subsidies based on the SCENAR 2030 results are shown in Table 1. The scenarios show the impact of *removing* CAP subsidies. Reversing the sign of these effects shows the impact of *maintaining* CAP subsidies relative a situation where the subsidies are removed.

Table 1. Production impacts of eliminating CAP subsidies under two scenarios

Impact	Lib&Prod scenario	NoCAP scenario
Agricultural production	-4%	-6%
Producer prices	-1%	+5%
Utilised agricultural area	-7.3%	-6.9%
Nitrogen surplus	+2 kg N/ha	+0.5 kg N/ha
Aggregate farm income	-20%	-18%
National GDP	Positive overall (++ EU15/- EU13)	Positive overall (+ EU15/-- EU13)

Source: M'Barek *et al.* (2017).

[8] The trade liberalisation scenario assumes full tariff liberalisation for 98.5% of HS six-digit lines, and a partial tariff reduction of 50% for the other lines (sensitive products) for the ongoing and upcoming FTAs between the EU and 12 trade partners (USA, Canada, Mercosur, Australia, New Zealand, Japan, Vietnam, Thailand, Turkey, Mexico, Philippines and Indonesia).

In both scenarios, there is a small drop in total agricultural production when subsidies are removed very similar to that found in the Mittenzwei, Britz, and Wieck (2012) paper (it should be noted that the same CAPRI model is used in both studies). The drop is somewhat greater when the Pillar 2 subsidies are also removed in the NoCAP scenario. In the Lib&Prod scenario, EU producer prices drop by almost 1%, as EU production decreases are compensated by cheaper imports. With the elimination of all CAP payments, the stronger EU production declines cannot be fully compensated by imports, leading to increased aggregated EU producer prices of about 5% in the NoCAP scenario. The removal of direct payments leads to a drop in the profitability of crop and livestock production, and results in around 7% of the utilised agricultural area (UAA) being taken out of production. As a result, the nitrogen surplus increases in both scenarios reflecting both the decrease in UAA and the intensification of crop and livestock production on the remaining UAA.

Imports increase in both scenarios, leading to a decrease in the EU trade balance. Although exports in the Lib&Prod scenario grow substantially because of the more favourable access obtained in third country markets because of the ambitious trade agenda implemented in this scenario, they cannot compensate for the higher level of imports. In the NoCAP scenario, the trade balance is reduced by about EUR 25 billion. This is greater than the projected trade surplus in 2030 under the reference scenario, bringing the EU back to net importer status. However, the study does not report the impact on world market prices of these trade balance changes. It should also be recalled that these trade effects are due both to some trade liberalisation as well as the removal of CAP subsidies.

There are very few recent model-based studies that specifically examine the impact of CAP subsidies on developing countries. One such study examines the impact of CAP subsidies on Uganda (Boysen, Jensen, and Matthews, 2016). Uganda is a least developed country with a high dependence on agriculture and a high share of agri-food exports in total exports. It also benefits from unrestricted access (subject to rules of origin) to the EU market for agri-food products under the Everything but Arms agreement. Their empirical results simulate the removal of remaining border protection as well as direct payments to EU farmers. They find overall a marginal but positive impact on Uganda of further CAP reform. Their results are driven largely by the assumption that EU direct payments are only partially decoupled and encourage a higher level of agricultural production than in the absence of the CAP. The removal of border measures turns out to have a negative effect on Uganda because it is a preference beneficiary, but this effect does not outweigh the positive effect of eliminating direct payments.

Summarising this review of literature, we find there is evidence that CAP subsidies continue to have a production-stimulating effect despite the reform path of the CAP in recent decades. Decoupled direct payments, but also coupled direct payments and productivity-enhancing investments under Pillar 2, are mainly responsible for this effect. EU agricultural production is greater and so are net exports as a result. We also find that the magnitude of this effect at the aggregate level is relatively small, with the best recent estimates suggesting that EU production is around 5%-6% higher than it might be in the absence of CAP subsidies. Depending on the initial levels of profitability of different farm products, and the way coupled payments are allocated to individual products, production effects for specific products may well be greater. While these are the effects due to agricultural policy, in assessing their importance it should be recalled that several EU non-agricultural policies also lay claim to land use, divert land out of the agricultural production and potentially raise agricultural prices, thus offsetting any potential CAP effects that increase agricultural production. These include renewable energy mandates supporting biofuel and biomass production, climate policy encouraging afforestation, nature policy prioritising habitat protection for biodiversity reasons, and bioeconomy policy encouraging the use of biological raw materials for industrial uses.

Part 2 Product case studies of EU exports

This part first sets the scene by describing the EU's role in global agri-food trade and exports to VDCs. Then, three case study products are selected for detailed analysis to identify the main importing countries among VDCs and the importance of the EU as an exporter to these markets.

2.1 EU agri-food exports to developing countries

Global agricultural trade is experiencing rapid structural changes with the emergence of new players and the shrinking role of traditional exporters. For the analysis in this study data trends from 2005 have been used where possible. 2005 has been chosen because this was the year when the CAP in its current incarnation (with income support provided largely through direct payments) was introduced. It is also the first full calendar year when EU trade statistics reflect the accession of the new MSs from Central and Eastern Europe.

Global agri-food trade (excluding intra-EU trade) increased from USD 374 billion in 2005 to USD 884 billion in 2017 (Figure 1).[9] The EU's share of this trade has fallen slightly, from 17.7% on average in the three years at the beginning of the period 2005-2007 (referred to as '2006') to 15.6% on average in the last three years 2015-2017 (referred to as '2016') where three-year averages are used to smooth out year-to-year fluctuations. Other developed economy exporters also lost market share, with the big gainers being exporters from developing Asia as well as Commonwealth of Independent States (CIS) exporters. The export shares of Latin America and the Caribbean and African exporters remained stable over this period.

Developing Asia, including China, is the largest market for food exporters (Figure 2). It has also grown faster, with food imports more than quadrupling in size over the period, though there is some evidence that the pace of growth has slowed down in the second half of the period. The EU is a relatively small exporter to this market, accounting for 10% of total food exports to the region, behind other developing Asia exporters, other developed country exporters and Latin American & Caribbean exporters. Its market share did not change since 2005. However, despite its relatively small share of the developing Asia market,

[9] Based on food exports data (excluding agricultural raw materials and fish) drawn from the WTO's International Trade Statistics database for the period 2005-2017.The considered product/sector is 'Other food products' defined in the WTO international trade statistics using the Standard International Trade Classification as SITC Sections 0, 1, 4 and division 22 minus division 03.

total EU agri-food exports in '2016' were worth over USD 26 billion (up from USD 8 billion in '2006'). The corresponding figures for EU agri-food exports to Africa (including North Africa) were less than USD 18 billion in '2016', compared to over USD 9 billion in '2006'. Asia is now a more important and more dynamic growth market than Africa for EU agri-food exporters.

Figure 1. Share of EU in global agri-food trade, 2005-2017

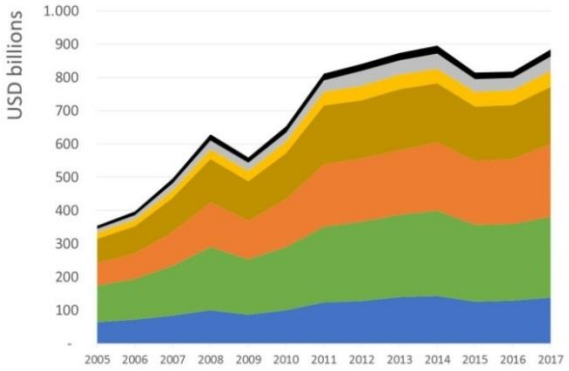
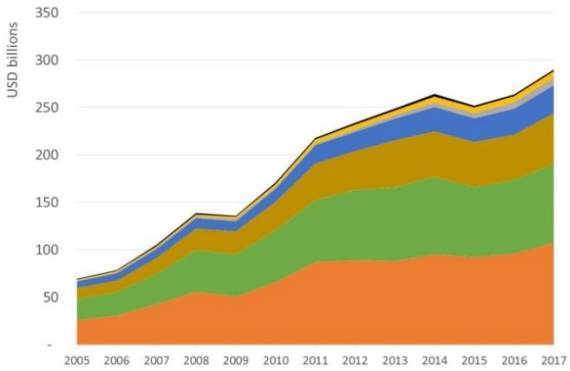
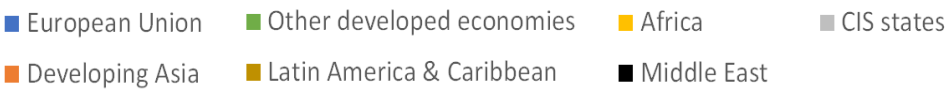


Figure 2. Food exports to developing Asia by major exporter, 2005-2017





Source: WTO's International Trade Statistics database.

The sources of food exports to Africa (including North Africa) are shown in Figure 3. Over the period the value of food imports into Africa more than doubled, although the period can be partitioned into two halves. All the increase took place in the first half of the period, and imports stabilised or even fell in value terms in the second half of the period. The EU is the major food exporter to Africa, but has lost market share slightly (a reduction from 28% of total exports in '2006' to 25% in the three-year period '2016') at the expense of increased market share for developing Asia and other African exporters.

Figure 4 shows the growth in the value of food imports by LDCs over the past decade. Food import growth has been rapid, more than tripling in value over the period, though this growth has stabilised in recent years. Developing Asia exporters are the largest supplier to LDCs, followed by African exporters, with EU exporters in third place. Over the period, EU exports have grown more slowly than exports from other sources, so that the EU has lost market share. It accounted for 21% of exports to LDCs in '2006' but just 13% in '2016'.

For specific developing country regions, the EU plays a more important role. For example, for the countries making up the West African Economic and Monetary Union – WAEMU (Benin, Burkina Faso, Cote d'Ivoire, Guinea-

Bissau, Mali, Niger, Senegal and Togo), food imports almost tripled in value, from USD 3.3 billion to USD 9.1 billion over this period. The EU is by far the most important exporter although it has lost market share to developing Asia exporters. It accounted for 50% of total food exports in '2006' and 45% in '2016' (Figure 5).

Figure 3. Food exports to Africa by major exporter, 2005-2017

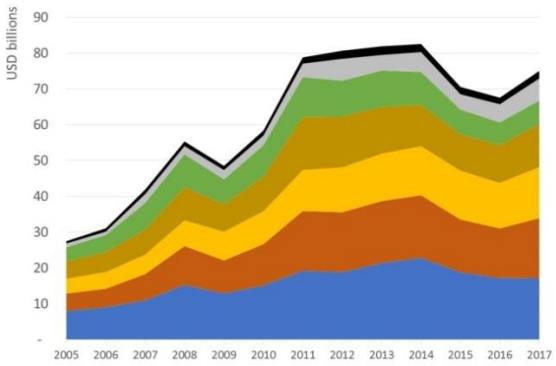


Figure 4. Food exports to LDCs by major exporter, 2005-2017

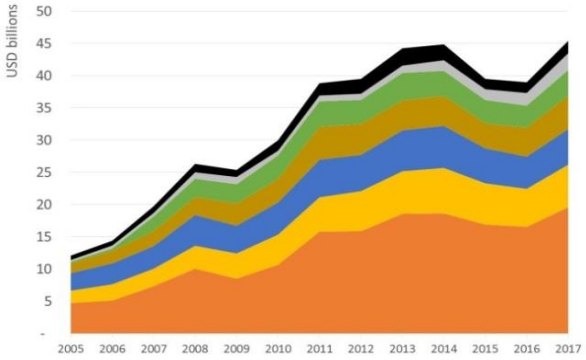
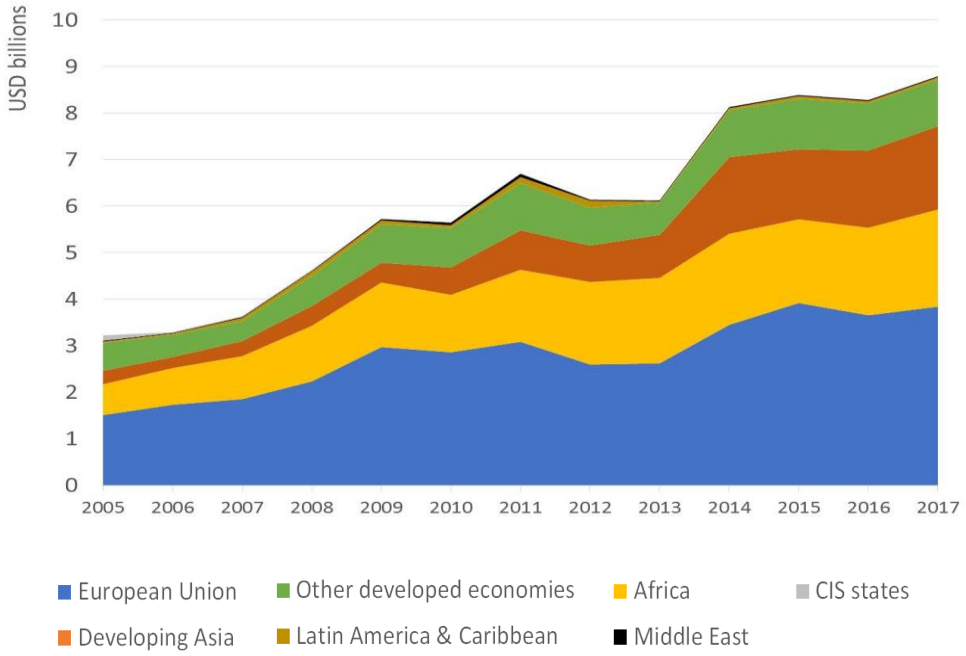


Figure 5. Food exports to WAEMU countries by major exporter, 2005-2017



Source: WTO's International Trade Statistics database.

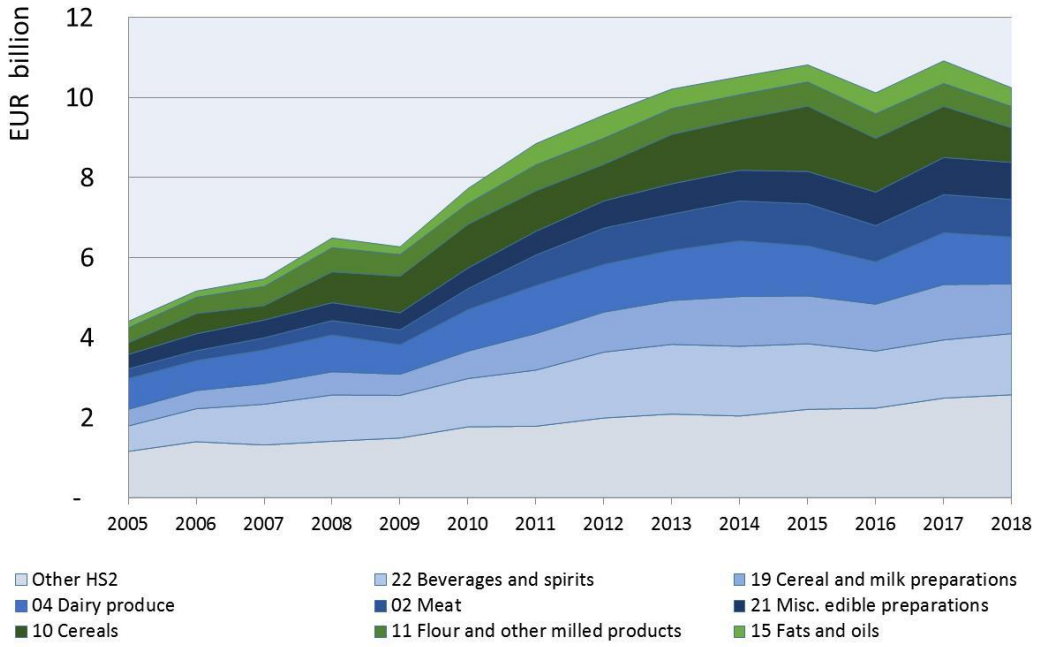
In summary, markets in developing Asia countries are now the most important markets for EU agri-food exporters, and also the most dynamic. However, the relative importance of the EU in food exports to developing countries varies across developing country regions. For some African regions (such as WAEMU) it supplies up to half of all food exports, but for other regions its significance is much less (such as for LDCs where developing Asia countries are

the most important suppliers and the EU share is now around 13%). In all markets, EU food exports have grown more slowly than exports from competing suppliers, and the EU has been losing market share.

2.2 EU agri-food exports to vulnerable developing countries

The next step is to identify the most important product groups in EU agri-food exports to VDCs based on Eurostat COMEXT data 2005-2018. VDCs are defined as those countries where competition from EU agri-food exports is most likely to affect their food security. These 83 countries belong either to Sub-Saharan Africa (SSA), the Least Developed Countries (LDCs) group or the African, Caribbean and Pacific (ACP) country group (see Annex I). Agri-food exports are defined as products in the HS1-24 chapters, excluding Chapter HS03 Fish.[10] Of the 23 HS chapters that cover agri-food exports, eight chapters account for 75% of total EU agri-food exports to the selected VDCs in 2018. These are shown in Figure 6 together with all other chapters aggregated into an 'Other HS2' category.

Figure 6. EU agri-food exports to VDCs, by HS2 code, 2005-2018



Source: based on Eurostat COMEXT data.

[10] Trade data from the Eurostat COMEXT database are classified according to the Combined Nomenclature (CN) system where the CN is an eight-digit subdivision of the Harmonised System (HS), comprising four two-digit levels: HS2, HS4, HS6 and CN8.

HS22 Beverages and spirits make up the single largest chapter (15% of total 2018 exports), followed by HS19 Cereal and milk preparations (12%), HS04 Dairy produce (including eggs) (12%) and HS02 Meats (9%). Overall, the value of EU agri-food exports to these selected developing countries grew by 132% between 2005 and 2018, though exports have stagnated since 2015 and in 2018 were back at their 2013 level. Meat exports make up the fastest growing component (287% increase over the period), followed by cereal and milk preparations and cereals (increases of 198% and 196%, respectively). The lowest rates of increase were recorded for HS11 Flour and other milling products (42%) and HS04 Dairy produce (53%) excluding milk preparations (infant formulae and fat-filled milk powders) included in HS19.

A more detailed picture is provided by examining products at the HS 4-digit level of disaggregation (Table 2). EU agri-food exports to the selected developing countries are dominated by two groups of products. One group we can call 'luxury products' which are imported to meet the demand of relatively well-off consumers in these countries – processed foods, spirits, wine, malt, mineral waters, beer, cheese, bread and cakes and chocolate. The other group are basic food products which may also compete with local food production: examples include wheat, milk powders, poultry meat, sugar, onions, tobacco, pigmeat, sauces (including tomato paste), meat offals, milk and cream, prepared vegetables and vegetable oils. Animal feed has been left unclassified. For this sub-group of HS 4-digit products (those with export sales over EUR 100 million), the share of luxury products was 38% in 2005 and 37% in 2018. The share of basic products was 60% in 2005 and 58% in 2018, while the share of animal feedstuffs was 2% in 2005 and 5% in 2018.

Table 2. Exports of EU agri-food products at HS4 level valued at more than EUR 100 million in 2018 to VDCs, EUR million

Product	2005	2018	Growth 2005-2018 (%)
1901 Cereal and milk preparations, including full-fat milk powder	**268.14**	**915.91**	**242**
1001 Wheat and meslin	**275.11**	**846.40**	**208**
0402 Milk powder and condensed milk	**575.36**	**653.72**	**14**
2208 Spirits	258.36	604.74	134
0207 Poultry meat	**171.24**	**589.52**	**244**
2106 Food preparations n.e.s.	222.66	581.34	161
2204 Wine	174.32	402.25	131
2309 Animal feedstuffs	63.71	361.29	467
1107 Malt	130.36	349.75	168
1701 Sugar	**136.86**	**238.10**	**74**
2202 Mineral waters	71.00	230.98	225
2203 Beer	101.50	222.36	119

Product	2005	2018	Growth 2005-2018 (%)
0406 Cheese	58.61	185.05	216
0703 Onions and similar vegetables	**42.38**	**181.53**	**328**
1905 Bread and cakes	54.46	169.88	212
2401 Tobacco	**67.75**	**156.10**	**130**
1507 Soybean oil	**41.79**	**153.75**	**268**
1806 Chocolate	31.69	152.82	382
0203 Pigmeat	**28.73**	**146.33**	**409**
2103 Sauces and pastes	**37.39**	**136.66**	**265**
0206 Meat offals	**25.48**	**125.85**	**394**
0401 Milk and cream	**30.87**	**122.60**	**297**
2005 Prepared vegetables	**49.36**	**113.72**	**130**
1512 Other vegetables oils	**5.15**	**102.50**	**1889**

Note: basic food products are in bold; n.e.s. = not elsewhere specified.

The single largest item by value in 2018 which has also experienced rapid growth is cereal and milk preparations which is driven largely by the growth in full-fat milk powders. Vegetable oils (including both soybean oil and other vegetable oils) have experienced rapid growth but from a relatively low base. Exports of pigmeat and meat offals have also grown rapidly from a low base. Conversely, exports of basic milk powders to these selected developing countries, though still important, have grown little over the period, while sugar exports have also grown relatively slowly. Exports of wheat remain the most important basic product and have grown relatively rapidly. Other products that have grown rapidly include onions, sauces including tomato paste, and poultry meat.

2.3 Literature review of previous studies

Product case studies have mainly been undertaken on behalf of development NGOs and have focused on a limited number of export products: milk powder, poultry meat, and tomato paste (purée). The starting point for these studies is often where local farmers experience a fall in price for their produce. Also, these studies identify EU exports as one of the reasons for this and often attribute to CAP subsidies the competitiveness of EU exports on the local markets.

► Milk products

Development NGOs have documented several cases where EU exports of milk powder have undermined incomes of dairy farmers in developing countries, including Bangladesh (Curtis, 2011), Cameroon (Brot für die Welt, 2010), Zambia (Lanje *et al.*, 2009) and West Africa (Choplin, 2016, 2019).

The Bangladesh report for ActionAid Denmark paid particular attention to the role of the EU's decoupled subsidies. Millions of poor people support their low incomes through milk production in Bangladesh. The report discusses how milk imports undermine poor farmers, competing on unfair terms with locally produced milk and suppressing investment in the dairy industry. In Bangladesh, whole milk powder is imported and marketed directly to consumers. Skimmed milk powder is imported and used for production of dairy products. In 2007-2008, 41,000 tonnes of milk powder were imported, accounting for around 27% of the country's milk consumption needs. Between 20% and 50% of imports of skimmed milk powder have come from the EU in recent years. As the report was commissioned by a Danish NGO, it focuses on the role of Arla Foods, the Danish-Swedish dairy company, as a supplier of milk powder exports to that market. Arla Foods manufactures the leading foreign milk powder brand in Bangladesh – Dano, which accounted for over 20% of all milk sales in the country. The report argues that Arla Foods was profiting from EU-subsidised milk powder sales to Bangladesh which were harming Bangladeshi milk farmers. Arla Foods had exported between 3,700 and 6,000 tonnes of milk powder annually to Bangladesh in previous years. The report was written shortly after the drop in world market prices for milk powder from more than EUR 3,400/t in 2008 to EUR 1,510/t in 2009. Because imported milk powder competes with locally-produced fresh milk, this led to a drop in the retail price of fresh milk from 32 cents per litre at the beginning of 2009 to around 25 cents per litre by mid-year, leading to protests by local dairy farmers in the light of the fall in their incomes. The argument that these imports are subsidised was based on a claim that Arla Foods had received nearly one billion euro in subsidies from the EU since 2000. The report pointed out that direct EU support to Arla had reduced in recent years, but that the farmers supplying Arla continue to receive substantial subsidies, including supplementary crisis aid during the milk price slump in 2009. The report notes that, despite the decoupling of subsidies in 2005, the amount spent on subsidies remains the same. It highlights the fact that many European farmers are selling below production costs and that some would not even be able to maintain production without EU subsidies, and thus those exports are only possible thanks to the continuation of subsidies. It referred to a 2010 report by the Danish Economic Council stating that the CAP "*leads to a higher level of production compared to a free market situation*" and that Danish agricultural production, for example, would fall if the EU subsidies were phased out (Curtis, 2011).

The German development NGOs Brot für die Welt and Evangelischer Entwicklungsdienst EED report discusses the impact of EU milk powder exports to Cameroon during the period 1997-2009 with a particular emphasis on developments in 2009 (Brot für die Welt, 2010). The organisations had been supporting the development of milk production in Cameroon for over 10 years

to enable smallholders to supply the local market. Local milk markets were being threatened by cheap milk powder from Europe and the US, and farmers' livelihoods were being affected. Although milk consumption per capita is very low, milk imports had grown to constitute 40% to 50% of the supply in Cameroon. The report provides data on milk production costs in Cameroon and compares this to the cost of milk (around EUR 0.68 per litre) and milk made from reconstituted imported milk powder (around EUR 0.40 – 0.51 per litre). There was a significant fall in the price of imported milk powder between the summer of 2008 (when the price was equivalent to EUR 1.05 per litre of low-fat pasteurised milk) and the summer of 2009 (when the price fell to the equivalent of EUR 0.51 per litre). The report identifies the reintroduction of export subsidies by the EU at the beginning of 2009 in response to the slump in milk prices during the previous year as a main reason for this fall. Local farmers campaigned for an increase in the tariff on imported milk products but were unsuccessful. Their demand was for the cessation of EU export subsidies but also that the EU should cut back on milk exports to allow the local dairy industry to develop. The development agencies considered the subsidising of milk powder exports to Cameroon to constitute unfair competition. They called for the end of export subsidies to ensure that agricultural exports are not sold at dumping prices in developing countries, i.e. below their real production costs, and expressed support for the grassroots organisations fighting for the right of countries such as Cameroon to be allowed to protect their local smallholding production for the purpose of securing their food.

The Germanwatch report on the impact of EU milk powder exports to Zambia was also written in 2009 following the reintroduction of export subsidies on EU milk powder exports (Lanje *et al.*, 2009). Direct exports of EU milk powder to Zambia were a relatively small share of total Zambian milk powder imports, with much larger volumes coming from Zimbabwe, South Africa and New Zealand, although some exports from South Africa were believed to be EU product that was re-exported. Over the period analysed (1997-2007) milk powder imports to Zambia fluctuated but without any evidence of an upward trend. The main concern highlighted in the report was the ongoing negotiations on Economic Partnership Agreements which gave rise to the fear that tariffs would be eliminated and cheap European agricultural products with which smallholders cannot compete would be increasingly present on the African markets. The report noted that both German and Zambian dairy farmers had similar demands for guaranteed reasonable prices for sufficient quantities to supply their domestic markets.

A recent report on EU exports to West Africa highlights the increasing volume of milk powder exports and the growing presence of European milk processors in the region (Choplin, 2019). The report emphasises the growing role of cheap

fat-filled milk powders where the fat is provided by palm oil. Milk reconstituted from this imported powder is sold much more cheaply compared to locally-produced milk. The low price of EU exports is attributed to the availability of direct payments that permit EU dairy farmers to remain producing despite higher costs of production. It also draws attention to the implementation of trade policy in West African countries which has failed to give sufficient protection to local producers. The study highlights the need to reconcile the dispersed supply of milk from local herders and pastoralists with the growing demand for milk products in the urban centres in West Africa. It notes that some foreign processors have entered into local arrangements to also process local supplies, but that these arrangements cover relatively few processors and very small volumes of local milk.

► Chicken meat

In a series of reports in the mid-2000s a number of different development NGOs drew attention to the difficulties caused by EU exports of chicken meat specifically to West Africa (Dorémus-Mege *et al.*, 2004; Aprodev, 2007; Paasch, 2008). The development of this trade in frozen chicken was traced back to the CAP reform in 1992 that began to lower cereal prices, the main input cost for poultry production. The reduction in feed costs triggered a fall in export costs to West Africa of 25%. EU exports consist of chicken parts. EU consumers prefer chicken breasts and to a lesser degree, chicken legs. Other minor parts (wings, necks, carcass, and rumps) are either processed into pet food, or deep frozen and exported to West African markets (Dorémus-Mege *et al.*, 2004). Paasch (2008) emphasises that these chicken parts are not sub-standard meat. They are simply chicken parts "*that are disdained by the European palate*". He points out that 60% of poultry consumption in Europe consists of chicken breasts, but they only make up 20% of the chicken. Disposing of these parts costs the slaughterhouses a lot of money. There had been a market for them in the manufacture of pet food but European pet owners were turning increasingly to demand red meat for their pets. Another outlet for these chicken parts was to process them into meat meal but after the BSE crisis in 1999 this was forbidden. By selling the frozen poultry parts in West Africa very cheaply, these costs turn into a lucrative business for European companies (Paasch, 2008).

These chicken cuts are sold on West African markets at knockdown prices, causing the overall price level to decline sharply. Poultry breeding is an activity of poor family farms in these countries but faced with this competition the majority of local producers can no longer sell their products with a profit. "*Their poverty ends up in malnutrition and hunger. Many abandon their farm, or breeding facilities, and move into towns, where they increase the number of those suffering from urban misery. Moreover, marketing conditions of frozen*

chicken cuts do not allow for safe conservation: salmonellae and other bacteria quickly invade products offered for consumption" (Dorémus-Mege *et al.*, 2004). The report identifies different kinds of local poultry farms, ranging from the traditional hen house (usually looked after by women), improved small poultry farms (often supported by international development agencies and NGOs) and, in some countries, 'semi-industrial' poultry farming sometimes with links to foreign companies. It acknowledges that these local farms often struggle to meet growing local demand, due to lack of support from state authorities, lack of access to credit, poor processing equipment and absence of marketing facilities. It also points to the role of consumer preferences: "*Imported meat, though less tasty, which can be bought by weight according to the needs and purse, is an opportunity. Local poultry, traditional chicken or improved varieties, is sold alive, and is often out of reach, except for outstanding occasions. Slaughtering and plucking comes on top. Easy cooking is an additional advantage; snobbishness drives some customers to buy European chicken only. However, the quality of this meat, which is often circulated in disregard of the refrigeration chain, poses a serious problem*" (Dorémus-Mege *et al.*, 2004). This is confirmed in the Aprodev (2007) report which notes that "*European chickens are cheap and can be bought by piece: legs, wings, necks and feet. Local poultry has only ever been available whole and most consumers can only afford whole birds for holidays and celebrations.*" The drawback is that it is difficult to maintain the sanitary standards needed for frozen product leaving consumers open to the risk of eating contaminated meat, while on the other hand the price of live chickens which is the most hygienic way of selling is out of the reach of most people for regular purchase.

Dorémus-Mege *et al.* (2004) also discuss some of the trade policy constraints which mean that the governments of importing countries have not used the possibility to raise tariffs to protect the domestic industry. However, it notes that several countries began to prohibit imports of European frozen chicken in the early 2000's. Particularly Economic Partnership Agreement negotiations with the EU were seen as a threat because they could limit the ability of importing countries to use tariffs as a development instrument (Paasch, 2008). The Dorémus-Mege *et al.* (2004) report concludes that "*Poultry meat is not subsidized in Europe. Strictly speaking, there is no unfair competition. For the EU, it rather is an escape market*." However, Paasch (2008) notes that, although chicken exports to Africa do not receive export subsidies, exports to other markets such as Russian and the Middle East were subsidised at that time. It documents the ongoing concentration in the EU poultry sector and notes that the biggest companies (for example, Doux in France) have expanded in emerging developing countries such as Brazil and Thailand to take advantage of lower production costs.

These reports frame the rapidly increasing exports of European frozen chicken parts to countries which are known to lack the infrastructure needed for competing as an ethical problem. They call for the right of importing countries to protect national borders in order to lay the foundations for national development. The Aprodev (2007) report documents the successful campaign by a civil society group in Cameroon to mobilise public opinion against frozen chicken imports because of their health risks which led to the prohibition of frozen chicken imports in 2005.

The role of EU chicken exports in Africa is most recently documented in Goodison (2015). This report highlights that consumption of poultry meat in Sub-Saharan Africa (SSA) is increasingly met by imports even though local production also increases albeit at a slower rate. He reports that by 2014 imports of chicken meat accounted for 44% of SSA chicken meat consumption compared to under 30% in 2004. The report shows the importance of the domestic trade policies adopted in individual countries in influencing the prospects for local production. He points out that low-cost imports make an immediate contribution to meeting rising consumer demand for low-cost protein especially in urban areas. "*The challenge would appear to be **structuring current trade in ways which are complementary to and supportive of local efforts to promote more competitive integrated and sustainable chicken production, capable of meeting growing demand for low priced protein***." (bolding in original).

Goodison notes that there is no direct support for poultry production in the EU, though producers have benefited in terms of lower feed costs from reforms in the EU's arable crops regime. However, the EU domestic market is itself heavily protected through high Most Favoured Nation (MFN) tariffs, limited quantities imported under Tariff Rate Quotas, and the permanent use of the special safeguard clause. This import protection has allowed the strong growth in EU consumption to be met largely from domestic production. But because of the imbalanced EU demand for the different types of chicken meat, larger EU production has also led to higher exports of the less favoured chicken parts and offals. Thus, the EU is now a net exporter of poultry meat largely because of its managed import regime and despite very high levels of import protection.

► Tomato paste

The case of EU exports of tomato paste to Ghana is described in Paasch (2008). Tomatoes are a key ingredient in West African meals, but in the mid-2000s local tomato production was increasingly challenged by imports of tomato paste, mainly from Europe but also from China. The report documents the rapid

increase in paste imports and quotes an FAO calculation that the market share of domestic tomatoes sunk in the period 1998 to 2004 from 92% to 57%.

Unlike chicken meat, EU exports of tomato paste at this time were heavily subsidised. The report estimates that EU support worth EUR 300 million was allocated to European tomato producers, which represents half their turnover. In addition to this support, processed tomatoes were eligible for export subsidies. The report assessed that these subventions especially for Italian farmers are an important factor. The report documents the consequences for Ghanaian tomato farmers who become unable to repay their debts because of low selling prices and are forced out of business.

2.4 Selected case studies of EU exports

On the basis of the statistical analysis of the most important EU agri-food exports to VDCs and the literature review three products are selected for further analysis. Based on the terms of reference, milk powders are one of the desk-based case studies to be developed. Five criteria are used to identify two other case study products:

a) they should be basic products (thus excluding luxury products not relevant to food security concerns such as spirits or chocolate products);
b) they should be reasonably significant in terms of value of EU exports;
c) they should show high growth rates over the 2005-2018 period;
d) they should be products in competition with local production in the VDCs;
e) they should have featured in previous studies of the impact of CAP subsidies on the price of EU food exported to developing countries.

Basic products presented earlier in Table 2 meet criteria (a) and (b). Wheat is left out of consideration because it is not a crop widely grown in the VDCs (although wheat and flour exports may displace locally-grown cereals such as sorghum or millet) – criterion (d). In terms of criterion (e), apart from milk powders, previous studies have focused on chicken meat and tomato paste. Both chicken meat and tomato paste show evidence of significant growth in export values – criterion (c) which makes them the other two selected products for our cases.

Each of the case studies discusses the type of CAP support provided, if any, and document the growth of EU production and exports for the selected products as well as the main importers among the VDCs. Based on this background, Part 3 assesses the role of CAP subsidies in influencing the trends identified.

2.4.1 Milk powders case study

CAP support for milk powders

Milk prices in the EU are determined by a variety of factors: supply and demand on the internal EU market; world dairy product prices; currency exchange rate fluctuations; the competition situation in the dairy supply chain; and support to the dairy market, and to farmers, from the CAP. Apart from safety-net intervention measures for butter and SMP, milk prices within the EU are left free to respond to market conditions. Farmers are generally paid a formula price that reflects the portfolio of products produced by the dairy company to which they sell, though dairy processors also compete for the available supply of milk.

The CAP dairy support programme in the past has consisted of a production quota for milk, import protection, an intervention program that supports the price of skim milk powder and butter, and export refunds which were used to market surplus dairy products. The dairy quota which had been in place since 1984 was eliminated in April 2015. Also export subsidies on dairy products as for other products have been eliminated in line with the EU's revised schedule of commitments for goods submitted to the WTO in October 2017.[11] Minimum intervention prices for butter and SMP have been reduced as well as the quantities that must be purchased at these minimum prices. If greater supply of these products is offered to the intervention system then purchases take place on a tender basis. This has lowered the internal market price for all dairy products and allows exports to take place at world market price levels. Dairy farmers were compensated for the reduction in intervention prices by granting direct payments in the form of a dairy premium. This premium was gradually integrated into the Single Farm Payment between 2005 and 2007. In 2009, a year of low prices, direct payments accounted for more than half of the income on specialised dairy farms (56%). Their share fell below 40% only in the recovery years 2013 and 2014 and rose again in the crisis years of 2015 (46%) and 2016 (49%) (DG AGRI, 2018b). Towards the end of that recent period of low prices the Commission made use of a further crisis management tool by introducing a voluntary supply management scheme that paid farmers who reduced their level of production below that of a previous period.

MSs may also decide to use part of their direct payments national envelopes to provide coupled payments to dairy farmers (Voluntary Coupled Support – VCS). DG AGRI reported that in 2017 19 MSs granted coupled support to dairy

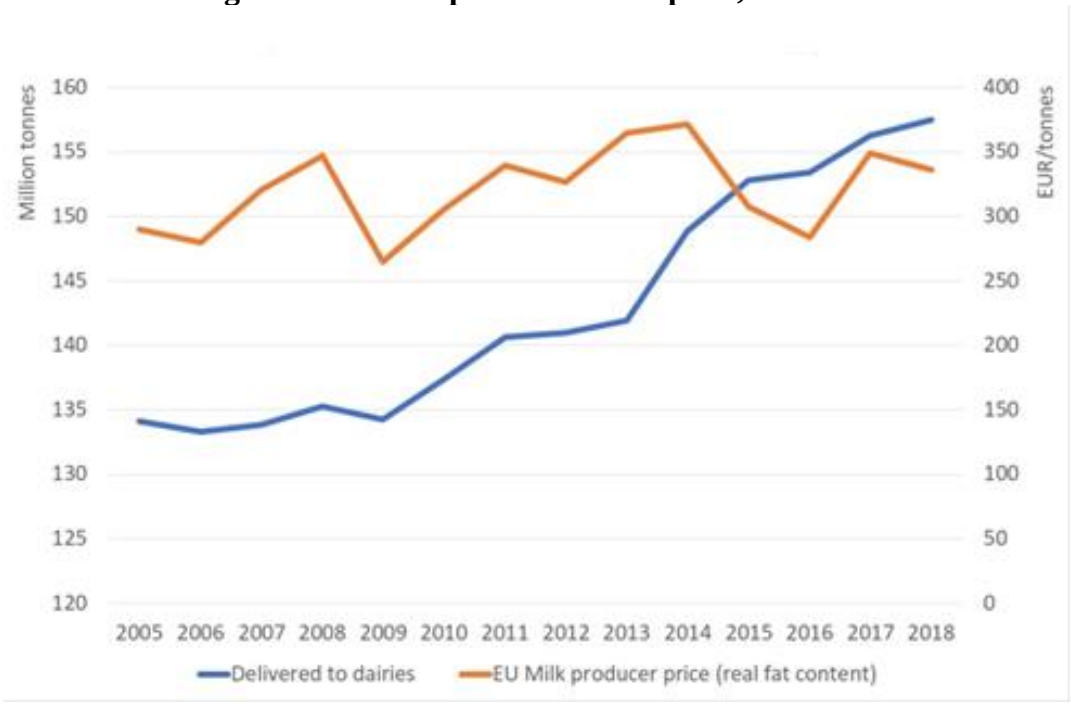
[11] 'EU leads the way by eliminating export subsidies ahead of WTO conference in Buenos Aires', European Commission News Archive 6 October 2017.

farmers amounting to 2% of the direct payments budget. Around half of the total number of dairy cows in the EU receives a coupled support payment that on average amounts to EUR 73 per head (DG AGRI, 2017). In 2007-2009 coupled support was on average 2 EUR/tonne of milk, rose to 4 EUR/tonne until 2014 and from 2015 remained unchanged at 7 EUR/tonne (DG AGRI, 2018b). These coupled payments can be compared to milk prices of around EUR 350/tonne at the beginning of 2019.

Finally, import tariffs remain very high. The EU's tariffs on skimmed milk powder (SMP) are EUR 1,188/tonne or EUR 1,254/tonne (depending on package size) and on whole milk powder (WMP) between EUR 1,304/tonne and EUR 1,672/tonne depending on fat content and package weight. These specific tariffs translate into different *ad valorem* rates depending on the unit import price which varies over time. Assuming a unit import price of EUR 3,000/tonne for WMP would yield an *ad valorem* tariff between 44% and 57%, while assuming a unit import price of EUR 2,200/tonne for SMP would yield an *ad valorem* tariff of between 51% and 57%. The EU has a tariff of 12.8% on full-fat milk powders (FFMPs).

The last years of the quota system contained a good deal of slack, in that many countries failed to produce their quota quantities. High milk prices in 2013 and 2014 reflecting strong global demand coincided with the end of quotas at the beginning of 2015. This led to a significant surge in EU production (Figure 7).

Figure 7. EU milk production and price, 2005-2018



Source: based on DG AGRI, 2018a.

The cyclical nature of milk prices is apparent, with troughs in 2009 and again in 2015-2016. Despite the fall in prices in 2015-2016 production continued to increase following the end of quotas as within the EU it was able to shift to lower-cost producers in north-west Europe. Further expansion is foreseen in the coming period but at a more modest pace (8% increase between 2018 and 2028 compared to 16% between 2008 and 2018) (DG AGRI, 2018a). Environmental issues will limit milk production increases in a number of EU countries.

EU production, export and price of milk powders

There are three milk powders, skimmed milk powder (SMP < 1.5% fat), whole milk powder (WMP >1.5% fat) and full-fat milk powders (FFMPs). The latter are milk powders in which the dairy fat has been removed and replaced by a cheaper vegetable fat, usually palm oil. They can be produced either directly in dairies or by mixing SMP with vegetable fat. In the latter case, production is recorded as part of domestic SMP production (DG AGRI, 2018c). FFMP statistics on production and trade are more limited than for the other milk powders.

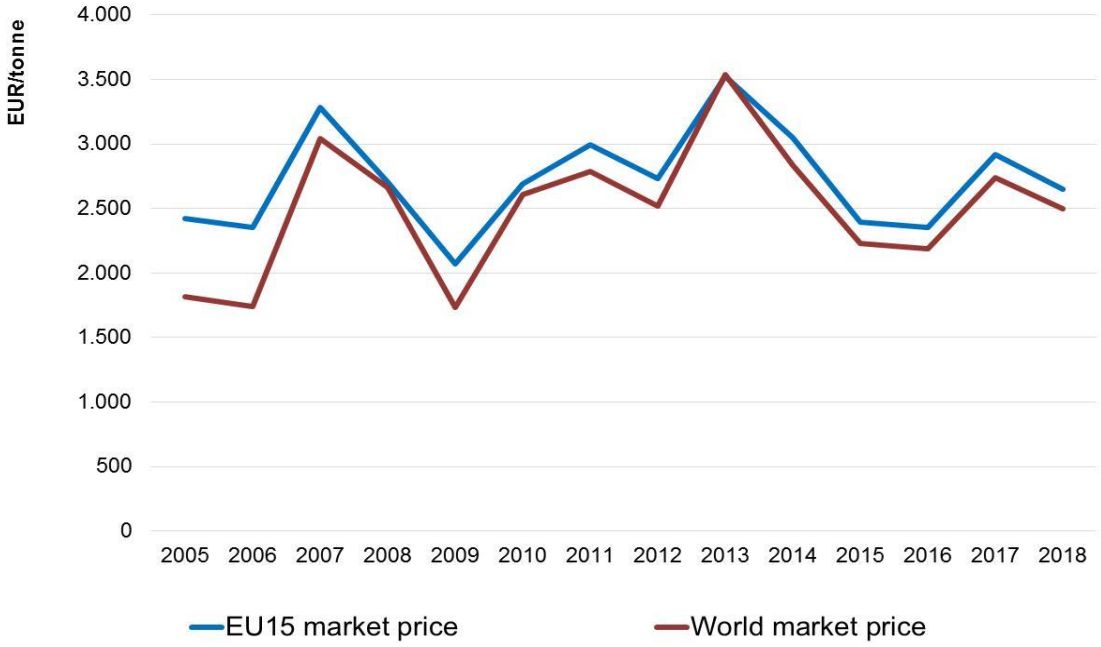
EU production of WMP has fluctuated around 725,000 tonnes per annum over the past decade without any obvious growth trend. On the contrary, WMP exports show a clear declining trend. Exports as a share of EU WMP production have fallen from 63% in 2005 to 49% in 2018 and are expected to fall further to 46% of EU production in 2030 (DG AGRI, 2018c). The level of production varies with the relative values of butterfat and protein, and competition from FFMPs has dampened export growth. In 2017, the EU's share of the world WMP market was 14% (compared to a 55% share for New Zealand) and this is expected to decline further to 12% by 2030, according to latest market projections (DG AGRI, 2018c).

There is a very close correlation between EU WMP prices and world market WMP prices (Figure 8). Generally, EU prices have been a little above the world market price quotation, but this may reflect differences in the underlying quotation (for example, where prices are measured at different locations or for different product specifications) rather than a real price differential.

EU SMP production has shown a steady increase over the period, with a particularly sharp increase in 2014 and 2015 following the period of record-high EU milk prices and the elimination of milk quotas. Production has stabilised since then (Figure 9). EU SMP exports have increased steadily throughout the period and production has become more dependent on exports. The export share was 19% in 2005, increased to 52% in 2018 and is expected to be 50% in 2030. The EU is a major player on the global SMP market accounting for around 30%

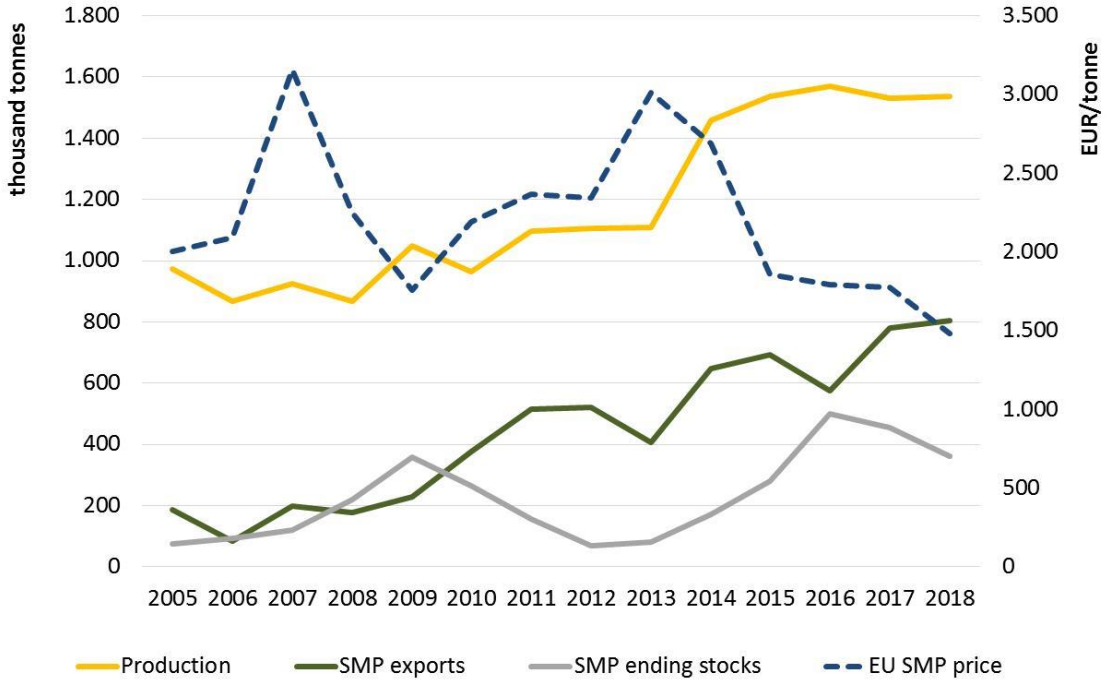
of global exports, just ahead of both Oceania and North America (OECD/FAO, 2018).

Figure 8. EU WMP prices compared to world WMP prices, EUR/tonne, 2005-2018



Source: based on DG AGRI, 2018c.

Figure 9. EU SMP production, exports, stocks and prices, 2005-2018

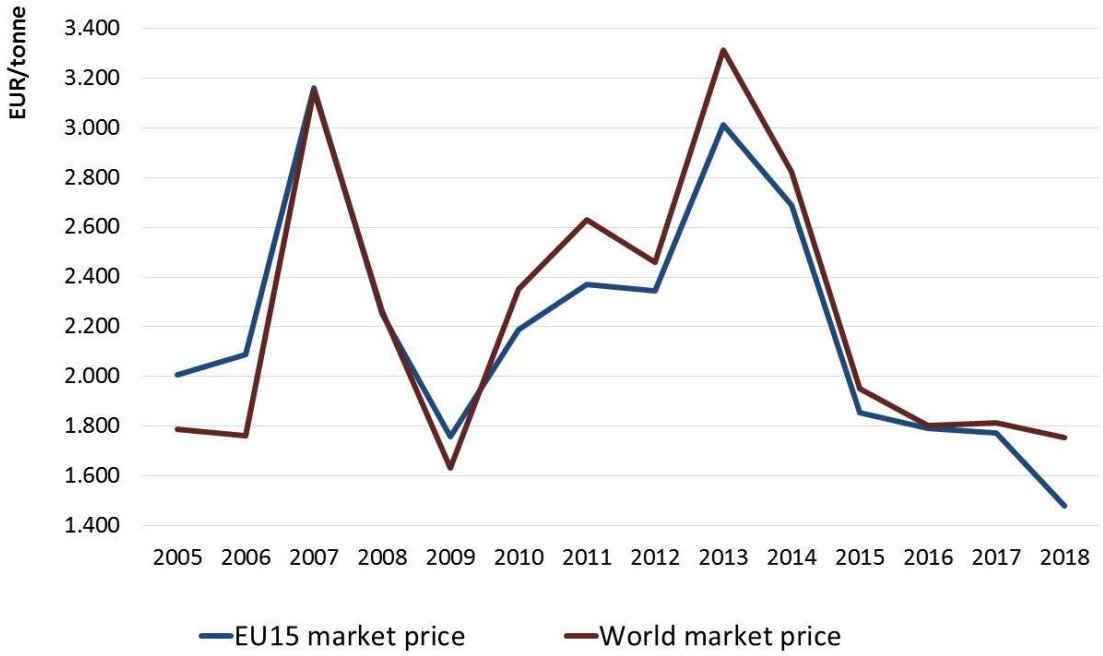


Source: based on DG AGRI, 2018c.

The volume of exports in particular years is influenced by the level of stocks. Unlike WMP, the price of SMP is supported both by public intervention purchases at a minimum price and aids for private storage when EU SMP prices fall below safety-net levels. Stock levels rose in 2009 and again in 2015-2017 in response to falling SMP prices on global markets in those years. At its peak, the EU public intervention stock amounted to 378,000 tonnes at year-end 2017, about 6.5% of world SMP production and about 20% of world SMP trade (OECD/FAO, 2018).

By withholding stocks in periods of low world market prices the EU puts a floor under these prices, although the existence of high stock levels will delay the rise in prices in the subsequent recovery period. This is supported by the very close correlation between EU and world market SMP prices including in years of very low prices (Figure 10). During the most recent downturn in prices, EU SMP prices have remained below world market prices despite the stock purchase programme, but such price comparisons need to be interpreted bearing in mind that the price quotations are not necessarily for the same product specification (for example, they may reflect prices at different locations or for different specifications).

Figure 10. EU SMP prices compared to world SMP prices, 2005-2018

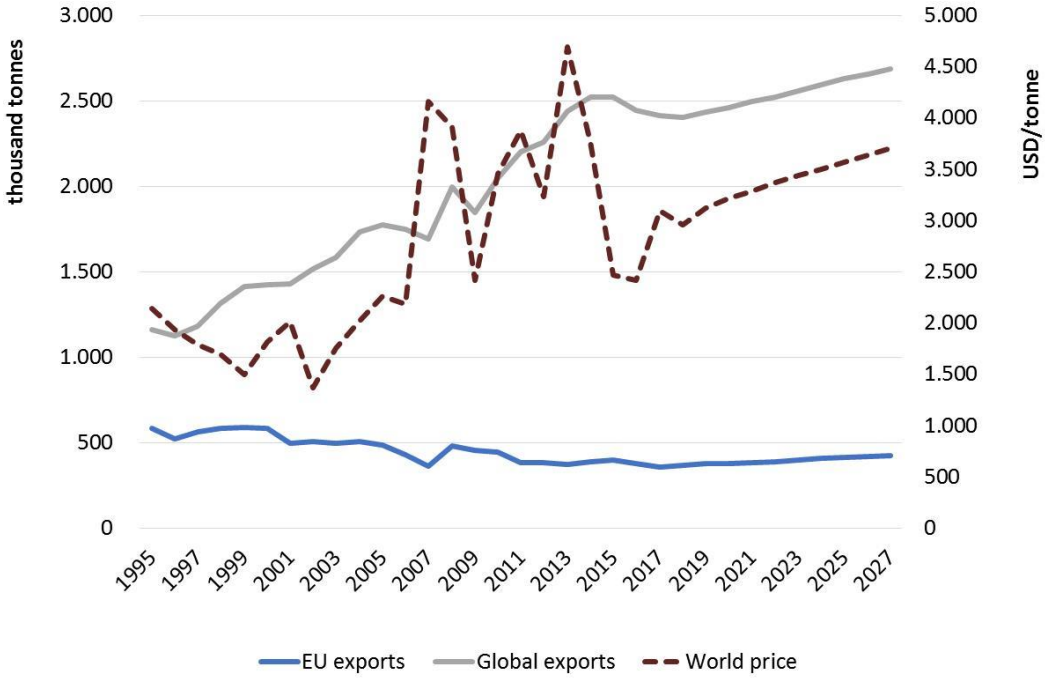


Source: based on DG AGRI, 2018c.

World market trends for WMP and SMP are shown in Figure 11 and Figure 12, respectively, according to OECD/FAO data. EU exports are compared to global

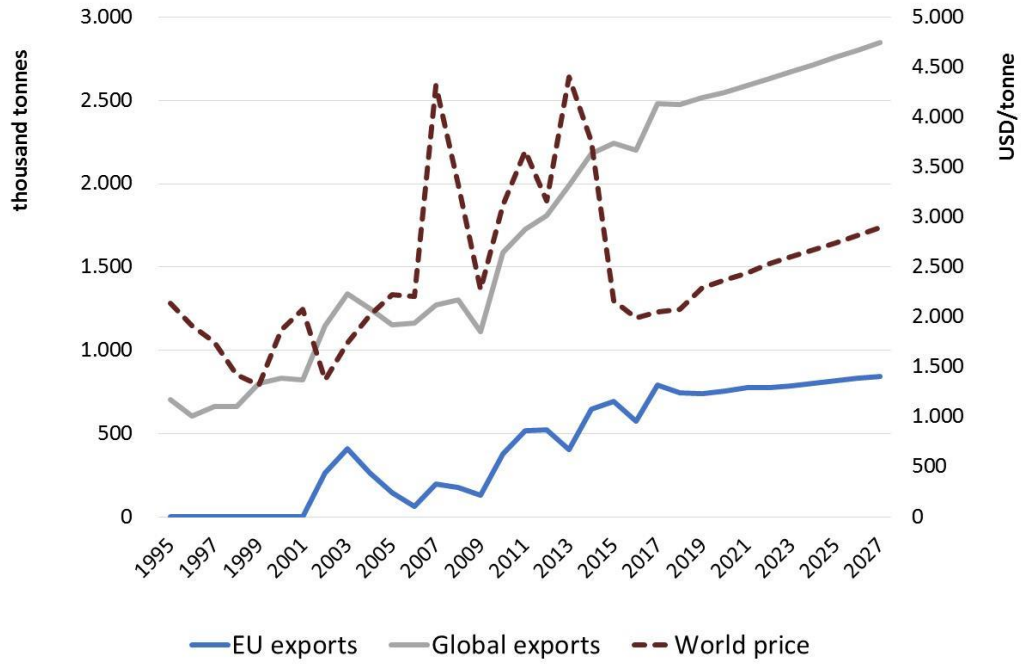
exports and to world market prices. These data cover a longer time period than DG AGRI data and include projections for the next decade in order to give a better idea of long-term trends.

Figure 11. World market WMP trends



Source: based on OECD/FAO, 2018.

Figure 12. World market SMP trends



Source: based on OECD/FAO, 2018.

Global exports of both WMP and SMP have substantially increased and are expected to continue to increase, albeit at a slower rate, in the coming decade. The EU has not been the main driver of export increases over the period. This is especially obvious with respect to WMP where EU exports have stagnated but also in the case of SMP the EU has lost market share to other global exporters. It is also worth remarking on the trend in prices (in nominal terms). Prices show a gently rising trend for both powders over time but with enormous volatility during recent years, especially with peaks in 2007-8 (sometimes characterised as the years of the 'food crisis') but also in 2011-12 and in 2014, in each case followed by a sharp decline.

EU exports of milk powders to vulnerable developing countries

EU milk powders are exported under various tariff codes in the Harmonised System (HS), as summarised in Table 3. Note that HS code 190190 covers FFMPs and other preparations used in the baking industry.

Table 3. Harmonised System codes for milk powders

HS code	Description of product
040210	Skim milk powder
040221	Whole milk powder, not containing sugar
040229	Whole milk powder, sweetened
190190	Milk powder preparations without milk fat (including full fat milk powders)

Table 4 provides an overview of EU milk powder exports focusing on the relative importance of VDCs in total export markets. In line with the previous data, total WMP exports have fallen with all of the fall occurring in exports to VDCs. As a result the share of these markets in total EU WMP exports fell from 42% to 33% between '2006' and '2017'. It is likely these markets are those where the competition from FFMPs has been felt most keenly. Most EU WMP exports to non-vulnerable countries go to Middle Eastern countries as well as China, Singapore and Hong Kong.

Table 4. Importance of VDCs as export market for EU milk powders, tonnes, 2005-2018

	Average 2005-2007	Average 2016-2018	Growth 2005-2018 (%)
WMP exports (HS codes 040221+040229)			
Total EU exports	429,870	369,652	-14
Exports to non-vulnerable countries	248,500	246,129	-1
Exports to VDCs	181,369	123,524	-32
Share of VDCs (in %)	42%	33%	
SMP exports (HS code 040210)			
Total EU exports	156,751	726,901	363

	Average 2005-2007	Average 2016-2018	Growth 2005-2018 (%)
Exports to non-vulnerable countries	131,316	608,322	363
Exports to VDCs	25,435	118,579	366
Share of VDCs	19%	19%	
FFMP exports (HS code 190190)			
Total EU exports	367,903	967,793	163
Exports to non-vulnerable countries	223,925	537,668	140
Exports to VDCs	143,979	430,126	199
Share of VDCs	39%	44%	

Source: own calculations based on Eurostat COMEXT data.

EU exports of SMP have, as shown above, increased dramatically from around 188,000 tonnes in 2005 to 727,000 tonnes in 2018. VDCs are a much less important market for this product, accounting for only 19% of the total in '2017', but in absolute terms the increase in exports to these markets has been substantial, from 31,000 tonnes in 2005 to 140,000 tonnes in 2018.

There has also been a dramatic growth in EU exports of FFMPs, from around 350,000 tonnes in 2005 to just over 1 million tonnes in 2018. However, as noted previously, the corresponding HS code 190190 covers more than FFMPs, and industry sources suggest that FFMP exports make up around half of this total. In the absence of a specific tariff code for FFMPs, our assumption is that all exports under this tariff code represent FFMPs but the reader should be cautioned that this is an over-estimate. The rapid growth in FFMP exports has mainly occurred since 2009. This development of FFMPs is likely to be a response to the dramatic relative increase in the price of butter after 2008. Prior to 2008 average indicative export prices for European and Oceania butter had usually been below USD 2,000/tonne. In July 2007 the butter price reached USD 4,000/tonne. Since then the price has only fallen below this level during crisis periods and it reached as high as USD 6,300/tonne in late 2017.[12] The fact that butterfat became more valuable stimulated dairy companies to find alternatives for butterfat in milk powder and led to the major expansion in EU FFMPs.

The majority of the EU's exports go to non-vulnerable countries, such as the oil-importing countries of the Middle East, rapidly growing economies in Asia as well as Russia and Belarus. However, an important share, around 44%, of these exports is destined for VDCs. This share has not changed much over the past decade. The most important importers of EU WMP among the VDCs are indicated in Table 5. The table shows all importers importing more than 4,000

[12] Butter price data are from the FAO global food price database.

tonnes WMP in the three-year period '2017' (because volumes to individual countries can fluctuate greatly from year to year, three-year averages are used to smooth out these fluctuations). Six of these countries are importing less WMP than they did in '2006' and just two are importing more. West African countries are predominant in the list, but Cuba, Dominican Republic and Bangladesh are also important markets.

Table 5. Top importers of EU WMP among VDCs, tonnes, 2005-2018

Region	Country	Average 2005-2007	Average 2016-2018	Growth 2005-2018 (%)
Africa	Nigeria	40,780	19,137	-53
	Senegal	14,031	5,760	-59
	Angola	10,407	9,603	-8
	Ivory Coast	6,496	6,475	0
	Mali	5,378	4,240	-21
	Cameroon	3,827	5,622	47
Developing Asia	Bangladesh	8,445	4,859	-42
Latin America & Caribbean	Dominican Republic	22,122	11,603	-48
	Cuba	6,957	12,685	82
TOTAL Top 9 VDC importers		118,444	79,985	-32
TOTAL VDC imports		181,369	123,524	-32

Source: Eurostat COMEXT database.

The most important VDC importers (those importing more than 2,000 tonnes) for EU SMP exports are shown in Table 6. EU SMP exports to VDCs are very concentrated, with just nine countries accounting for over 80% of VDC imports from the EU. West African countries are less prominent on this list than for the other milk powders, with only three of the nine top importers from that region. Apart from Nigeria which recorded relatively slower growth over the period, the rate of growth in imports by many importers has been very high. All countries are importing more SMP than they did in '2006'. However, for most importers, imports in absolute terms are not very large.

Table 6. Top importers of EU SMP among VDCs, tonnes, 2005-2018

Region	Country	Average 2005-2007	Average 2016-2018	Growth 2005-2018 (%)
Africa	Nigeria	13,619	25,394	86
	Ghana	2,024	8,561	323
	South Africa	1,202	6,689	456
	Ivory Coast	621	2,764	345
	Kenya	29	2,300	7831
Developing Asia	Yemen	1,210	14,883	1130
	Bangladesh	485	20,705	4172
Latin America & Caribbean	Cuba	2,576	10,034	290
	Dominican Republic	729	7,016	862

Region	Country	Average 2005-2007	Average 2016-2018	Growth 2005-2018 (%)
TOTAL Top 9 VDC importers		22,496	98,346	337
TOTAL VDCs		25,435	118,579	366

Source: Eurostat COMEXT database.

Imports of FFMPs by VDCs now exceed their imports of WMP and SMP combined. The top importers of EU FFMPs (those importing more than 10,000 tonnes) among them are shown in Table 7. This list is dominated by West African countries such as Nigeria, Senegal, Mauritania, Mali, Ivory Coast, Ghana and Guinea. South Africa and Ethiopia also make an appearance, as well some countries outside of Africa such as Yemen and Haiti. Also in this case, all countries are importing more FFMPs than they did in '2006'.

Table 7. Top importers of EU FFMPs among VDCs, tonnes, 2005-2018

Region	Country	Average 2005-2007	Average 2016-2018	Growth 2005-2018 (%)
Africa	Nigeria	34,594	79,116	129
	Senegal	21,212	66,385	213
	Mali	6,858	26,942	293
	DR Congo	6,038	11,289	87
	Mauritania	4,058	33,693	730
	Ghana	3,874	12,381	220
	Ivory Coast	3,302	16,431	398
	South Africa	2,446	11,107	354
	Guinea	1,136	10,890	859
	Ethiopia	48	23,260	48359
Developing Asia	Bangladesh	3,148	13,468	328
	Yemen	1,770	12,686	617
Latin America & Caribbean	Haiti	2,414	11,621	381
TOTAL Top 13 VDC importers		90,899	329,271	262
TOTAL VDC imports		143,979	430,126	199

Source: Eurostat COMEXT database.

Given the frequency with which West African countries appear in the lists of top importers of milk powders, Table 8 summarises their total imports of milk powders from the EU. For this purpose, West Africa is defined as making up the countries of the Economic Community of West African States (ECOWAS) plus Mauritania. While the volumes imported in part reflect differences in market size, there is also a clear distinction between the predominantly agricultural Sahelian countries (Burkina Faso, Mali, Niger, Chad, Mauritania) that do not import much milk powder, and the coastal countries with the biggest milk deficits, including Nigeria, Ghana, Senegal and Ivory Coast, which import 75% of the total milk consumed (Oxfam International, 2018).

Table 8. EU milk powder exports to West African countries, tonnes, 2005-2018

Country	Average	WMP		SMP		FFMPs	
		2005-2007	2016-2018	2005-2007	2016-2018	2005-2007	2016-2018
Benin		840	588	51	393	1,847	2,382
Burkina Faso		1,363	2,063	8	231	1,554	6,545
Cape Verde		3,250	2,563	1	169	1,230	1,753
Gambia		1,384	247	1	16	1,011	3,928
Ghana		1,831	1,618	2,024	8,561	3,874	12,381
Guinea		678	3,422		79	1,136	10,890
Guinea-Bissau		200	181			1,690	1,318
Ivory Coast		6,496	6,475	621	2,764	3,302	16,431
Liberia		407	226	1	2	1,249	1,824
Mali		5,378	4,240	101	231	6,858	26,942
Mauritania		4,273	3,804	139	1,009	4,058	33,693
Niger		1,861	891	120	1,266	8,274	7,131
Nigeria		40,780	19,137	13,619	25,394	34,594	79,116
Senegal		14,031	5,760	105	1,549	21,212	66,385
Sierra Leone		331	339	22	30	1,450	1,095
Togo		1,122	363	105	376	5,228	9,427
TOTAL West African Importers		84,226	51,917	16,919	42,071	98,567	281,241
TOTAL VDCs		181,369	123,524	25,435	118,579	12,686	430,126
TOTAL EU Exports		429,870	369,652	156,899	726,901	16,431	967,793

Source: own calculations based on Eurostat COMEXT database.

Table 9 places EU milk powder exports in the context of raw milk production in West African countries. To make this comparison, milk powder exports are expressed in milk equivalents assuming that 100 kg raw milk is used to produce 13 kg of WMP and FFMP and 9 kg of SMP. The milk equivalent of powder imports from the EU is then expressed a ratio of domestic milk production. A ratio of 100% implies that domestic production and imports supply equal shares of the domestic market (this calculation takes no account of imports from sources other than the EU and also assumes there are no exports of milk products). A ratio less than 100% means that domestic production supplies a greater share of the domestic market, while a ratio greater than 100% implies that EU imports supply a greater share of the domestic market.

As noted earlier, there are important differences across West African countries in their reliance on EU milk powder imports relative to domestic production. Countries like Cape Verde, Ivory Coast, Senegal, Nigeria and Liberia are heavily dependent on EU imports, whereas these imports play a much less important role in Sierra Leone, Guinea-Bissau, Burkina Faso, Mauritania and Mali. It is beyond the scope of this study to analyse the reasons for these differences. For West Africa as a whole, dependence on EU milk imports has increased over the period.

Table 9. EU exports in milk equivalent expressed as a share of domestic production in West African countries, %

	2005-2007 share, %	2015-2017 share, %
Benin	24	20
Burkina Faso	19	30
Cape Verde	730	798
Gambia	27	35
Ghana	177	497
Guinea	15	60
Guinea-Bissau	12	8
Ivory Coast	282	582
Liberia	162	163
Mali	21	57
Mauritania	14	49
Niger	21	10
Nigeria	160	201
Senegal	256	391
Sierra Leone	15	8
Togo	65	96
West Africa	61	86

Source: own calculations based on FAOSTAT data for cows' milk production and Eurostat COMEXT data for EU milk powder exports.

2.4.2 Chicken meat case study

CAP support for chicken production

The EU chicken industry does not benefit from CAP subsidies or guaranteed intervention support. It is not an eligible product for coupled payments under the CAP VCS scheme. Chicken farms may be located on farms with agricultural land and may therefore be eligible for decoupled direct payments as a result. DG AGRI figures show that operating subsidies made up 20% of the income of pig and poultry farms in the EU over the period 2007-2015 (DG AGRI, 2018d).
Export subsidies were available under the CAP for exports of poultry meat but are no longer used (export refunds for whole birds on exports to Africa were eliminated in 1998, although were occasionally authorised for short seasonal periods for chicken cuts).

The main cost of producing chicken is the cost of feed, which accounts for around 60%-75% of total costs depending on the Member State. In the EU, the main feed ingredients used are wheat and soya, with maize also used in the southern MSs. It is sometimes argued that chicken producers are indirectly supported through cereal subsidies on feed costs. There is a small amount of coupled aid paid to cereal growers under the VCS scheme. For the 2017-2020

period, this amounts to EUR 396 million or approximately EUR 100 million per annum (DG AGRI, 2017). In addition, cereal growers receive per hectare decoupled payments although these are not conditional on the production of cereals. Even if it is argued that these coupled and decoupled payments help to reduce the variable costs of producing cereals, these are widely traded commodities. There is no reason why cereal growers should sell more cheaply to feed compounders (with the possibility that some of this subsidy might be passed through to broiler producers) when they can also sell to traders who offer the world market price. In these circumstances, we conclude that there would be no pass-through of the CAP payments to cereal growers to the price of feed and to the benefit of broiler producers.

In fact, the opposite situation where CAP protection on cereals penalises the EU chicken industry is more likely to be the case. Applied tariff rates on cereal imports differ between high quality wheat and other cereals, and low and medium quality wheat. In the former case, the tariff system, which originated in the Blair House agreement between the US and the EU as part of the Uruguay Round trade negotiations, sets tariffs on the basis of world reference prices for the different cereals. The duty is fixed on the basis of the difference between the effective EU intervention price for cereals (EUR 101.31/tonne) multiplied by 1.55 (EUR 157.03/tonne) and a representative carriage, insurance and freight (c.i.f.) import price for cereals at Rotterdam. The applied tariff has been zero now for some years.

However, for the low and medium quality wheat which is used in the manufacture of chicken feed, the bound rate of EUR 95/tonne applies apart from imports under Tariff Rate Quotas (TRQs) where the tariff is limited to EUR 12/tonne. There is also a duty-free TRQ with Ukraine. The OECD estimated the value of this market price support to EU producers of common wheat at EUR 2.3 billion in 2017 and EUR 1.5 billion in 2018.[13] This market price support to producers represents an additional cost to the purchasers of feed wheat including the poultry sector.

Also relevant is that EU chicken production is subject to higher environmental, animal welfare, hygiene, salmonella control and other food safety standards than production in competitor countries which raises the costs of broiler production in the EU. The additional costs directly related to EU regulations are estimated to be 5 eurocents per kg live weight, equivalent to almost 6% of the total production costs in 2015 (van Horne, 2017). In some MSs, national regulations are even stricter. Partly due to these factors, the price of broilers in the EU tends

[13] OECD Producer Support Estimate database for the EU28.

to be higher than in the two main exporting countries, Brazil and the US. Van Horne estimated, based on 2015 data, that production costs after slaughter are 70% of the EU average in Brazil, 74% lower in the Ukraine, 81% lower in the US, 81% lower in Argentina and 83% lower in Thailand.

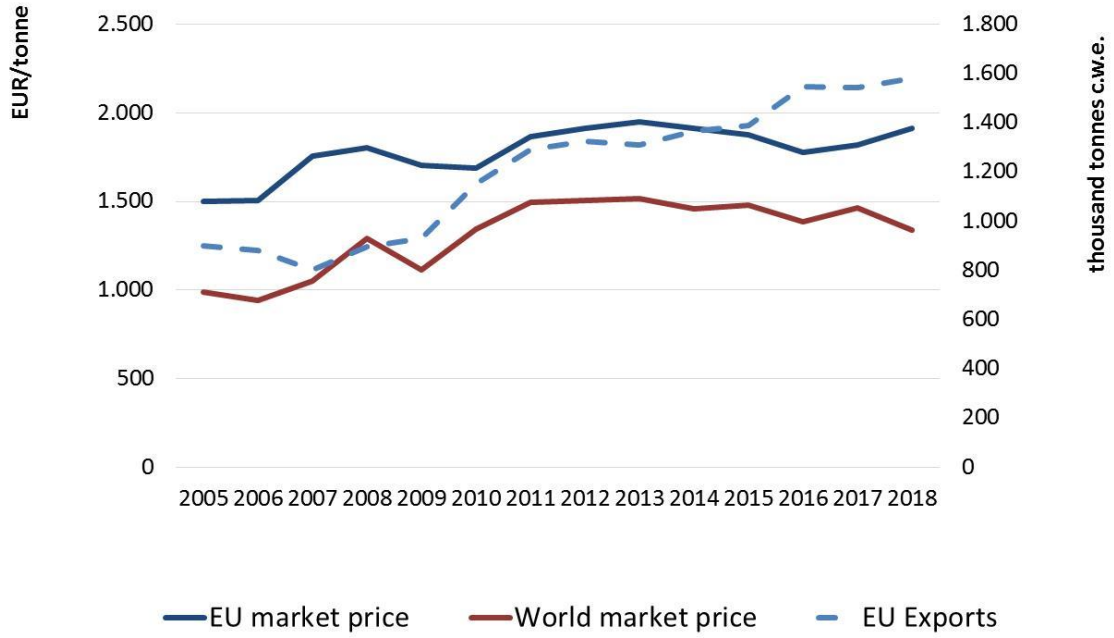
EU imports of chicken meat are subject to high import duties, with various tariff rate quotas allowing preferential access at lower rates of duty for limited quantities. EU imports are mainly of high-value chicken cuts, including frozen natural breast fillet, salted breast fillet and cooked breast fillet. The import duties levied on these products range from EUR 1,024/tonne to EUR 1,300/tonne depending on the product. In 2018 applied Most Favoured Nation (MFN) tariffs were between 31.4% and 48.3% in *ad valorem* terms. The OECD estimated the value of this support to poultry producers (not only chicken) at EUR 4.5 billion in 2017 and EUR 4.3 billion in 2018. These tariffs are critical to reserving the EU chicken market for domestic producers apart from quantities imported under the preferential TRQ tariffs and free trade agreements. Van Horne (2017) compared the production costs of breast fillet in the EU and exporting countries by adding up the costs of cutting up the breast cap and deboning it and taking account of the revenue from or cost of offal disposal and the sale of the rest of the carcase. This gave the net production costs of a kg of breast meat at the processing plant in the production country, to which he added transport costs and import levies to compare the offer price of the selected non-EU countries to the EU average. The author found that, even with import levies, product from Brazil and Ukraine was competitive with EU production. Van Horne concludes that "…*the import levies protect the EU countries from large imports of breast meat from third countries*". The recent strong negative political reactions from EU policymakers to rising chicken imports from Ukraine support this conclusion.[14]

EU production, export and price of poultry meat

Production and consumption of poultry meat (a term that includes meat from chicken, ducks, geese, turkey and guinea fowl) have been steadily increasing in the EU, with production growth averaging 2.5% per annum over the past decade (DG AGRI, 2018c). Exports have almost doubled in volume terms, and the share of exports in EU production has increased from 8% in 2005 to 11% in 2018 (Figure 13).

[14] Livingstone, E., 'Feathers fly in Europe's battle with Ukrainian chicken boss', Politico Europe, 3 May 2019.

Figure 13. EU poultry meat prices and exports, 2005-2018



Source: based on DG AGRI, 2018a. Export volumes are in carcase weight equivalent.

Both production and exports in 2016-2017 were adversely affected by avian flu in several EU countries but recovered in 2018. EU producer prices are closely correlated with movements in world market prices. The fact that EU market prices are generally above world market prices may reflect the high protection of the EU poultry market, but it may also reflect differences in the specification of the product that is being measured.

EU poultry trade (meat and offal) is characterised by high-value imports and low-value exports. The EU is a net exporter of poultry when measured by volume, but a small net importer in value terms. A specific feature of the trade in poultry meat is that the EU is exporting lower-quality and cheaper cuts less appreciated by European consumers (such as legs and wings, sometimes referred to as 'brown' meat, as well as meat from spent laying hens) and importing cuts with higher added value (such as breasts, known as 'white' meat), and cooked preparations.

This case focuses on chicken meat which accounts for around 80% of EU production of poultry meat. Chicken is traded under eight separate tariff headings, two representing live chicks and chickens, four representing chicken meat in unprocessed form, and two representing chicken meat in prepared or processed form (Table 10).

Table 10. Harmonised System codes for chicken

HS code	Description of product
010511	Live chicks weighing <= 185 gm
01059400	Live chickens weighing > 185 gm
020711	Chickens, not cut in pieces, fresh or chilled
020712	Chickens, not cut in pieces, frozen
020713	Chicken cuts and offal, fresh or chilled
020714	Chicken cuts and offal, frozen
02109939	Poultry meat, salted or in brine
160232	Other prepared chicken meat and offal

Source: European Customs Portal https://www.tariffnumber.com/.

The trend in EU exports of chicken meat in the four tariff headings covering unprocessed chicken meat which is considered most relevant to the VDC markets is shown in value and volume terms in Table 11. Trade statistics confirm that EU chicken meat exports have almost doubled in both value and volume terms over the decade 2009-2018. Exports are largely a trade in frozen chicken meat, either as whole chickens or as chicken cuts and offal. Indeed, nearly all of the increase in both the value and volume in exports is due to the exports of frozen chicken cuts and offal. The value and volume of exports of frozen whole chickens dropped slightly.

Table 11. Value and volume of EU chicken meat exports, 2009-2018

	Value of EU exports (EUR million)			Volume of EU exports ('000 tonnes)		
HS code	Average 2009-2011	Average 2016-2018	Growth 2009-2018 (%)	Average 2009-2011	Average 2016-2018	Growth 2009-2018 (%)
020711 - Chickens, not cut in pieces, fresh or chilled	11.4	17.2	51	6.0	8.6	43
020712 - Chickens, not cut in pieces, frozen	353.5	288.4	-18	305.4	251.9	-18
020713 - Chicken cuts and offal, fresh or chilled	63.8	92.8	46	34.7	42.2	21
020714 - Chicken cuts and offal, frozen	468.6	812.6	73	585.6	1052.0	80

Source: Eurostat COMEXT database via EU Market Access Database. Volumes are given in product weight equivalent.

Exports of chicken cuts and offal are less valuable on a per tonne basis than exports of whole chicken, indicating that they represent the less valuable and less preferred cuts. Also, frozen meat is generally less valuable than fresh or chilled exports. The role of the EU in global chicken meat exports is shown in Table 12. Global chicken meat exports are growing rapidly, increasing by 30%

between ‘2008’ and ‘2015’. The EU accounts for a relatively modest 11% of the global market, behind Brazil and the US that are the market leaders, although its market share has expanded slightly over the decade.

Table 12. Global chicken meat (broiler) exports ('000 tonnes), 2007-2016

	Average 2007-2009	Average 2014-2016	Growth 2007-2016 (%)
World	8,063	10,493	30
Brazil	3,129	3,763	20
US	2,976	2,071	-30
EU	705	1,196	70
Thailand	353	619	76
China	311	406	30
Turkey	51	332	546
Ukraine	8	187	2242
Argentina	156	208	33
Belarus	12	131	992
Canada	146	135	-8
Chile	63	97	54
Russia	5	75	1507
Others	148	281	90

Source: USDA, Production Supply & Distribution database.

EU exports of chicken meat to vulnerable developing countries

If we focus on the exports of frozen chicken cuts and offal where all of the growth in EU exports has taken place, there has been a significant change in the destination of these exports over the decade. At the beginning of the period, most (72% by value in 2009) of these exports went to non-vulnerable countries particularly in Asia (Hong Kong, Malaysia, China, Vietnam) and in Eastern Europe (Ukraine, Belarus, Macedonia, Kosovo, Albania). By the end of the period, African countries plus a few Caribbean countries (Haiti, St Lucia and Barbados) had become more important destinations and just 54% by value of EU exports in 2018 went to non-vulnerable countries. The nature of demand also varies between markets, with frozen wings being mainly directed to Hong Kong while halves and quarters are mainly shipped to Africa (DG AGRI, 2018c). The principal importers among VDCs of EU frozen chicken meat cuts and offal valued at more than EUR 10 million in any recent year are shown in Table 13. Top of the list are Ghana and South Africa, although EU exports to South Africa have dropped significantly in the most recent two years because of the imposition of restrictions on imports from EU countries due to anti-dumping duties and avian flu outbreaks (Goodison, 2018). Benin is in third place although it is believed that most of these imports are destined to be smuggled over the border to Nigeria which has banned the import of chicken meat. Exports to

Angola, DR Congo and Haiti have risen sharply in the past two years in value and also in volume terms.

Table 13. Principal importers of EU frozen chicken cuts and offal among VDCs

		Value of EU exports (EUR million)			Volume of EU exports ('000 tonnes)		
Region	**Country**	**Average 2009-2011**	**Average 2016-2018**	**Growth 2009-2018 (%)**	**Average 2009-2011**	**Average 2016-2018**	**Growth 2009-2018 (%)**
Africa	Ghana	24.1	87.5	263	36.2	126.8	250
	South Africa	26.2	119.4	355	29.3	132.2	351
	Benin	54.4	39.2	-28	49.4	47.3	-4
	Gabon	12.2	26.5	118	13.7	32.5	137
	Angola	0.7	8.9	1230	0.7	8.2	1071
	DR Congo	5.0	11.1	124	6.0	18.5	211
	Togo	5.9	9.3	58	6.1	12.4	104
	Comoros	5.8	9.4	63	5.5	10.5	92
Latin America & Caribbean	Haiti	-	8.1	-	-	12.0	-

Source: Eurostat COMEXT database.

The importance of imports in domestic consumption, and the importance of imports from the EU in total imports, in the above identified developing countries are shown in Table 14. For these main import markets as a whole, the share of the EU in total imports has steadily risen from 18% in 2005 to 46% in 2018, indicating their growing importance to EU exporters. Nonetheless, there are clear differences across countries. In Angola, DR Congo, Gabon and Haiti, domestic consumption is almost entirely met from imports and the EU provides a small or even insignificant share of import demand relative to other exporters. In Ghana, the market is also largely supplied by imports and dependence on imports has been growing up to 2015, with a fall in imports in 2016. Imports are primarily supplied from the US (40% market share) with Brazil and the EU each having about 25% market share (USDA, 2017). However, EU exports have continued to increase dramatically in the more recent years not shown in the table, by a further 43% between 2016 and 2018 from 110,000 tonnes to 158,000 tonnes.

In South Africa, on the other hand, imports make up only a relatively small share of the domestic market which is mainly supplied by domestic production. However, import volumes have been growing more rapidly than domestic production and dependence on imports is increasing. The EU share of imports, moreover, has risen rapidly in recent years to account for around 50% of imports in 2016 (though anti-dumping duties and avian flu restrictions in 2017 and 2018

led to a sharp fall in imports from the EU in these years). In Benin, the EU provides virtually all imports though the statistics for domestic consumption are distorted by the fact that the major share of these imports is subsequently smuggled across the border to Nigeria.

Table 14. Imports and EU share of imports relative to domestic chicken consumption in main VDC markets for EU chicken meat exports

Region	Country	Average imports ('000 tonnes)		Ratio of domestic consumption (%)	
		2007-2009	2014-2016	2007-2009	2014-2016
Africa	Angola: imports	157	264	92	87
	of which EU imports	9	10	5	3
	Benin: imports	63	123	86	90
	of which EU imports	55	101	74	74
	DR Congo	46	77	81	88
	of which EU imports	16	26	28	29
	Gabon: imports	36	64	90	94
	of which EU imports	10	26	26	38
	Ghana: imports	75	107	76	76
	of which EU imports	27	80	27	57
	South Africa: imports	212	451	16	28
	of which EU imports	4	221	0	13
Latin America & Caribbean	Haiti: imports	26	73	76	90
	of which EU imports	0	1	0	2

Source: USDA, Production, Supply & Distribution database. Imports from the EU are assumed equal to EU exports shown in the Eurostat COMEXT database.
Notes: Data for Togo and Comoros not available.

There are some African countries one might expect to see on the list of top importers of EU chicken meat in Africa but that do not appear. Nigeria and Cameroon do not appear on the list of major chicken importers as they banned poultry imports since 2003 and 2006, respectively. Domestic chicken production seems to have responded well in Cameroon which has developed a thriving local chicken industry (GIZ, 2018). However, production difficulties caused by outbreaks of avian influenza seem to have encouraged some smuggling of frozen chicken cuts into the country in recent years. In Nigeria, by contrast, local production has found it difficult to respond to the ban on imports and much of Nigerian poultry consumption is smuggled into Nigeria across its overland borders. One estimate is that local demand is around 1.5 million tonnes of which domestic production only supplies 300,000 tonnes. Increasing local production has been difficult because of the high cost of feed (mainly maize in West Africa which is also used for food) and poor development infrastructure (lack of electricity, unregulated importation of day old and hatchery chicks, non-

regulation of the use of antibiotics and other drugs and low standards of biosecurity).[15]

2.4.3 Processed tomato products case study

CAP support for tomatoes

There is no direct EU support under the CAP for tomato processing, although individual tomato processing firms may receive government support under other headings. However, there is a potential subsidy in favour of tomato processing if CAP subsidies for the production of raw tomatoes result in the greater availability and thus lower price of the raw material for processing.

CAP support for raw tomato production has changed over time. The first Common Market Organisation (CMO) rules on processed tomatoes date back to 1977 and the regime was first reformed in 1996. Under the support system for processed tomatoes laid down in 1996[16] the CAP subsidy was: i) coupled to output and limited to a quantity of processed products corresponding to a specific volume of fresh tomatoes. The quantity of fresh tomatoes, divided into three groups (tomato concentrate, canned whole peeled tomatoes and other products), was distributed annually among MSs according to the average quantities produced; ii) paid to processors approved by the MSs on the basis of a contract with recognised Producer Organisations. The aid was only granted on processed products meeting minimum quality requirements made from raw materials harvested in the Community for which a price at least equivalent to the minimum price had been paid. In 2000 the support regime was changed and the minimum price was abolished.[17] Aid was now paid directly to farmers via their Producer Organisations provided a contract for sale had been concluded with an approved processor. The aid was paid per tonne of tomatoes, originally set at EUR 34.50 per tonne which was equivalent to an *ad valorem* subsidy of 43% (Rickard and Sumner, 2011). The quota system was replaced by Community and national processing thresholds. If these thresholds were exceeded, penalties were applied.

The 2007 reform of the single CMO integrated support for tomatoes into the Single Payment Scheme (SPS) of decoupled payments from 1 January 2008.[18] For processing tomatoes, the EU's largest producer Italy opted for a three year transition period (2008-2010), maintaining coupled payments at 50% of the

[15] 'Nigeria's Ban on Poultry Imports – Important Lessons for Ghana', The Poultry Site, 7 June 2016.
[16] Regulation (EC) No 2201/96 and Regulation (EC) No 2200/96.
[17] Regulation (EC) No 2699/2000.
[18] Regulation (EC) No. 1182/2007.

national ceiling until the end of 2010 with decoupled payments to be fully implemented from 2011. However, because Italy retained the 'historic basis' for decoupled payment, tomato growers that historically received very high payments per hectare continued to receive these payments, albeit now decoupled and no longer linked to the production of tomatoes. That is, after 2011 tomato growers receive a Single Farm Payment at the full rate of support they received during 2000 to 2002. The reform did not seem to have had any major impact on production trends. Statistics on overall EU production of tomatoes for processing show production has been broadly stable since 2005 though with annual fluctuations (peaks of 10.2Mt in 2005, 10.5Mt in 2009, 10.5Mt in 2015, 10.9 Mt in 2016 but falling to 9.4Mt in 2018) (DG AGRI, 2018c).

Under the 2013 CAP reform, which entered into force in 2015, the SPS was replaced by the Basic Payment Scheme under which new payment entitlements were allocated based, as a general rule, on the number of eligible hectares at the disposal of farmers in the first year of implementation of the scheme.[19] MSs that had used the historic basis were allowed to keep their existing payment entitlements with some convergence in the values per hectare within a region or country. Italy made use of this possibility and has moved towards only partial convergence of payment entitlements per hectare by 2019. Thus, the historic high payments to tomato growers continue, albeit in a less pronounced way, under this model. In addition, MSs make use of the voluntary coupled payments scheme to support the production of processing tomatoes (Table 15).

Table 15. Coupled support in the EU for tomatoes for processing

Country		Quantity limit (ha)	Yields (t/ha)	Unit payment (EUR/ha, 2017)	Envelope 2017 (EUR million)
France		2,711	75	1,057	2.86
Greece	(2015)	9,080			3.91
	(2017)	5,800	70	430	3.00
Italy		96,768	63	114	10.99
Malta		139		6,504	0.90
Portugal		13,896	93.48	240	3.34
Poland	(2015)	12,874			4.25
	(2017)	5,150	30	330	2.84
Romania	(2015)	2,000			2.84
	(2017)	2,000	15	1,420	1.42
Spain		25,000	75	254	6.35

Source: DG AGRI, 2015; DG AGRI, 2017.

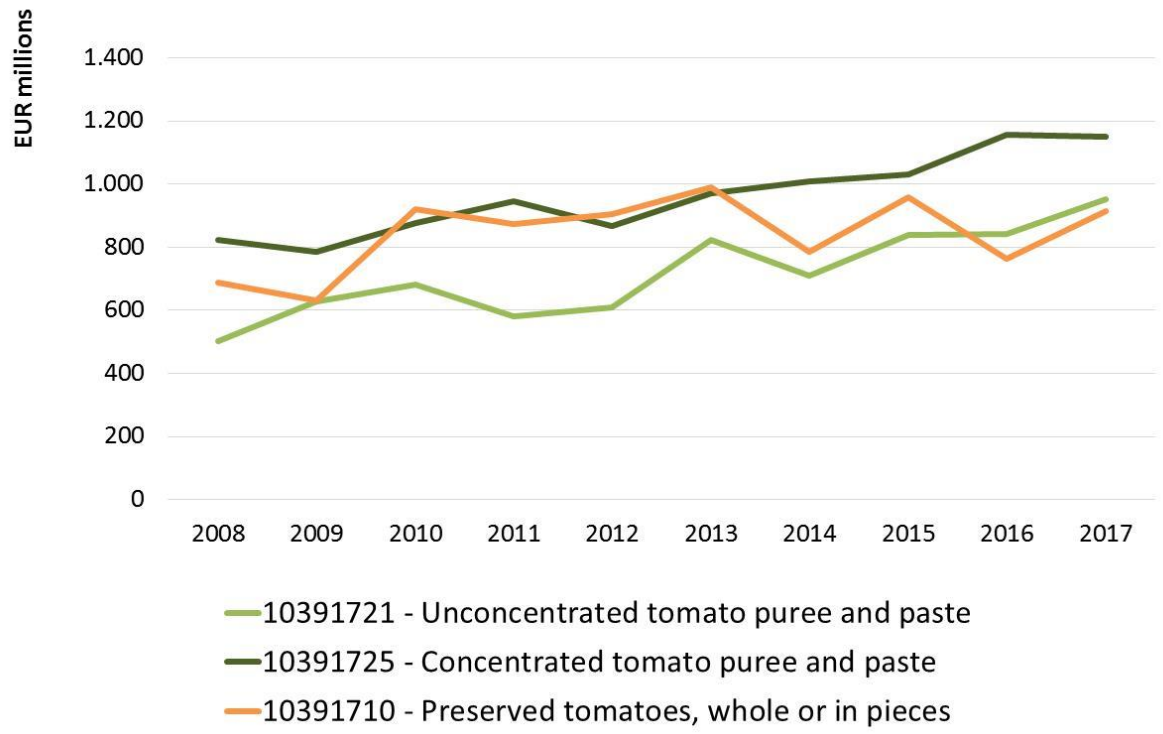
[19] Regulation (EU) No 1307/2013.

MSs had to originally notify their intentions by 1 August 2014 to grant coupled support in 2015 but had the possibility to revise their VCS decisions by 1 August 2016 with the changes (if any) effective from 2017. A few countries appear to have notified changes for tomatoes in their VCS scheme. In addition, other countries notified that they provided coupled support to generic fruit and vegetable production, without indicating whether any of this support was granted for tomato production.

Trends in EU processed tomato production

Processed tomato products include canned tomatoes, tomato paste (including tomato purée) as well as a range of tomato sauces including ketchup.[20] Two kinds of tomato paste are distinguished: unconcentrated and concentrated. Figure 14 shows the increasing trend of EU processed tomato production since 2008.

Figure 14. Value of processed tomato production in EU28, EUR million



Source: Eurostat PRODCOMM database.

[20] The term 'tomato paste', which includes different degrees of concentration, is related to canned tomatoes prepared by eliminating a part of the water from the pulpy juice obtained by homogenising fresh tomatoes and sieving the resulting chopped product. The FAO CODEX standard for tomato concentrates (CODEX STAN 57-1981) requires that the name of the product shall be 'tomato purée' if the food contains not less than 7% but less than 24% natural total soluble solids, and 'tomato paste' if the food contains not less than 24% natural total soluble solids.

Italy is by far the most important producer of processed tomato products. It accounts for around 85% of the value of production of canned tomatoes and unconcentrated tomato paste. For concentrated tomato paste, Spain and Portugal as well as Greece are important producers, and the Italian share of EU28 production is around 50%. However, Italy is the most important exporter of processed tomato products to countries outside the EU.

Processed tomato products are exported under different HS code classifications (Table 16). The relevant codes for our purposes are canned tomatoes (200210) and tomato paste (200290). Tomato sauces are a rapidly growing category but the 'other sauces and preparations containing tomato' is a 10-digit HS class and COMEXT trade statistics are only disaggregated to the 8-digit level. Because export values and volumes in this class include sauces without any tomato content, it is not possible to determine how much of the exports in this class are processed tomato exports.

Table 16. HS codes relevant to processed tomatoes

HS code	Description of product
200210	Tomatoes whole or in pieces prepared or preserved otherwise than by vinegar or acetic acid (canned tomatoes)
200290	Tomato paste
210320	Tomato ketchup and other tomato sauces
2103 90 90 10	Other sauces and preparations containing tomato

The growth in exports of canned tomatoes and tomato pastes and the division of export markets between vulnerable and non-vulnerable countries is shown in Table 17. Exports of both canned tomatoes and tomato paste have grown over the period. Although in 2005 exports of tomato paste were more important in value terms, more rapid growth of canned tomato exports has meant that by 2018 these roles were reversed.

The VDCs have never been important markets for canned tomatoes – their share has grown from 5-6% at the beginning of the period to 6-7% by the end. On the contrary, VDCs took more than half of all EU exports of tomato paste at the beginning of the period. However, since 2005 both the value and share of exports to these markets has decreased. In 2018, EU exports of tomato paste to Japan alone (EUR 58 million) nearly equalled total EU exports to VDC markets. Other important export markets are high-income countries such as Libya, Switzerland, Russia, Australia, United States, Saudi Arabia, Canada and Norway in that order.

Table 17. Market shares of EU exports of selected processed tomato products, 2005-2018, EUR million

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
200210 Prepared or preserved tomatoes, whole or in pieces (canned tomatoes)														
Total non-vulnerable countries														
	153	158	181	210	226	252	268	296	311	330	342	336	343	355
Total VDCs														
	8	10	13	13	15	17	18	19	23	24	25	22	23	24
Total extra-EU28														
	162	168	193	223	241	269	286	315	334	355	368	357	366	379
Share VDCs in tot exports (in %)														
	5	6	7	6	7	7	7	7	7	7	7	6	7	7
200290 Tomato paste														
Total non-vulnerable countries														
	100	130	148	165	163	157	193	158	220	226	259	305	262	268
Total VDCs														
	137	130	128	140	164	117	105	127	107	72	77	57	64	60
Total extra-EU28														
	237	260	276	306	327	274	298	285	327	298	337	361	326	329
Share VDCs in tot exports (in %)														
	58	50	46	46	50	43	35	45	33	24	23	16	20	18

Source: Eurostat COMEXT database.

Despite the fall in the value of tomato paste exports to VDCs, this value in 2018 was still significantly higher than exports of canned tomatoes to these markets, even if the latter are on a rising trend. Also, criticisms of the impact of EU exports on producers in VDCs, especially in Africa, have focused on tomato paste. Our focus is therefore on the main markets for EU tomato paste among VDCs.

EU exports of tomato paste to vulnerable developing countries

The top ten principal VDC importers of EU tomato paste are shown in Table 18, to which has been added Nigeria which was the major importer in the past. Divergent trends are apparent.

Both the value and volume of imports has steadily increased for those importers at the top of the list in 2018. However, for large importers at the start of the period (Nigeria, Ghana, Ivory Coast and Angola) imports from the EU show a sharp decline both in value and volume. The case of Ghana is particularly noteworthy as it has been the country highlighted in the NGO literature reviewed earlier. The main reason for the fall in EU exports to Ghana has been a

loss of market share to China due to uncompetitive prices although total imports by Ghana have also fallen back from the unusually high levels in 2013.[21]

Table 18. Principal importers of EU tomato paste among VDCs

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Value of EU exports (EUR million)										
Burkina Faso	2.3	2.4	1.9	2.7	2.5	4.5	5.6	5.5	7.8	8.3
South Africa	3.3	3.6	3.5	3.3	4.2	5.5	4.2	5.4	6.5	7.4
Sudan	4.2	5.9	8.4	11.0	6.3	8.0	16.3	8.8	7.2	7.3
Tanzania	3.2	3.9	4.1	4.9	4.1	5.7	7.7	4.8	4.4	5.3
Gabon	3.7	4.2	3.1	3.9	4.0	4.0	5.0	4.5	4.7	4.3
Congo	5.0	2.0	1.8	3.0	1.8	1.8	1.7	3.0	1.7	2.9
Senegal	0.9	0.2	0.9	0.4	2.5	1.6	2.0	1.6	1.7	2.6
Ghana	26.8	23.7	12.6	28.3	19.9	6.8	4.3	4.2	3.4	2.6
Ivory Coast	10.5	9.9	6.7	6.2	3.5	3.2	2.5	2.8	2.4	2.6
Angola	18.1	12.5	13.4	16.2	13.6	6.7	6.6	3.8	9.2	2.4
Nigeria	43.1	23.1	27.7	27.1	27.1	10.8	6.2	1.0	0.3	0.3
Volume of EU exports ('000 tonnes)										
Burkina Faso	2.0	2.3	2.2	2.7	2.3	4.1	4.9	5.0	7.3	8.2
South Africa	3.3	4.0	3.8	3.7	4.2	6.1	4.5	6.0	7.5	8.8
Sudan	4.1	6.5	9.7	11.8	6.5	7.4	14.5	9.3	7.6	9.4
Tanzania	2.2	3.1	3.3	3.9	3.2	4.4	5.4	3.5	3.3	4.0
Gabon	2.8	4.0	3.0	3.7	3.5	3.2	4.0	3.7	3.8	3.7
Congo	3.6	1.7	1.5	2.4	1.3	1.3	1.2	2.3	1.3	2.3
Senegal	1.2	0.2	1.2	0.5	4.1	2.2	2.3	2.1	2.2	3.6
Ghana	23.0	23.7	13.2	28.9	18.9	6.3	3.7	3.5	2.9	2.7
Ivory Coast	10.6	11.3	8.4	7.3	3.6	3.1	2.3	2.5	2.2	2.7
Angola	13.3	11.0	12.3	14.2	11.4	5.5	5.1	3.3	7.8	2.2
Nigeria	35.0	21.0	28.1	25.9	25.0	10.0	5.0	1.0	0.3	0.3

Source: Eurostat COMEXT database.

Information on the relative importance of the major import suppliers to these markets is patchy, but Table 19 provides some data taken from FAOSTAT. There are essentially only two exporters in these markets, China and Italy. The table shows the relative share of Italian exports of tomato paste in the selected markets. What emerges clearly is that, even in those markets where Italian exports played a significant role in the past (Burkina Faso, Ghana, Ivory Coast) its market share has fallen dramatically, while in other countries it was never the major supplier. In all countries for which recent data are available, Chinese imports are now the main source of competition for local producers.

[21] For the prospects and challenges facing tomato paste production in Ghana, see 'Ghana's Tomato Processing Industry: An Attractive Investment Option in 2016', 8 December 2015, Goodman AMC Blog.

Table 19. Imports of tomato paste and Italian share to selected VDCs, EUR million

		2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Burkina Faso	World			5.1	3.9	3.5	4.6	4.7	3.9	2. 4	3.1
	Italy share			37%	33%	31%	31%	36%	26%	26%	25%
DR Congo	World	12.4	11.8								
	Italy share	46%	35%								
Ghana	World	49.2	38.9	38.0	46.2	78.8	90.3	108.6			57.3
	Italy share	40%	32%	21%	31%	13%	20%	16%			1%
Ivory Coast	World	11.1	22.	15.7	16.1	12.9	15.3	15.9	13.4	10.6	
	Italy share	63%	59%	58%	60%	39%	27%	14%	12%	5%	
Nigeria	World	86.4	39.3								
	Italy share	33%	25%								
Senegal	World	5.1	8.2	7.2	7.8	7.8	8.1	10.0	7.7	15.6	11.7
	Italy share	19%	2%	3%	0%	0%	0%	4%	0%	4%	0%
South Africa	World	5.9	10.4	12.2	10.6	11.8	16.3	15.6	31.7	25.9	18.9
	Italy share	18%	14%	13%	19%	12%	11%	15%	8%	14%	10%
Tanzania	World	0.7	0.5	0.6	0.8	0.9	0.9	0.5	1.0	0.7	1.0
	Italy share	9%	8%	5%	3%	0%	0%	0%	1%	0%	2%

Source: FAOSTAT, Detailed Trade Matrix.

Notes: empty cells denote missing data. Data for Gabon, Libya and Sudan not available.

Part 3 Main findings on the impact of current CAP subsidies on the price of EU food produced and exported to developing countries

In this part the influence of CAP subsidies on export prices of case study products and on VDCs importing these products is discussed.

3.1 CAP subsidies contribute to a greater volume of EU milk powders exports but price effects are limited

The CAP subsidy policies under review include coupled payments, decoupled payments and price management policies. Exports of EU dairy products are made at world market prices so there is no longer any direct impact of CAP subsidies on export prices. However, following the discussion in Part 2, CAP subsidies may have an indirect impact on export prices to the extent that (a) they encourage increased production within the EU, and (b) increased EU production leads to increased EU exports which, given the importance of the EU as an exporter on world dairy markets, is likely to depress the world price for these products and thus, indirectly, the EU export price.

The discussion in Part 2 identified two mechanisms whereby CAP subsidies might influence the volume of EU dairy products produced. One is the direct incentive effect where coupled subsidies raise the return to producing milk in the EU and decoupled subsidies increase production through a combination of risk, wealth, credit and insurance effects. The other is an indirect incentive effect where farmers use their direct payments to subsidise their production activity, essentially producing below cost, thus enabling higher production and higher exports to take place, and which has been described as a form of dumping.

It may seem obvious that coupled payments to dairy cows should raise total milk production in the EU. However, simulations using the CAPRI model for DG AGRI in the impact assessment of its legal proposal for the CAP post 2020 found this was not the case. The removal of coupled support (in isolation from other changes) would indeed reduce dairy cow numbers (by 0.7%) but this would be more than offset by an increase in productivity (yields would go up 1.5%) in part due to higher prices (1.4%), yielding an overall increase in production of 0.7% (EC, 2018). Still, even if coupled payments appear to reduce

milk production in the EU because of their impact on average yields, they also reduce the cost of raw milk to dairy processors.

The impact of decoupled payments is less obvious. The impact of decoupled payments on production and prices is measured by the degree of decoupling. There is controversy about the magnitude of this parameter though most observers judge it to be relatively low (see Box 4). This is confirmed by simulation results in the SCENAR 2030 study for the scenarios Lib&Prod (the removal of Pillar 1 supports, the redirection of a smaller Pillar 2 to productivity-enhancing measures, and extensive trade liberalisation through bilateral free trade agreements) and NoCAP (which in addition eliminated Pillar 2 as well as Pillar 1 expenditure) (M'Barek *et al.*, 2017). General results for agricultural production as a whole were earlier reported from this study. Dairy is a sector that is projected to gain from the improved market access obtained under the various FTAs included in these scenarios. Without this improved market access, the impact of removing CAP subsidies alone would be greater than what is reported below.

In the Lib&Prod scenario, dairy cow numbers fall (by 0.7%) but this is again compensated by an increase in yields resulting in almost no change in total milk production (-0.1%). In the NoCAP scenario, EU milk supply decreases by -2.1%, mainly because of a decrease in average milk yield as cow numbers increase by 0.7%. In both scenarios, the decrease in EU milk production leads to a reduction in the supply of EU dairy products and a reduction in the net trade surplus for dairy products in volume terms. Nonetheless, the EU would remain a substantial net exporter in dairy products in both scenarios.

The models used in the SCENAR 2030 simulations assume rational behaviour by farmers, so by definition they do not take account of the possibility that farmers may use their direct payments to subsidise their farming activity. To the extent that this happens, there is likely to be considerable pass-through of this subsidy to the dairy processors in the form of lower raw milk material costs. This is because raw milk is not an internationally traded product, so farmers do not have an alternative outlet other than to sell their milk to an EU dairy processor. This implicit subsidy will not be reflected in the selling price of milk powder products as these products are relatively standardised and sold at a competitive market price. However, the availability of a larger supply of milk at a lower market price than would prevail in the absence of CAP subsidies allows the EU dairy industry to export larger volumes of dairy products than might otherwise be the case. Because of the important role of the EU as an exporter in these markets, this means that the world market price (and thus the EU export price) is lower than it would be in the absence of CAP subsidies. However, there

are no published estimates of the potential size of this effect in the case of the current CAP.

The final CAP subsidy instrument to be examined is price management policy where the measures include safety-net intervention when market prices for specific dairy products (butter and SMP) fall below a certain level, and voluntary supply management where producers are compensated to reduce production faced with a market situation of lower prices.

EU intervention policy in the past destabilised world markets for milk powders because it helped to maintain production in the EU and the accumulated surpluses could later be disposed of on the world market with the aid of export subsidies. With the elimination of export subsidies, EU safety-net intervention has a different market impact. The EU, when acting as a buyer of last resort, supports the world market price for dairy products in the same way as an international buffer stock manager would do. The intent and effect of the EU's safety-net intervention is to maintain EU production capacity during a market crisis that might otherwise disappear, but third country producers also benefit. The impact on world market and import prices in 2015-2016 if the EU had allowed the SMP it diverted to storage to be sold on world markets would have been even more severe than what actually occurred.

When the accumulated stocks are subsequently released on to the market again, this dampens the price recovery. And while stocks exist and overhang the market, this price recovery may be delayed. This is the main advantage of a voluntary supply management scheme over intervention purchases. Both measures remove surplus from the market, in the former case by paying farmers not to produce. Therefore, the issue of the disposal of the surplus stocks does not arise. However, provided that CAP subsidies do no more than compensate for the cost of storage, the EU is effectively acting as an international buffer stock manager smoothing out price fluctuations but not increasing the average level of EU prices. Because of the impact of EU producer prices on world market prices its actions will also smooth the path of world market dairy product prices.

However, it has been reported that the European Commission in disposing of the SMP stocks that had built up during the 2015-16 price depression has accepted tenders at EUR 1,050/tonne, well below the European floor price of EUR 1,698/tonne.[22] Where this occurred, it is clearly an additional subsidy to the dairy sector which directly benefits traders who purchase at this price.

[22] 'Milk powder stocks: the Commission's strategy has cost European milk producers € 2.3 billion', Agriculture Stratégies, 20 April 2019.

In conclusion, the ending of milk quotas in 2015 allowed an expansion in EU milk production as production shifted to lower-cost production regions in north-west Europe that had previously been constrained by the quota limits. This increase in production at a time when world market prices were falling (in part due to the Russian ban on imports of various EU agri-food exports including dairy products) put further downward pressure on world market prices at this time. Looking forward, the issue is whether CAP subsidies have an impact on the volume of EU dairy product exports such that there is a systemic lowering of world market prices and not just a once-off adjustment.

The evidence for coupled payments is ambiguous. Coupled payments result in more cows but lower raw milk prices for producers. Because this effect, in turn, lowers the average yield per cow, the overall impact of coupled payments on milk production is to lower the level of production (EC, 2018). EU dairy processors get access to cheaper raw milk, but paradoxically there is less of it. Lower availability of milk supplies means there is less production of milk powders than would otherwise be the case.

Decoupled payments make up 40-50% of dairy farmer incomes. Despite no longer being linked to milk production, the modelling evidence suggests that these payments have stimulated milk production to some small extent (by up to 2%) and that milk powder exports are also greater as a result. If the possibility that farmers use some of their direct payments to subsidise their farming activity is also taken into account, then the stimulus to production and milk powder exports would be greater. There exists no published evidence on the potential size of this price effect, but as the EU competes with other exporters on these markets, it will be limited.

3.2 CAP subsidies are not a significant determinant of milk powder exports to VDCs

Section 2.4.1 showed that the majority of EU exports of milk powders are exported to oil-exporting and middle-income developing countries where issues of agricultural development and food security are less important than in the VDCs. West African markets in particular take an important share of exports of WMP and, in particular, FFMPs, and this section focuses on these markets. Highlighting the growth of dairy imports into Africa is not new. Already in the 1980s, Valentin von Massow, a researcher at the International Livestock Centre for Africa, had drawn attention to this phenomenon (von Massow, 1984, 1989). What are the drivers of this growth in imports and how important are CAP subsidies as an explanatory factor?

Milk production in West Africa is not stagnant. According to FAOSTAT (and bearing in mind that the quality of these statistics is likely to be very low), production in the region as a whole grew by 43% between 2005 and 2017, or a growth rate of 2.4% per annum, though with considerable variability from year to year within countries. However, this rate of growth is barely able to keep up with population growth and is much lower than the growth of milk powder imports.

The growth in dairy imports, and milk powder imports in particular, in West Africa reflects a number of factors including rapid population growth, growth in per capita income, and a rapid rate of urbanisation. It also reflects weaknesses in the ability of local dairy supply chains to meet this consumer demand. Milk yields are low in traditional breeds, and there is a lack of adequate infrastructure (milk collection facilities, refrigerated trucks, and processing units) (Salla, 2017). There is a strong preference among dairy processors in these countries producing pasteurised milk, butter, ice cream and yoghurt for milk powder which is easy to store and which can last for long periods in a hot climate without refrigeration, as compared to the purchase of liquid milk from local suppliers where there may be quality problems due to the absence of cold chain infrastructure in milk assembly and transport. Also, households welcome the convenience of being able to purchase milk powder in small sachets which allow easier storage.

Imported powdered milk from Europe is sold at much lower prices in West Africa than locally produced milk. For example, in Senegal, the price of a litre of local milk is about USD 1-1.2, while the imported and reconstituted milk powder costs about 0.5 USD/litre (Salla, 2017). Oxfam International claims that imported milk powder costs only one-third the price of local fresh milk (Oxfam International, 2018).[23] Not only can local producers not compete on price, but the availability of cheap imported milk powder reduces the incentive for governments to invest in local milk production, perpetuating the imbalance.

To what extent are CAP subsidies responsible for the low cost of imported milk powder in West Africa? The previous analysis concluded there was evidence that CAP subsidies have contributed to a greater volume of EU dairy product exports, including milk powders, which in turn will have lowered the world market price. There are no estimates of what this price effect might be, but as

[23] These price comparisons are made using the official exchange rate. Where the official exchange rate is overvalued, either because a country has significant non-agricultural commodity exports (oil or minerals) or because inflation has been higher than in its trading partners, domestic production will always find it more difficult to compete with imports.

the EU competes with other exporters on these markets, this price effect will not be large. The EU is now a relatively minor player on the world WMP market (Figure 11) and only accounts for around one-third of global SMP exports, a share that is likely to decline (Figure 12). Even if the price effect were as high as 5-10% this would make little difference to the attractiveness of imported milk powder if the price differential with local milk is of the order of 3 to 1.

Most EU milk powder exports to VDCs such as those in West Africa now take the form of FFMPs where the EU is the major player (see Table 8). In the period 2015-2018, FFMPs accounted for 257,000 tonnes (72%) of total EU milk powder exports of 355,000 tonnes to these markets.

The growth in FFMPs is primarily due to the technological innovation that allows butterfat in milk to be replaced by a cheaper vegetable fat, usually palm oil. This allows these products to be sold at a price up to 30% lower than full-fat powdered milk (Oxfam International, 2018). This technological innovation has further increased competition for local milk production in West Africa but has occurred in isolation from CAP policies. Over the longer term, the issue is how to help West African producers (and those in other VDCs competing with milk powder imports) to improve their productivity and the performance of local supply chains to enable them to compete at these prices.

3.3 CAP subsidies do not influence the price and volume of EU chicken meat exports

The main reason why the EU can export chicken meat despite higher production costs than its competitors is due to the nature of consumer preferences in the EU. Due to the preference for breast meat, the value of the whole carcase is split approximately 75% for the breast meat, and 25% for the rest of the carcase. Because EU consumers favour white meat (breasts), EU chicken processors are faced with a large surplus of dark meat (wings, legs and offal) that cannot be disposed of on the EU market. While there was a market for these chicken parts in pet food in the past, EU pet owners are trading up to other meats for their pets. In the absence of overseas outlets, chicken processors would be required to dispose of these chicken parts at a cost. So, even a relatively small return from export sales makes these attractive to processors. Thus, the low price of EU chicken exports documented in Part 2.4.2 cannot be attributed to the role of subsidies but is instead explained by the role of consumer preferences.

Goodison (2015, 2018) notes that high import protection has allowed EU chicken production to expand in line with the growth of EU consumption despite

significantly higher EU production costs. This is not the end of the story, and he notes the EU's import regime carries important implications for EU exports of chicken meat. "*This has created a situation where the expansion of EU poultry production promoted by the tightly controlled import regime has generated a* ***rapid expansion of EU production of poultry parts****, which are surplus to domestic EU requirements. It is these frozen poultry parts which have increasingly been exported to sub-Saharan African markets*…" (bolding in original). Thus, his argument is that the volume of EU chicken exports has been supported by the extensive import protection provided to the EU chicken industry, exacerbating the import competition faced by producers in VDCs.

The counter-argument to this assertion is that what determines the volume of dark meat available on world markets is EU consumption, not production. Suppose tariff protection for the EU chicken industry was reduced or eliminated and EU consumption was met instead by imports. EU consumers would still demand white meat, leaving the new exporters to the EU market (for example, Brazil, Ukraine or Thailand) with an equivalent quantity of dark meat to be disposed of. Indeed, EU consumption of chicken will increase because of reduced protection and lower prices on the EU market. While this will be partly offset by reduced consumption outside the EU due to higher world market prices for broiler meat, overall global consumption and thus production would be higher if the EU removed its protection. As the EU with its preference for white meat would now account for a larger share of global consumption, the availability of dark meat for sale outside the EU would increase even further. The trade statistics quoted in Part 2.4.2 show how easy it is for frozen chicken parts from one exporter to be replaced by another exporter (as happened in the South African market in 2017 following restrictions on EU exports due to anti-dumping duties and avian flu). Import competition faced by local producers would not be lessened if the EU reduced its import protection and thus domestic production of chicken meat; in fact, the opposite would be more likely to occur.

3.4 CAP subsidies do not impact chicken meat exports to VDCs

We observed in the chicken meat case study in Part 2.4.2 that the demand for EU chicken meat exports in the mid-2000s was mainly in non-vulnerable country markets in Asia and in Eastern Europe, but by 2018 African plus some Caribbean countries had come to account for around half of total EU exports of frozen chicken meat. What is behind the growth of EU exports to these markets and are CAP subsidies an explanatory factor?

Demand for livestock products in these markets, including poultry, is expanding as a result of population growth and increased urbanisation. Traditionally, chickens were eaten on festive occasions, but with the greater availability of cheaper imported chicken cuts, consumption of chicken is becoming a more everyday occurrence in both urban and rural areas (Sumberg, Awo, and Kwadzo, 2017). Consumers in urban areas prefer imported frozen chicken products because they are cheaper than domestic chicken products and are already processed with pre-cut parts of leg-quarters and wings. Local poultry processors often lack the infrastructure and equipment to produce the chicken cuts that are preferred by most consumers. Frozen poultry is widely distributed through a network of privately-owned cold stores located in major cities. However, often the cold chain is broken when the product is driven long distances in tropical temperatures and is sold unrefrigerated from market stalls or in antiquated freezer cabinets that have to contend with daily power failures. Consumers may be exposed to salmonella and other bacteria as a result, and there are also concerns around contamination with formaldehyde, a solution of which is used as a disinfectant and preservative, and with antibiotics. Similar hygiene and food safety issues apply to domestically-produced chicken meat processed and sold in the same way (Sumberg, Awo, and Kwadzo, 2017; Rudloff and Schmieg, 2016).

All analyses of the growing dependence of African economies on imported chicken meat point out the price advantage enjoyed by imports. For example, in Ghana, market prices of local broiler meat tend to be higher than imported meat by a 30%-40% margin, making local broiler meat uncompetitive (USDA, 2017). In Nigeria, smuggled chicken costs about ₦500- ₦700 ($2.50-$3.50) per kg while locally produced frozen chicken costs between ₦1,000- ₦1,300 ($5 - $6.50) at retail locations, and approximately ₦650 ($3.25) at the farm gate.[24]

Another fundamental problem is the low productivity of the domestic industry.[25] Feed costs represent over 60%-70% of overall production costs and feed is often relatively expensive. Slower growth rates mean that producers must feed their birds over a longer period, which further increases feed and medication costs.[26] Improving productivity can also be held back by other factors. Diseases such as Newcastle disease cause high mortality. Farmers lack reliable access to inputs,

[24] *Ibidem.*

[25] For discussion of the challenges facing the broiler industry in Ghana, see Kusi et al., 2015; Netherlands Embassy, 2014; Ayisi and Adu, 2016.

[26] One study in Ghana compared production efficiency and costs of a modern commercial broiler unit with efficiency and costs in a sample of five selected farmers in the Accra area (Banson, Muthusamy, and Kondo 2015). Results emphasised the importance of the feed conversion rate as a major factor in reducing production cost and improving the broiler growth efficiency. The feed conversion rate for the commercial broiler unit was 1.56 kg of feed needed to produce 1 kg live weight compared to 2.12 kg of feed to produce 1 kg live weight by other poultry farmers in the study.

including chicks and feed, and face high costs for veterinary services. Production has also been adversely affected in recent years by avian influenza outbreaks, which sometimes mean the destruction of day-old chicks and thus shortages of production.

African governments have often failed to address the constraints that hold back productivity. The case of Ghana is an example. In 2014, the Ghanaian government announced the Ghana Broiler Revitalization Project (GHABROP), a ten year collaboration project with the Ghana National Association of Poultry Farmers. However, it appears very little has been achieved with this project and local poultry producers are unclear how the money was disbursed.[27] One study of government policy towards the poultry industry in the country concluded that: "*This review has shown that despite a rhetorical commitment to the development of the domestic poultry industry, there is little evidence of sustained follow through on the part of the Government of Ghana. Instead, poultry has languished in the nether reaches of the domestic agricultural policy system*" (Sumberg, Awo, and Kwadzo, 2017).

In some cases local associations have reacted to alleged dumping behaviour of EU exporters. South Africa has been the largest market for EU frozen chicken exports in Africa up to 2016 (when EU exports amounted to 250,000 tonnes) after which exports fell sharply due to the imposition of anti-dumping duties on exports from specific EU countries (Box 5) as well as restrictions imposed as a result of the outbreak of avian flu in some EU countries. This is an example of EU exports that had increased on the back of duty-free access under FTAs with South Africa and the imposition of higher MFN duties on imports from its competitors.

Box 5. Imposition of anti-dumping duties on EU exports of frozen chicken parts to South Africa

The South African Poultry Association (SAPA) complained in 2013 that imports of frozen chicken parts in the calendar year 2012 were being imported at below their normal value from processors in three EU countries, Germany, the Netherlands and the UK. To establish whether there was merit in the case, the South African International Trade Administration Commission (ITAC) – the organisation tasked with customs tariff investigations, trade remedies, and import and export control – compared the export prices of EU frozen chicken to Benin (a market of comparable size to South Africa) with export prices of EU frozen chicken in South Africa. For each of the three countries, the

[27] 'US$56m USDA funding goes waste …As GPP, AMPLIFIES projects fail to impact on local poultry industry', *The Chronicle*, 11 March 2019; 'No ban on poultry imports – Govt says', *Graphic Online*, 2 March 2017.

export prices to Benin were higher than the export prices to South Africa. To determine whether dumping had occurred, the Commission compared the export price of different chicken parts to their 'normal value'. It based the normal value on the domestic price of comparable (frozen) cuts sold by each of the cited companies and compared these values with the prices of the same cuts exported to South Africa during the investigation period. Where there were no domestic sales of the exported cut, the export price to Benin was used as the normal value. Where this was not available, the Commission based the normal value on constructed costs of production. The dumping margins found were based on these calculated differences between the normal value and the export price to South Africa. There was no inference that the differences found were related in any way to the operation of CAP subsidies. In 2015, ITAC recommended that anti-dumping duties of between 31.30% and 73.33%; 3.86% and 22.81% (with some company exceptions); and 12.07% and 30.99% be imposed on frozen bone-in chicken portions originating in or imported from Germany, the Netherlands and the United Kingdom, respectively (ITAC, 2015; 'Anti-dumping duties imposed on frozen chicken portions imports'; USDA, 2018).

After an investigation following a further complaint in February 2016 from SAPA, South Africa imposed a provisional safeguard duty of 13.9% on imports of EU bone-in chicken under the agricultural safeguards clause of the Trade, Development and Co-operation Agreement with the EU. This allows the imposition of safeguard duties where imports threaten to cause a serious disruption of the domestic market. Following completion of the investigation, this duty was increased to 35.3% in September 2018 on imports from selected EU countries, which will depreciate over four years to 15% (USDA, 2018). In June 2019 the EU sought consultations under the dispute mechanism provisions of the EU-Southern African Development Community (SADC) Economic Partnership Agreement arguing that the measure appears to be inconsistent with the provisions of that Agreement.

In conclusion, there is no evidence that CAP subsidies have depressed the export price of chicken meat from the EU to VDCs. As discussed in Section 2.4.2, the EU chicken industry does not benefit from CAP subsidies or guaranteed intervention support. Tariff protection on feed wheat raises the cost of feed which accounts for 60%-75% of the cost of producing chicken meat and thus penalises rather than subsidises chicken production in the EU. This means that the price of broiler meat in the EU is higher than that of other exporting countries, in part due to higher feed costs but also due to higher environmental, animal welfare and food safety standards. High import tariffs are necessary to prevent a substantial increase in imports into the EU from these exporters. These import barriers reduce EU consumption of chicken meat and reduce the global supply of dark meat which is exported to VDCs. Despite these cost disadvantages, the EU is a significant and increasing exporter of chicken meat, and especially frozen chicken parts. Half of these exports now go to markets in the VDCs. This trade is based on distinct differences in consumer preferences for different types of chicken meat in the EU and export markets. Even if these exports are not the result of CAP subsidies, local poultry producers find it

difficult to compete with these cheap imports and stronger measures to develop the local industry are required.

3.5 CAP subsidies have the potential to influence the price of exports of tomato products

Various academic studies have examined whether CAP subsidies influence the price of processing tomatoes (Rickard and Sumner, 2008, 2011; Solazzo *et al.*, 2014). Rickard and Sumner (2011) estimate that the regime of coupled support between 2001 and 2007 increased EU tomato production by 9.1% and the regime of decoupled payments after 2007 increased EU tomato production by 3.8%, relative to a situation with no support. Their study supports the view that decoupled payments have a smaller but still non-zero impact as compared to coupled payments. However, the regime they model in 2008 is the transitional regime where half of the payment to tomato growers is still made as a coupled payment. The coupled support regime led to an increase in the price paid for processing tomatoes of 18.4% (including the payment) and an unspecified fall in the cost of processing tomatoes to the processors. It also led to a fall in world market prices of between 1.6% (US) and 3.2% (Rest of World). In the partially-decoupled situation in 2008, the price of processing tomatoes is increased by 8.3% (including that part of the payment that is still coupled) and the world price reductions are between 0.8% (US) and 1.4% (Rest of World). However, in their model, a fully-decoupled payment would have no production or price effects by assumption (see Box 4 for discussion of the limitations of modelling studies in providing evidence of the production and price impacts of decoupled payments).

The Solazzo *et al.* (2014) paper assesses the impact of the Commission's legal proposal for the 2013 CAP reform (not the final outcome) which, in addition to replacing the Single Farm Payment (SFP) with the Basic Payment, also introduced a greening payment with associated mandatory farm practices. The two issues analysed are the impact on farms growing processing tomatoes of the greening conditions (specifically, the obligation to observe crop diversification and to set aside ecological focus areas) and the convergence of payments to a regional flat rate uniform payment (while this was the original Commission proposal, the option of only partial convergence was included in the final legislation and as noted previously, Italy made use of this option). They conclude that the greening requirements will have no major impact (most farms in the region that they consider growing processing tomatoes already grow other cereal crops) but the convergence of payments would have a serious impact on their profitability. The value of payments to farms growing processing tomatoes

would fall by 60% and they would lose a quarter of their income. Nonetheless, they project that there would be hardly any reduction in the area under processing tomatoes (a fall of -1.8%, including the impact of the greening requirements) because of the decoupled nature of these payments.

In a case against two Italian tomato companies decided by the Australian Anti-Dumping Commission in 2016 (Box 6) covering the year 2014 when the SFP was in effect, the fact that payments to Italian tomato growers continued at their previous levels under the historic basis in the SPS, in addition to a separate payment made specifically to growers of processing tomatoes, was sufficient to persuade the Anti-Dumping Commission that the price of raw tomatoes for Italian processing firms was a distorted one and no longer represented a competitive market price. The fact that these payments were now decoupled, and that in principle tomato growers would continue to get the payment even if they stopped to grow tomatoes, did not persuade the Anti-Dumping Commission that the support no longer had an effect on tomato prices. It therefore accepted that the imposition of an anti-dumping duty on exports from these two firms was warranted.

Box 6. Australia anti-dumping duties on Italian tomatoes

An Australian company, SPC Ardmona Operations Limited (SPCA), which is the sole Australian producer of prepared or preserved tomatoes, initiated an anti-dumping complaint with the Australian Anti-Dumping Commission on two occasions, in July 2013 and in November 2014, alleging that prepared or preserved tomatoes (canned tomatoes for short) exported to Australia from Italy at dumped prices had caused it material injury.

The Anti-Dumping Commission following the first complaint found that during the investigation period July 2012 to June 2013 canned tomatoes were dumped by Italian exporters and recommended anti-dumping duties of between 3.25% and 26.35% should be applied (with the exception of two Italian firms Feger di Gerardo Ferraioli S.p.A. (Feger) and La Doria S.p.A. (La Doria) for which it determined that the dumping margins were negligible). The second dumping case brought by the complainant re-opened the case against the two remaining firms. On the second occasion, based on the investigation period of the calendar year 2014, the Anti-Dumping Commission calculated dumping margins on imports of canned tomatoes of 8.4% for Feger and 4.5% for La Doria (Anti-Dumping Commission, 2016).

These cases continued a long history of Australian countervailing and dumping duties on imports of Italian canned tomatoes which were first imposed in 1992, confirmed for a further five years in 1997 and again in 2002. The measures lapsed in April 2007 until the case brought in 2013.

Whether dumping by an exporter is occurring is normally established by comparing the price of export sales with the price of similar goods sold by the exporter on its domestic market (see Box 1). However, there may exist a market situation such that the domestic market price may not be a true reflection of the good's 'normal value', including because

of government policies. Based on the claimant's application, the Anti-Dumping Commission set out to investigate whether payments made to Italian tomato growers under the CAP distorted the prevailing market prices in Italy for prepared or preserved tomatoes. The Commission accepted that the mere fact of government payments did not in itself create a market situation where prices were distorted, and that it needed to examine whether these payments led to a distortion of competitive market conditions such that domestic sale prices are unsuitable for the purposes of determining normal value.

The prices paid for raw tomatoes for processing in Italy are determined by negotiations between the processors and farmers. In reviewing the claimant's first case, the Anti-Dumping Commission had found that the price negotiations for the canned tomato products were not influenced by CAP payments to farmers. It compared the weighted average price of tomatoes purchased by the Australian industry from local suppliers (taken to represent a notional price of fresh tomatoes paid by processors in a market unaffected by any support programmes), with the raw material purchase price paid by selected exporters from tomato suppliers in Italy. It wanted to assess whether there was any indication that payments paid to tomato growers have flowed through to distorted selling prices paid by the tomato processors in the form of lower prices. In all instances, the Anti-Dumping Commission found that the price of fresh tomatoes paid by Italian processors was either similar or higher than the benchmark price of fresh tomatoes available in Australia. On this basis, the Commission concluded that any payments provided directly to tomato growers in Italy are benefitting the growers in isolation and are not transferred to processors in the form of lower prices.

While the Commission calculated a dumping margin for many exporters, this was mostly in the context of receiving insufficient information from the exporting firms which meant the Commission had to substitute its own estimates for specific costs. Where sufficient information was provided, as in the case of the two firms Feger and La Doria, no dumping margin was found.

Following the second complaint by SPCA in November 2014, the Commission asked a consultancy firm LECA to prepare a report on the Italian market situation (Barker, 2015) and reviewed additional evidence on CAP payments to Italian tomato growers. While the previous partially-coupled payments to tomato growers had been gradually assimilated into the fully-decoupled SFP, it concluded that under its national ceiling for SFP payments the Italian government in 2014 had allocated a specific amount (EUR 184 million) to be paid as direct income support to growers of raw tomatoes.

In working out the potential impact of these payments on the price of raw tomatoes for processing, the report assumed that they effectively reduce the variable costs of production (Barker, 2015).[28] Based on FADN data, it calculated that if the subsidy were removed the

[28] "*Despite attempts at reform overall it appears that reform of CAP payments to raw tomatoes has not been fully implemented in Italy, and that total farm assistance for tomatoes has not been fully decoupled and has moreover not fallen significantly. Thus EU CAP payments with respect to tomatoes used in processed and preserved tomatoes in Italy have thus remained coupled in two ways. First explicitly - with an additional payment of 160 Euros per hectare introduced recently, which is coupled to production of tomatoes. Second they are implicitly coupled, in that EU CAP payments are largely based on subsidy levels received by farmers in previous years, which were based on the past system of coupled payments, and are thus implicitly tied to output.*" (Barker, 2015).

variable costs of production for the farmer would increase by 32%. The question then is what effect the removal of the subsidy would have on the price of raw tomatoes for the processing firms. This depends on two variables: (a) the degree of 'pass-through' of the subsidy to raw tomatoes to the price of raw tomatoes; and (b) the degree of 'pass-through' of any change in the price of raw tomatoes to prepared and preserved tomatoes.[29]

In turn, the size of the pass-through depends on the relevant supply and demand elasticities and the importance of the raw material cost of tomatoes in the overall costs for prepared and preserved tomatoes. The report also took account of two other CAP instruments that can potentially raise the price of tomatoes and thus offset some of the subsidy effect of direct payments. One is the potential for Producer Organisations to engage in cartel-like behaviour when bargaining over the price with processors. The other is import regulations which limit the purchase of raw tomatoes from other countries. Taking all these factors into consideration, the Barker report assessed that the impact of the CAP subsidy on the price of prepared and preserved tomatoes was relatively small. While the exact figure is redacted in the final report on confidentiality grounds, the Anti-Dumping Commission notes that it considers the amount to be 'insignificant'.

However, the Commission also took account of other ways of estimating the impact of CAP subsidies on the final price of prepared or preserved tomatoes, including the model used in the academic articles previously cited, and concluded there was a market situation where the costs of raw tomatoes for the two Italian firms did not reflect a competitive market price. "*The Commission is satisfied that the totality of direct income support payments made to growers of raw tomatoes in Italy have significantly affected the prevailing market prices in Italy for raw tomatoes*" (Anti-Dumping Commission, 2016). As a result, when calculating the normal value of exports, it adjusted the cost price of raw tomatoes to include the estimated value of the subsidy expressed on a per kg basis.[30] Based on this procedure, it calculated the dumping margins noted at the outset and recommended that anti-dumping duties at this level should be implemented to avoid injury to the domestic industry.

Our conclusion is that CAP subsidies influenced the price of processing tomatoes and the price of tomato products during the period of coupled payments (Rickard and Sumner, 2008, 2011; Solazzo *et al.*, 2014). These coupled payments are now replaced by decoupled direct payments, though many EU countries still maintain coupled support for processing tomatoes under the VCS scheme. The Barker (2015) report highlighted that paying the decoupled payment on the historic basis also meant that it could still be interpreted as a coupled payment. Farmers will assume that their future payment will depend on maintaining their current level of output and they will behave accordingly.

[29] The Australian documents use the term 'flow on' but we prefer to use the term 'pass-through' for consistency with the discussion of the Spanish ripe olives case in Part 1.

[30] When this procedure was challenged by the exporting firms on the grounds that it did not allow for a less than 100% pass-through between the subsidy to tomato growers and the selling price of tomatoes, the Anti-Dumping Commission argued that this was not relevant when calculating costs for the purposes of establishing a dumping margin.

Italy continues to use the partial convergence model where payment entitlements reflect historic levels of support. Coupled support, based on the evidence in Rickard and Sumner (2011) stimulates production of tomatoes and lowers the cost of raw material to the processors of tomato paste. However, Barker found that on the economic evidence, taking account of the various factors that influence the pass-through rate to the price of tomato paste, the impact on the price of tomato paste was insignificant. These offsetting factors included the power of Producer Organisations to influence contract prices through collective bargaining as well as the limitations in importing tomatoes for the production of tomato paste. Despite this economic evidence that CAP subsidies do not in practice influence the price of exported canned tomatoes, the Australian Anti-Dumping Commission using a different legal standard came to a different conclusion. Thus the impact of CAP subsidies on the export price of tomato products including tomato paste remains a matter of contention.

3.6 CAP subsidies are not a significant determinant of tomato products exported to VDCs

The case study focused particularly on exports of tomato paste as these are of most relevance to VDCs. Section 2.4.3 showed that these countries accounted for half of all EU exports of tomato paste in the mid-2000s but that by 2018 this share had fallen to 18%. Even in major markets in the past in West Africa, the EU has been losing market share, mainly to China, and in none of these countries for which data exists is the EU any longer the dominant supplier. This could be due to the fact that, due to the reform of CAP subsidies to tomato growers, the EU is no longer a low-cost producer of tomato paste. For example, the Australian Anti-Dumping Commission accepted evidence that the contract price agreed between the representative branches of Producer Organisations and the processing industry in Italy is higher than what is paid in Australia to growers of tomatoes for processing (Anti-Dumping Commission, 2016).

Tomatoes are a traditional crop in many regions in West Africa and are an essential part of West African cuisine. There is evidence that local production has suffered in competition with the cheaper imported tomato paste. Even if CAP subsidies have encouraged EU exports, EU exports have been losing market share to China which does not subsidise exports of tomato paste. What then is driving these imports?

A significant factor is the difficulty of producing tomato paste economically and efficiently in countries like those of West Africa. Despite an apparent abundance of tomatoes at particular times of the year, local processing factories fail to be

profitable. While it is easy to point to imported competition as the cause of this, local plants suffer from severe production inefficiencies which lead to high costs. The process of creating tomato paste is capital and energy intensive.[31] Factories need to run continuously to be efficient. This is difficult to achieve when electricity supplies are unreliable and supplies are often scarce for much of the year. The difficulties facing Ghana's tomato processing industry in West Africa may not be untypical (Robinson and Kolavalli, 2010b). Foreign investment in local processing capacity could be attracted if these basic infrastructural deficiencies were addressed (Robinson and Kolavalli, 2010a).[32]

In conclusion, CAP subsidies may still influence the price of exports of tomato paste because of the existence of coupled support and the influence of the historic model in influencing the level of payments to producers of processing tomatoes in Italy, the main source of tomato paste exports. However, the EU is no longer setting the import price in importing countries as it loses ground to China. Cheap imports of tomato paste, increasingly from China, do create competition for local producers. The solution lies in overcoming the infrastructural deficiencies as well as the lack of policy support that make local production unprofitable.

[31] 'Tomato paste processing', *Tomato Jos*, 3 Sept 2014.
[32] 'Ghana's Tomato Processing Industry: An Attractive Investment Option in 2016', *Wathi: Le Think Tank Citoyen de L'Afrique de l'Ouest* 22 August 2017.

Part 4 Conclusions: implications for the current debate on CAP reform

There is no question that the VDCs need to foster and encourage their domestic agricultural production and reduce their dependence on food imports, including from the EU. Our case studies of milk powder, chicken meat and tomato paste underscored the damage that lower-priced imports have caused to local production of these products (milk, broiler production) or their raw material inputs (tomatoes). The inability to compete with imported agricultural products retards domestic agricultural growth and rural poverty reduction.

Still, the EU is one of a number of countries supplying imports of the case study products to the VDCs. Furthermore, this report finds that the extent to which CAP subsidies have influenced the price of selected EU exports to these markets and have encouraged growth in these exports is limited but not negligible for milk powders, non-existent for chicken meat, and not significant for tomato paste.

Based on the findings of this study a number of suggestions for future CAP support policy are proposed.

- **Greater disciplines on coupled support payments are needed.**

Coupled support payments directly incentivise greater production of the supported commodities (even if in the case of payments coupled to dairy cow numbers the impact on total milk production may be in the opposite direction because of an offsetting effect on milk yields per cow). Coupled payments may be justified where it is necessary to support specific forms of production in particular regions because of their special environmental or social contribution. In the original legislative basis for these payments in 2013, there was a quantitative restriction that the number of animals or hectares supported should not exceed the highest level achieved in the previous five years. Although doubt has been expressed about how effectively this limitation was policed, the limitation was removed with retrospective effect by the co-legislature in an amendment to the legislation in 2018. From the point of view of importing VDCs, this support to EU producers is clearly an unfair subsidy. To reduce its adverse effects, the quantitative limit in the 2013 legislation should be re-introduced and the overall financial ceiling allowed to MSs to finance coupled support payments should be reduced.

- **Ensure market management measures do not destabilise prices for VDC producers.**

Price and yield volatility is difficult for EU producers to manage but is even more difficult for low-income producers in the VDCs who lack the reserves and the capacity to withstand even short periods of relatively low prices. Price instability has been particularly a feature of the dairy market where small changes in export quantities up or down can lead to much larger price swings. For this reason, the dairy market is one of the few EU markets where explicit market intervention instruments have been retained (although crisis management measures can be initiated by the European Commission for all commodities). The principal instruments include buying-in policies to remove surplus product from the market during periods of low prices (either public intervention or aids for private storage) or supply management schemes, either voluntary or mandatory, that seek to limit production below a previous period. In its legal proposal suggesting amendments to the single CMO Regulation for the period post 2020, the Commission did not propose major changes to the EU safety-net system for farm commodities.

Storage schemes carry the risk that product in store is sold out of intervention at prices lower than buying-in prices, which effectively turns the scheme from a price stabilisation scheme into an income support scheme. It has been reported that this has occurred with the disposal of stocks that built up in the 2015-2017 milk price crisis which would effectively be a breach of the EU's commitment not to resort to export subsidies. Intervention stocks held in store overhang the market and also have a price-depressing effect, and when they are eventually sold out of storage they also slow the recovery in prices. Therefore, from the perspective of producers in VDCs, reducing EU milk production during periods of low global prices rather than simply storing it would be a preferable outcome. The AGRI Committee of the European Parliament in its report adopted just prior to EP elections in May 2019 calls for additional tools to prevent and manage market crises. While the proposed tools would be available to all commodities, the suggestions are clearly aimed at the milk sector and build on proposals put forward by the European Milk Board for a number of years. The intent of the COMAGRI amendments is to break the production cycle through pre-emptive action, rather than dealing with the consequences of over-production afterwards through intervention storage or crisis payments to producers. It is an attractive idea even if there would be significant technical challenges to its successful implementation (European Committee of the Regions, 2016).

- **Internal convergence of direct payments should be completed.**

The report highlights how the continued use of the partial convergence model of decoupled direct payments has allowed anti-dumping authorities in importing countries to claim that the EU's decoupled payments continue to support producers of specific products (e.g. ripe olives and processing tomatoes). This is because, under this model, there is still a link between the per hectare payments producers receive and the product-specific support they received in the early 2000s before decoupled payments were introduced. The EC in its 2013 CAP reform proposals proposed that the historic model for direct payments should be phased out in favour of the regional model whereby all farms in a particular region receive an uniform payment (a proposal known as internal convergence of payments, to distinguish it from proposals to equalise payments per hectare across MSs, known as external convergence). However, the co-legislature rejected this proposal and permitted the partial convergence model to continue albeit with constraints. In its 2018 CAP reform proposal, the Commission has proposed that MSs still using the partial convergence model should set a maximum basic payment per hectare by 2026 and ensure that no payment is less than 75% of the regional average by that date, but it has given up the idea of requiring convergence to a uniform regional value per hectare. From the point of view of importing VDCs, decoupled payments whose value is still determined by the value of historic coupled payments in the past may be seen as unfair competition. To reduce its adverse effects, the 2018 CAP reform should insist on full convergence to uniform payments within a region by 2026 at the latest.

- **The use of decoupled payments for income support should be phased out and replaced by payments explicitly linked to paying for public goods.**

Even after full internal convergence of decoupled payments they will remain a very important component of EU farm incomes. This study finds that even decoupled income support payments may have a direct production stimulus, although its magnitude is likely to be small. Some farmers may also use these payments to subsidise their farm enterprises which allows higher-cost farms to remain in production. From the point of view of importing VDCs, these payments can be seen as giving rise to unfair competition. In its budget proposal for the coming Multi-annual Financial Framework, the Commission has proposed to maintain the value of direct payments in nominal terms. However, in addition to moves to better target these payments on small and medium-sized farms through capping and degressivity and the mandatory use of a redistributive payment, the Commission proposes that MSs must use a proportion of their direct payments envelope to finance eco-schemes. These will be voluntary schemes for farmers who wish to enrol to receive payments for

undertaking management commitments to improve environmental and climate outcomes that go beyond the minimum mandatory standards. Importantly, eco-scheme payments are not limited to reimbursing farmers for the costs incurred and income foregone due to these management commitments. They can be paid as a top-up on the per hectare basic payment and open the possibility of paying farmers the value of ecosystem services that they provide. A criticism of the Commission proposal is that it does not specify any minimum share of direct payments spending to be allocated to eco-schemes, but neither does it specify a maximum share. The more that decoupled payments for income support can be converted into decoupled payments for the provision of ecosystem services and public goods, the lower their potential trade-distorting effect for VDCs.

- **Create a platform for PCD dialogue on agri-food trade**.

These changes in the basis for CAP payments to farmers would help to remove the basis for suspicion that they contribute to unfair competition with producers in VDCs. But in themselves they are unlikely to have more than a marginal effect on the volume of EU exports to these countries. This is because CAP subsidies are no longer the basis for the competitive position of EU exports in these markets and removing them does not directly help to improve conditions for domestic production in these countries. The recent Task Force Rural Africa (TFRA) report (EC, 2019b) prepared for the EC saw value in both Africa and the EU engaging in a continuous policy dialogue about different aspects of the food industry. It specifically recommended to "*set up multi-stakeholder dialogue to scale up existing guidelines on responsible business conduct and investment; and to tackle issues relating to food imports and foreign direct investment going into African countries. Involve African stakeholders in PCD assessments and make use of joint platforms where PCD issues can be raised*". It particularly identified African food import problems as an issue for discussion and suggested two fora to pursue this dialogue: the African Union-EU Agriculture Ministerial Conferences and an EU agri-food industry dialogue on responsible trade and investment with Africa. It also recommended that EU-Africa trade developments in the agri-food sector be reviewed regularly, for instance by scientific analysis, the EU market observatories, outlook conferences and stakeholder dialogue. Concrete progress towards this dialogue should be part of the follow-up to the TFRA report. The basis for this dialogue would be strengthened by making explicit reference to Policy Coherence for Sustainable Development in the basic CAP regulations as proposed by the European Parliament's Committee for Development in its Opinion on the Commission's draft legislative proposals (COMDEVE, 2019).

Annex I: List of vulnerable developing countries

	Country	Sub-Saharan Country	African, Caribbean and Pacific Country	Least Developed Country
1	Afghanistan			✓
2	Angola	✓	✓	✓
3	Antigua and Barbuda		✓	
4	Bahamas		✓	
5	Bangladesh			✓
6	Barbados		✓	
7	Belize		✓	
8	Benin	✓	✓	✓
9	Bhutan			✓
10	Botswana	✓	✓	
11	Burkina Faso	✓	✓	✓
12	Burundi	✓	✓	✓
13	Cabo Verde	✓		
14	Cameroon	✓		
15	Cambodia			✓
16	Central African Republic	✓		✓
17	Chad	✓		✓
18	Comoros	✓		✓
19	Congo	✓		
20	Cook Islands		✓	
21	Côte d'Ivoire	✓	✓	
22	Cuba		✓	
23	Democratic Republic of the Congo	✓		✓
24	Djibouti	✓	✓	✓
25	Dominica		✓	
26	Dominican Republic		✓	
27	Equatorial Guinea	✓	✓	
28	Eritrea	✓	✓	✓
29	Ethiopia	✓	✓	✓
30	Fiji		✓	
31	Gabon	✓		
32	Gambia	✓		✓
33	Ghana	✓		
34	Guinea	✓		✓
35	Guinea-Bissau	✓		✓
36	Guyana		✓	
37	Haiti		✓	✓
38	Jamaica		✓	
39	Kenya	✓	✓	
40	Kiribati		✓	✓
41	Lao People's Democratic Republic			✓
42	Lesotho	✓	✓	✓
43	Liberia	✓	✓	✓
44	Madagascar	✓	✓	✓
45	Malawi	✓	✓	✓
46	Mali	✓		✓

47	Mauritania	✓		✓
48	Mauritius	✓		
49	Mayotte	✓		
50	Mozambique	✓		✓
51	Myanmar			✓
52	Namibia	✓		
53	Nauru		✓	
54	Nepal			✓
55	Niger	✓	✓	✓
56	Nigeria	✓	✓	
57	Niue		✓	
58	Palau		✓	
59	Papua New Guinea		✓	
60	Reunion	✓		
61	Rwanda	✓	✓	✓
62	Saint Kitts and Nevis		✓	
63	Saint Lucia		✓	
64	São Tomé e Príncipe	✓		✓
65	Seychelles	✓		
66	Senegal	✓		✓
67	Sierra Leone	✓		✓
68	Solomon Islands			✓
69	Somalia	✓	✓	✓
70	South Africa	✓	✓	
71	South Sudan	✓	✓	✓
72	Sudan	✓	✓	✓
73	Suriname		✓	
74	Swaziland	✓	✓	
75	Tanzania	✓	✓	✓
76	Timor-Leste		✓	✓
77	Togo	✓		✓
78	Tuvalu			✓
79	Uganda	✓		✓
80	Vanuatu			✓
81	Yemen			✓
82	Zambia	✓		✓
83	Zimbabwe	✓		

Annex II: References

Anti-Dumping Commission. 2016. 'Dumping of Prepared or Preserved Tomatoes Exported from Italy by Feger Di Gerardo Ferraioli S.p.A. and La Doria S.p.A.*'.* Final Report No. 276. Canberra: Australian Government.

Aprodev. 2007. 'No More Chicken, Please: How a Strong Grassroots Movement in Cameroon Is Successfully Resisting Damaging Chicken Imports from Europe, Which Are Ruining Small Farmers All over West Africa'. Brussels: APRODEV.

Ayisi, N., and K. Adu. 2016. 'Challenges and Future Prospects for Broiler Meat Consumption in Ghana.' *Imperial Journal of Interdisciplinary Research* 2 (8): 648–54.

Banson, K., G. Muthusamy, and E. Kondo. 2015. 'The Import Substituted Poultry Industry; Evidence from Ghana.' *International Journal of Agriculture and Forestry* 5 (2): 166–75.

Bardají, I., and A. Garrido, eds. 2016. 'State of Play of Risk Management Tools Implemented by Member States during the Period 2014--2020: National and European Frameworks'. Brussels: European Parliament, Directorate General for Internal Policies.

Barker, G. 2015. 'Assessment of the Market Situation: Factors in Italy for Prepared or Preserved Tomatoes'. Sydney: Law and Economics Consulting Associates Ltd (LECA) For Australian Anti-Dumping Commission.

Bertholot, J. 2018. 'All EU Agricultural Subsidies to Exported Products Can Be Sued for Dumping'. SOL Alternatives Agroécologiques et Solidaires.

Blanco, M. 2018. 'The Impact of the Common Agricultural Policy on Developing Countries'. Brussels: European Parliament Directorate-General for External Affairs.

Borras Jr, S. M., P. Seufert, S. Backes, D. Fyfe, R. Herre, L. Michele, and E. Mills. 2016. 'Land Grabbing and Human Rights: The Involvement of European Corporate and Financial Entities in Land Grabbing Outside the European Union'. Brussels: European Parliament Directorate-General for External Affairs.

Boysen, O., H. G. Jensen, and A. Matthews. 2016. 'Impact of EU Agricultural Policy on Developing Countries: A Uganda Case Study.' *The Journal of International Trade & Economic Development* 25 (3): 377–402.

Brot für die Welt. 2010. 'Milk Dumping in Cameroon'. Stuttgart: Brot für die Welt.

Choplin, G. 2016. 'L'Industrie Laitière Européenne - Lorgne Sur l'Afrique de l'Ouest'. Brussels: Oxfam-Solidarité and SOS Faim Belgique.

———. 2019. 'N'Exportons Pas Nos Problèmes'. Brussels: SOS Faim Belgique.

COMDEVE. 2019. 'Opinion of the Committee on Development of the European Parliament on the proposal for a regulation of the European Parliament and of the Council on establishing rules on support for strategic plans to be drawn up by Member States under the Common agricultural policy (CAP Strategic Plans) and financed by the European Agricultural Guarantee Fund (EAGF) and by the European Agricultural Fund for Rural Development (EAFRD) and repealing Regulation (EU) No 1305/2013 of the European Parliament and of the Council and Regulation (EU) No 1307/2013 of the European Parliament and of the Council'.

Curtis, M. 2011. 'Milking the Poor - How EU Subsidies Hurt Dairy Producers in Bangladesh'. Copenhagen: ActionAid Denmark.

De Schutter, O. 2011. 'The Common Agricultural Policy towards 2020: The Role of the European Union in Supporting the Realization of the Right to Food'. Geneva: UN High Commissioner for Human Rights.

DG AGRI. 2013. ‘EU Beef Farms Report 2012 Based on FADN Data’. Brussels: European Commission Directorate-General for Agriculture and Rural Development.
———. 2015. ‘Voluntary Coupled Support – Sectors Mostly Supported. Notification of Decisions Taken by Member States by 1 August 2014’. Brussels: European Commission Directorate-General for Agriculture and Rural Development.
———. 2016. ‘EU Cereal Farms Report Based on 2013 FADN Data’. Brussels: European Commission Directorate-General for Agriculture and Rural Development.
———. 2017. ‘Voluntary Coupled Support: Notification of the Revised Decisions Taken by Member States by 1 August 2016 ('the Review’)*’*. Informative Note. Brussels: European Commission.
———. 2018a. ‘Direct Payments 2015-2020: Decisions Taken by Member States: State of Play as from December 2018’. Information Note. Brussels: Directorate-General for Agriculture and Rural Development.
———. 2018b. ‘EU Dairy Farms Report Based on 2016 FADN Data’. Brussels: European Commission Directorate-General for Agriculture and Rural Development.
———. 2018c. ‘EU Agricultural Outlook for Markets and Income 2018-2030’. Brussels: European Commission Directorate-General for Agriculture and Rural Development
———. 2018d. ‘Operating Subsidies (both Direct Payments and Rural Development except Investment Support)’. Brussels: European Commission Directorate-General for Agriculture and Rural Development.
DG ENV. 2013. ‘The Impact of EU Consumption on Deforestation: Comprehensive Analysis of the Impact of EU Consumption on Deforestation’. Brussels: European Commission.
Dorémus-Mege, C., C. Gaurdard, D. Horman, B. Hermelin, and J.-J. Grodent. 2004. ‘Chicken Exports: Europe Plucks Africa!’. Paris: Agir Ici and other development NGOs.
EMB. 2018. ‘What Is the Cost of Producing Milk? Results for 2017’, 2nd Edition. Brussels: European Milk Board.
European Commission. 2018. ‘Impact Assessment Accompanying the Commission’s Legislative Package on the Common Agricultural Policy Post 2020’. Staff Working Document SWD/2018/301. Brussels.
———. 2019a. ‘2019 EU Report on Policy Coherence for Development’. SWD(2019) 20. Brussels.
———. 2019b. ‘An Africa-Europe Agenda for Rural Transformation: Report by the Task Force Rural Africa’. Brussels.
European Committee of the Regions. 2016. ‘Evaluation of the market responsibility programme put forward by the European Milk Board taking 2014 as a test year’. Report written by Matthews, A. and R.Soldi. doi:10.2863/185270.
European Parliament. 2018. ‘Resolution of 15 March 2018 on US Measures on EU Farm Support under the CAP (in the Context of Spanish Olives)’. P8_TA(2018)0091. Brussels.
Fritz, T. 2011. ‘Globalising Hunger: Food Security and the EU’s Common Agricultural Policy (CAP)’. Berlin: Transnational Institute, FDCL-Verlag.
Garrido, A., M. Bielza, and J. Sumpsi. 2003. ‘The Impact of Crop Insurance Subsidies on Land Allocation and Production in Spain’. OECD Papers 420 (5): 11.
Gasperin, C., and I. Doporto Miguez. 2009. ‘Green Box Subsidies and Trade-Distorting Support: Is There a Cumulative Impact?’ In *Agricultural Subsidies in the WTO Green Box*, edited by R. Melendez Ortiz, C. Bellmann, and J. Hepburn. Cambridge, U.K.: Cambridge University Press.
GIZ. 2018. ‘Poultry Production in Cameroon: How the Import Restriction Affects the Cameroonian Poultry Sector’. Bonn: Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH.

Goodison, P. 2015. ‘The Impact of EU Poultry Sector Policies on Sub-Saharan African Countries’. Copenhagen: Initiativet for Handel og Udvikling.

———. 2018. ‘EU Poultry Exports to South Africa In the Face of Avian Influenza Based Export Restrictions.’ EPA Monitoring. October 11, 2018.

Horne, P. van. 2017. ‘Competitiveness of the EU Poultry Meat Sector, Base Year 2015: International Comparison of Production Costs’. Report 2007-15. Wageningen: Wageningen Economic Research.

ITAC. 2015. ‘Investigation into the Alleged Dumping of Frozen Bone-in Portions of Fowls of the Species Gallus Domesticus, Originating in or Imported from Germany, the Netherlands and the United Kingdom: Final Determination’. Report No. 492. Pretoria: International Trade Administration Commission.

Josling, T., K. Anderson, A. Schmitz, and S. Tangermann. 2010. ‘Understanding International Trade in Agricultural Products: One Hundred Years of Contributions by Agricultural Economists.’ *American Journal of Agricultural Economics* 92 (2): 424–446.

Kusi, L., S. Agbeblewu, I. Anim, and K. Nyarku. 2015. ‘The Challenges and Prospects of the Commercial Poultry Industry in Ghana: A Synthesis of Literature.’ *International Journal of Management Sciences* 5 (6): 476–89.

Lanje, K., A. Müller-Frank, T. Reichert, and B. Thomsen. 2009. ‘Consequences of the EU Trade and Agriculture Policy for Zambia’s Dairy Farmers’. Bonn: GermanWatch e.V.

Massow, V. von. 1984. ‘Dairy Imports into Sub-Saharan Africa: Development and Policies’. LPU Working Paper No. 4. Addis Ababa: International Livestock Centre for Africa.

———. 1989. ‘Dairy Imports into Sub-Saharan Africa: Problems, Policies and Prospects’. ILCA Research Report No. 17. Addis Ababa: International Livestock Centre for Africa.

Matthews, A. 1985. ‘The Common Agricultural Policy and the Less Developed Countries’. Dublin: Gill and Macmillan.

———. 2017. The Development-Related Impacts of EU Agricultural Subsidies. TEP Working Paper No. 1617. Dublin: Trinity College Dublin.

Matthews, A., L. Salvatici, and M. Scoppola. 2016. ‘Trade Impacts of the Common Agricultural Policy’. IATRC Commissioned Paper 19. Minneapolis: International Agricultural Trade Research Consortium.

M'Barek, R., Barreiro-Hurle, J., Boulanger, P., Caivano, A., Ciaian, P., Dudu, H., Espinosa, M., Fellmann, T., Ferrari, E., Gomez y Paloma, S., Gorrin Gonzalez, C., Himics, M., Louhichi, K., Perni, A., Philippidis, G., Salputra, G., Witzke, P., and Genovese, G. 2017. ‘SCENAR 2030 - Pathways for the European Agriculture and Food Sector beyond 2020’. EUR 28797 EN. Luxembourg: Publications Office of the European Union.

Meijerink, G., and T. Achterbosch. 2013. ‘CAP and EU Trade Policy Reform: Assessing Impact on Developing Countries’. LEI Report 2013-023. The Hague: LEI Wageningen UR.

Mittenzwei, K., W. Britz, and C. Wieck. 2012. ‘Studying the Effects of Domestic Support Provisions on Global Agricultural Trade: WTO and OECD Policy Indicators in the CAPRI Model’.

Moro, D., and P. Sckokai. 2013. ‘The Impact of Decoupled Payments on Farm Choices: Conceptual and Methodological Challenges.’ *Food Policy* 41: 28–38.

Netherlands Embassy. 2014. ‘Analysis Poultry Sector Ghana: An Inquiry of Opportunities and Challenges’. Accra: Embassy of the Kingdom of the Netherlands.

OECD. 2001. ‘Decoupling: A Conceptual Overview’. Paris: Organisation for Economic Cooperation and Development.

———. 2011. ‘Managing Risk in Agriculture Policy Assessment and Design’. Paris: OECD Publishing.

OECD/FAO. 2018. ‘OECD-FAO Agricultural Outlook 2018-2027’. Paris and Rome: OECD Publishing and FAO.

Oxfam. 2002. ‘Stop the Dumping! How EU Agricultural Subsidies Are Damaging Livelihoods in the Developing World’. Briefing Paper 31. Brussels: Oxfam International.

Oxfam Deutschland. 2009. ‘Dumping von Milch Durch Deutschland Und Die Europäische Union’.

Oxfam International. 2018. ‘Taking a Fresh Approach: Enabling Local Producers to Meet Rising Demand in West Africa’s Dairy Sector’. Cowley, Oxford: Oxfam GB.

Paasch, A. 2008. ‘Devastating Floods Man-Made: European Trade Policy Violates Right to Food in Ghana – Chicken and Tomatoes’. Bonn: GermanWatch e.V.

Pendrill, F., U. Martin Persson, J. Godar, T. Kastner, D. Moran, S. Schmidt, and R. Wood. 2019. ‘Agricultural and Forestry Trade Drives Large Share of Tropical Deforestation Emissions.’ Global Environmental Change 56 (May): 1–10. https://doi.org/10.1016/j.gloenvcha.2019.03.002.

Rickard, B., and D. Sumner. 2008. ‘Domestic Support and Border Measures for Processed Horticultural Products.’ *American Journal of Agricultural Economics* 90 (1): 55–68.

———. 2011. ‘Was There Policy “Reform”? Evolution of EU Domestic Support for Processed Fruits and Vegetables.’ *Food Policy* 36: 438–49.

Robinson, E., and S. Kolavalli. 2010a. ‘The Case of Tomato in Ghana: Institutional Support’. Ghana Strategy Support Programme (GSSP) Working Paper #22. Washington, D.C.: International Food Policy Research Institute.

———. 2010b. ‘The Case of Tomato in Ghana: Processing’. Ghana Strategy Support Programme (GSSP) Working Paper #21. Washington, D.C.: International Food Policy Research Institute.

Rude, J. 2008. ‘Production Effects of the European Union’s Single Farm Payment.’ *Canadian Journal of Agricultural Economics/Revue Canadienne d’agroeconomie* 56 (4): 457–471.

Rudloff, B. and E. Schmieg. 2016. ‘More bones to pick with the EU? Controversial Poultry Exports to Africa: Sustainable Trade Policy as a Task for the G20’, SWP Comments 57, Berlin: Stiftung Wissenschaft und Politik/German Institute for International and Security Affairs.

Salla, A. 2017. ‘Review of the Livestock/Meat and Milk Value Chains and Policy Influencing Them in West Africa’. Rome: FAO and ECOWAS.

Schroeder, L. A., A. Gocht, and W. Britz. 2015. ‘The Impact of Pillar II Funding: Validation from a Modelling and Evaluation Perspective.’ *Journal of Agricultural Economics* 66 (2): 415–41.

Schutter, O. de. 2011. ‘The Common Agricultural Policy towards 2020: The Role of the European Union in Supporting the Realization of the Right to Food’. Comments and Recommendations by the United Nations Special Rapporteur on the Right to Food. Geneva: United Nations Special Rapporteur on the Right to Food.

Smit, B., R. Jongeneel, H. Prins, J. Jager, and W. Hennen. 2017. ‘Impact of Coupled EU Support for Sugar Beet Growing: More Production, Lower Prices’. Report 2017-114. Wageningen: Wageningen Economic Research.

Solazzo, R., M. Donati, F. Arfini, and G. Petriccione. 2014. ‘A PMP Model for the Impact Assessment of the Common Agricultural Policy Reform 2014-2020 on the Italian Tomato Sector.’ *New Medit*, no. 2: 9–19.

Sumberg, J., M. Awo, and G. Kwadzo. 2017. ‘Poultry and Policy in Ghana: Lessons from the Periphery of an Agricultural Policy System.’ *Development Policy Review* 35 (3): 419–38.

Swinbank, A., and R. Tranter. 2005. ‘Decoupling EU Farm Support-Does the New Single Payment Scheme Fit within the Green Box.’ The Estey Centre Journal of International Law and Trade Policy 6 (1): 47–61.

Swinnen, J. 2011. ‘The Right Price of Food.’ *Development Policy Review* 29 (6): 667–688.

Tangermann, S. 2011. ‘Market and Trade Implications of Risk Management Policies in Agriculture: The Case of the EU’s Common Agricultural Policy’. ICTSD Programme on Agricultural Trade and Sustainable Development. Issue Paper No. 34. Geneva: International Centre for Sustainable Trade and Development.

USDA. 2017. ‘2017 Ghana Poultry Report Annual’. GAIN Report. Washington, D.C.: US Department of Agriculture, Foreign Agricultural Service.

———. 2018. ‘South Africa Extends Safeguard Duty on EU Bone-in Broiler Meat’. GAIN Report. Washington, D.C.: US Department of Agriculture, Foreign Agricultural Service.

US Department of Commerce. 2018. ‘Ripe Olives From Spain: Final Affirmative Countervailing Duty Determination.’ Federal Register 83 (117): 28186–89.

USITC. 2018. ‘Ripe Olives from Spain’. Publication 4805. Washington, D.C.: US International Trade Commission.

WTO. 2019a. ‘DS577 United States – Anti-Dumping and Countervailing Duties on Ripe Olives from Spain.’ 2019.

———. 2019b. ‘United States – Anti-Dumping and Countervailing Duties on Ripe Olives from Spain: Request for Consultations by the European Union’. WT/DS577/1. Geneva: World Trade Organization.

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Rue Belliard/Belliardstraat 101 | 1040 Bruxelles/Brussel | BELGIQUE/BELGIË | Tel. +32 22822211
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