



The EU Budget Process and International Trade Liberalisation

**David Kernohan, Jorge Núñez Ferrer
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Abstract

This paper gives an overview of the channels by which the EU budget is directly or indirectly affected by the change in the external trade relations of the EU. In addition it discusses what role the EU budget can play, despite its limited size and scope, in addressing some other key challenges presented by globalisation and liberalised trade flows. The paper begins with a detailed theoretical explanation of the ways in which the EU budget is directly or indirectly affected by its revenues, structure and objectives. It then reviews how the EU budget has been affected by the changing challenges of trade liberalisation and expansion, in particular due to decisions at the WTO negotiations. This leads to an analysis of the possible impacts on the EU budget from the current DDA negotiations, and a discussion of how international economic and trade developments may challenge the EU and what role the budget can play in assisting the adaptation of Europe's economy to these challenges.

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THE EU BUDGET PROCESS AND INTERNATIONAL TRADE LIBERALISATION

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DAVID KERNOHAN, JORGE NÚÑEZ FERRER & ANDREAS SCHNEIDER

Executive Summary

This paper presents an analysis of the relationship between the EU budget and the process of trade liberalisation, in particular the effects of forthcoming agreements under the WTO Doha Development Agenda (DDA). The document is divided into three main parts: historical influences on the EU budget, the likely direct implications of a successful Doha round, and finally how sensitive the budget might be to future developments, including how it will address the challenges facing the European Union.

The budget is not designed to address trade issues

Historically, the budget was not created to be a proactive tool in the international trade arena. The linkages to trade were restricted to the raising of revenue for the budget or exporting excess production in the agricultural sector via subsidies. This is not surprising, as budget expenditures were mainly limited to agricultural policy at first and only later to the structural funds. The first main impact on the EU budget has been from the integration of agricultural trade into multilateral trade negotiations following the Uruguay round. Due to the strong reliance of EU agricultural policy on a system of high tariffs and export subsidies, such decisions have had a profound effect on the Common Agricultural Policy (CAP), changing the nature of the policy and its objectives.

The EU budget is affected mainly by decisions on agricultural trade

Agriculture has dominated trade negotiations ever since. For the EU it is an important domestic policy and for developing countries an important development area. So agriculture is still the key area in which the WTO process has a direct effect on the EU budget. In other areas the effects on the EU budget are almost non-existent or indirect. Thus the implications of the Doha round for the budget will mainly concern its effects on the CAP.

Since the 1992 reforms, the EU has considerably reduced the level of export refunds, from approximately ECU 10,000 million in the early 1990s to €3,500 million in 2003. In the event of a successful DDA agreement, it is likely that export subsidies for the EU-25 will be progressively eliminated producing a cost saving of €4,000 million, which can have some implications for member states' net balances. However, no other significant impacts are to be expected on the budget.

The trade implications of a possible DDA agreement for agricultural markets are considerable. A fall in tariff barriers can cause important effects for some commodity markets. Major tariff reductions will negatively affect most sectors, in particular the meat and vegetables sectors. The wider opening of other markets partly counterbalances those effects, but overall trade balances will deteriorate. It is important to note that the decoupling of agricultural direct payments allows for an easier adjustment of the sector to changes. Overall, however, the economic benefits for the EU of increased trade liberalisation are estimated to largely exceed the losses sustained in the agricultural sector.

The actual effect of the budgetary savings will depend on how these finances will be dealt with. These will either be deducted from the budget altogether or redistributed to compensate farmers or to support rural development expenditure. This is a political decision that will have to be taken once the shape of any agreement has emerged more clearly.

Abolishing export refunds also has implications. Export subsidies exist due to the level of internal price support. Not subsidising exports requires internal prices to be reduced or excess production to be stored or destroyed. The second option is clearly not politically viable. The mid-term review and the proposed reforms of the sugar regime are conceived to prepare the EU's agricultural sector for those tariff changes.

The implications of the DDA for the EU budget are small ...

It is estimated that the revenues from the Common Customs Tariff will fall by approximately €1,000 million, which is 1% of the EU budget at present, shifting the resource to GNI contributions of the member states. These impacts are fairly limited. Tariffs do not have an effect on the official net balances, as these are not taken into account for the purposes of net balance calculations.

Export subsidies are expected to be eliminated during the DDA, producing a cost saving of €4,000 million, which if not spent in other areas, can have some implications on the member states net balances, especially for those who have large subsidised exports.

... but these small changes reveal the weaknesses of the EU budget structure...

The savings, if not re-channelled into other expenditure areas in agriculture, will have implications on the net balances of the member states. It would damage the net balance of those countries that benefit from export subsidies but do not register savings in their contributions to the EU budget of a similar level. Big exporters, especially those with low contributions are worse off. Hungary and the Netherlands will see their net balances deteriorate by 0.06% of GNI and Denmark by 0.08 %. It is interesting to observe that a savings in the budget for the CAP can have negative implications for some of the member states that are calling for a reduction in budget expenditures to reduce their net contributions.

Interestingly, a savings in export subsidies diminishes the net balance of the UK, thereby increasing the burden of the rebate on other member states. The analysis adds weight to the controversy surrounding the UK rebate, which certainly appears to be disproportionate. The ad-hoc cuts for the main contributors to the budget to their share of the UK rebate ensure that the increased burden of the UK rebate falls on the poorer member states. The rebate is expected to be in excess of €7,300 million by 2013, as also estimated by the Commission's Own Resources Report of 2004, and increases to over €7,500 million with the savings of the CAP export subsidies.

... and its inability to respond to real needs effectively

While the direct impacts of a multilateral trade agreement on the EU budget are limited, it is important to consider the role of the EU budget for the future, given the EU's increasing domestic and international challenges. While the title invites us to analyse the 'likely impacts of the EU budget on the WTO negotiations', a clearer concern is that the EU budget appears to be unlikely to *respond* to the wider challenges of international trade developments in addition to those of an ageing population and enlargement.

The EU budget needs a radical re-thinking

The EU has to face the challenges and opportunities offered by the trade liberalisation process. To be able to do so successfully, as well as having the capacity to influence the rules developed at the WTO level, the EU has to maintain – if not improve – its trading position. This can only be achieved if the European economy is strong. Thus, this paper calls for a deep revision of the budget and a speeding up of its restructuring in line with the Lisbon strategy to develop Europe's competitiveness. Even the policies aimed at cohesion have to be improved, by better targeting of investment in the domestic growth potential of the poorer EU regions. This requires a more-integrated planning framework. The paper also calls for an improvement in the support for human capital investments from the EU budget.

The future of the EU economic strength and welfare depends on its competitiveness. The EU budget today is a partial 'relic' based on outdated objectives of a different kind of EU. Now that the EU has new member countries with much lower GDPs per capita, an ageing population and a declining international competitiveness, the present budget is losing touch with reality. The Financial Perspectives for the period 2007-13, while acknowledging the challenges ahead, do not present a sufficiently changed agenda.

The lack of perspective in the budget is partially caused by a preoccupation with the net balances of the member states. They are the outcome of difficult compromises that limit policy reform options drastically. This is reflected in the inability of the member states to accept the profound changes that enlargement implies, leading to the anomalous and contradictory disputes on net balances and the future budget, wherein countries simultaneously call for a reduction in their budget expenditures, but also defend their benefits derived from it. The EU should try to find a system that permits the elimination of the 'net balance influence' on important strategic decisions.

The rejection of the Constitutional Treaty by the citizens of founding members of the EU is a signal that many citizens feel alienated from the developments in the EU, and partially mistrust the present political and institutional structures. Policy-makers have to send a signal that the EU is capable of taking the necessary steps to address the challenges ahead. Taking courageous political step to reform the EU resources and expenditure structures of the EU budget could be a good place to begin.

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1. Introduction

Trade and financial flows have increased radically during the last 50 years due to technological changes in transport and communications. With the expansion of these flows, the capacity of policy-makers to influence the domestic economy has changed. Policy-makers cannot intervene without considering important economic implications linked to the international trade position and the situation on international financial markets. Furthermore, policy-makers are increasingly 'forced' to adapt domestic policies that are influenced by international markets rather than formulate policies based on domestic conditions.

The EU's case is a particular one, because it behaves in international trade relations as a large 'country', while on the other hand it is composed of 25 sovereign countries, most of which are small open economies that are easily affected by changes in trade and international financial flows. Furthermore, while it is widely recognised that trade liberalisation is globally welfare-enhancing, the distribution of the benefits as well as the costs are not evenly balanced. Thus changes in trade policy, even if considered neutral or positive at the EU level, can have distributional effects between member states and regions that are more difficult to accept.

It is thus not surprising that policy-makers in the EU turn to Community instruments and to the budget to find mechanisms that can address the asymmetric impacts of external trade relations. The origins of the EU budget's main expenditure areas were in fact created as a response to concerns over the distributional effects of the single market and can thus be considered by some as a legitimate tool for addressing any negative effects that originate from external trade.

The revenue and expenditure of the EU budget have also been directly affected by changes in the trade relationships of the EU. In the case of expenditure, this is mainly true for agricultural policy, where the structure of EU subsidies has undergone radical change to conform to WTO trade agreements, affecting the nature of domestic subsidies. For revenues, the effects come from changes in the common customs tariff limitations imposed by international agreements. While the implications of trade liberalisation on the Common Agricultural Policy (CAP) have been largely discussed in the literature, there has been little analysis of the potential links between other EU budget lines and trade. Only recently has attention turned to other areas and their potential role in improving the EU's external competitiveness.

This paper aims to give an overview of the channels by which the EU budget is directly or indirectly affected by the change in the external trade relations of the EU. In addition the study will also discuss what role the EU budget can play, despite its limited size and scope, in addressing some other key challenges presented by globalisation and liberalised trade flows. This may be of particular importance to the European Parliament, since its role in determining the shape and objectives of the EU budget is bound to expand in the future should the EU Constitution or similar reforms be adopted.

Following this introductory section, section 2 presents a detailed theoretical explanation of the ways in which the EU budget is directly or indirectly affected by its revenues, structure and objectives. Section 3 reviews how the EU budget has been affected by the changing challenges

of trade liberalisation and expansion, in particular due to decisions at the WTO negotiations. The fourth section analyses the possible impacts on the EU budget from the current DDA negotiations, and section 5 discusses how international economic and trade developments may challenge the EU and what role the budget can play in assisting the adaptation of Europe's economy to these challenges. Section 6 presents a short summary and conclusions.

2. The EU budget and the WTO process – Theory

The EU budget has a relatively simple structure. On the resources side, it depends largely on member states' contributions based on their GNI (gross national income) and VAT (value-added tax) receipts. In addition, the so-called traditional own resources (TOR) cover 10-20% of the budget requirements. These are composed of 80% of the common customs tariff (CCT) revenues and some agricultural levies. On the expenditure side, the budget is at present divided into seven budgetary headings: Agriculture, Structural Operations, Internal Policies, External Action, Administration, Reserves and Pre-accession Aid.

However, the budget is dominated by two of those headings, Agriculture, which takes over just under 50% of the budget and the structural funds, which are around 35% of the EU budget. The WTO negotiations have an important influence on the Agricultural budget, which is the only heading directly affected by the WTO negotiations.

With the exception of the common customs tariffs, which provide a degree of protection to the internal market from import competition, the budget was not designed for handling directly international trade liberalisation. In fact, the budget is not designed to have any links with trade developments. The origin of the budget has its roots in internal trade 'imbalances'. The CAP is said (amongst other reasons) to have originated by the expected stronger gains of the single market for industrial goods, thus benefiting countries like Germany more than the then more rural France (see e.g. Nugent, 1999; House of Commons, 2005). Even the agricultural export subsidies were not conceived as a trade tool, but as a means to allow the CAP to function with prices above the world market. The structural and cohesion funds were also designed for correcting internal regional disparities – also an inward-looking exercise.

The reason for this absence of a budgetary side to trade is simply because EU competitiveness on the world stage only started to be a major concern since the early 1990s. Prior to that, the EU was more concerned with the process of opening and regulating the internal market, which was expected to generate substantial economic benefits. The rise of the Asian countries, and especially China and India as world competitors for high-value, high-tech consumer goods, has presented an unprecedented challenge in areas where rich developed countries have had the undisputed supremacy for most of the 20th century.

Thus, until the end of the 20th century, the only relationship between the budget and trade and in general international issues concerned tariffs, export subsidies for agricultural products and limited funds for external actions (which were very little compared with the development aid budgets of some member states). As a consequence, the budget in its present form may respond to a WTO agreement by changing agricultural policies or by experiencing changes in the tariff revenues, but it does not directly react to changing trade circumstances. This section describes the mechanisms of this influence from a theoretical point of view. Historical and expected future developments are treated in subsequent sections.

2.1 Issues addressed at the WTO and the affected EU budget components

The WTO deals with trade in goods, services, intellectual property, trade disputes and produces trade policy reviews.

For goods, the GATT (General Agreement on Tariffs and Trade) is the most advanced area of the WTO, which deals with tariff reductions, but also one of the most complicated areas due to the exceptional nature of agricultural goods protection. In fact, while agreements on tariff reductions started in 1947, these only covered industrial goods and not agricultural products. For industrial goods, the EC average level of customs duty protection today amounts to around 4% and EU tariffs are among the lowest in the world, compared to tariffs in agriculture which are for most main products over 50% and can reach up to 200%. It is only in the Uruguay round starting in 1986 that agricultural products were included in the talks. Thus, it is not surprising that agricultural tariff reductions causes so many difficulties compared to reductions in other areas.

Of course, there are other issues, such as the GATS (General Agreement on Trade in Services), TRIPS (trade-related aspects of intellectual property rights) and some other specific areas. However, these are, despite being major issues, largely overshadowed by the disputes on an agreement on agricultural support. In the future, as solutions in the agricultural area are reached, other areas of the WTO will increase in importance. In fact, as trade expands to services, a large number of controversial areas are expected to develop.

Other aspects are expected to expand, such as an increased attention to the industrial policies of some countries, especially the role of the government in supporting exports in ways not previously treated. Today the exchange rate policy of China is under fire, due to its supposed strong undervaluation. The US has announced its intention on several occasions to challenge China in the WTO, despite the fact that WTO does not have any clear rules on exchange rates. But for the present round, agriculture is still the focus aspect of the negotiations.

2.2 The EU budget, trade and tariffs – the theory

Trade flow changes and trade agreements can have three distinct effects on the EU budget. Firstly it can affect the EU budget revenue through the effects on the customs tariff, which is part of the Traditional Own Resources. Secondly it can change EU common policies to adapt them to newly agreed rules on tariffs and allowed domestic subsidies or non-tariff barriers. The third effect is more implicit and indirect: the adaptation of the objectives of the budget to help the EU to face new challenges that emerge from changes in its trade relationships.

2.3 Tariffs and customs revenues

The EU's main objective in imposing customs tariffs is to protect internal production from cheaper imports. CCT revenues are not very high, as tariffs are generally low for most manufactured goods. The most significant tariffs of the EU are concentrated on agricultural products and are an integral part of the mechanisms to sustain internal prices of agricultural products. In contrast, customs tariffs for developing countries are often one of the main sources of government income.

Tariffs also represent the only accepted means for limiting trade (with the exception of non-tariff barriers based on standards, such as agreed Sanitary and Phytosanitary – SPS – measures). With the conclusion of the Uruguay round of the WTO in 1994, all countries have to switch from quantitative restrictions (such as import quotas) to more visible tariff-based mechanisms, based on values. The only quantity restrictions allowed are for imports under preferential tariffs below the normal rate.

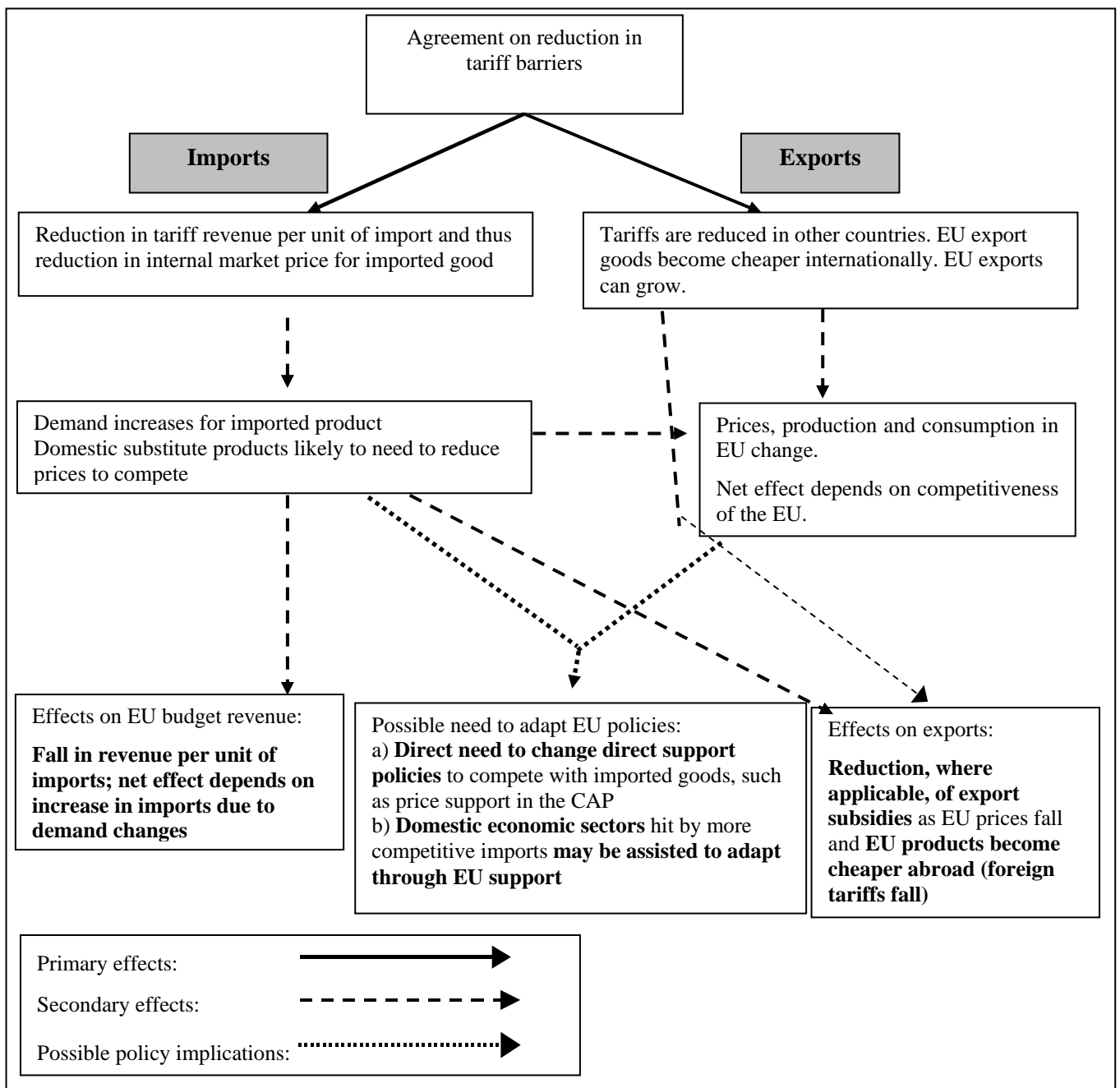
The most common tariffs in the EU and most OECD countries are *ad-valorem*, a percentage of the value of the imported product. Specific tariffs that levy a tax on a quantity imported regardless of the value are also common in many countries. These two tariffs are often

combined, with ad-valorem and specific tariffs applied on the same item. The WTO imposes limits on the overall value of the tariffs as a percentage of the value of imports.

2.4 Impacts of changes in tariff barriers

The WTO process addresses primarily the level of tariff barriers, bringing these down to increase trade flows and global welfare. A reduction in tariffs can have implications on the level of customs revenues, trade flows, internal market prices and consequently production and consumption. Thus, while agreements on the levels of tariffs directly affect tariff revenues, secondary effects can trigger a need to adapt EU common policies and even objectives of the budget. Figure 1 depicts the effects in a diagram, followed by an explanation.

Figure 1. Impacts of reduction in tariff barriers



2.4.1 *Tariff revenue impacts*

The common custom tariffs (CCT) are part of the EU budget revenues. Thus the first effect of a reduction in import tariffs or an increase in preferential import quotas is to reduce the revenue per unit of import of the EU budget. These do not, however, necessarily reduce total tariff revenues. The following cases are possible:

- a) Tariffs are extremely high thereby blocking any imports. The reduction in tariffs is not sufficient to induce imports. There is no effect.
- b) Tariffs are effectively blocking any imports. A tariff reduction that triggers imports would increase tariff revenues even if the tariff has fallen.
- c) A reduction in tariff revenue proportional to the reduction in tariffs. This occurs if the fall in tariffs does not change the quantity imported.
- d) A reduction in tariffs causes a reduction in revenues not proportional to the tariff fall. As imported goods get cheaper, demand for imports is likely to increase; thus tariff revenues will fall less and may even increase if demand is highly reactive to prices (highly elastic). Thus the increase in imports could offset the tariff revenue fall. This may occur not only because consumers increase their demand for the product, but also because they shift demand from domestically produced products to imported products, if these become cheaper.
- e) An increase in preferential access quotas usually reduces tariff revenues. While the effects are similar to a fall in tariff revenues, the tariff reduction is granted to a certain group of countries only, such as the Association of African and Caribbean countries (ACP) or less developed countries (LDCs) through the Everything but Arms Agreement (EBA). This will reduce the tariff revenues, if imports from these countries existed or if imports shift from those under the higher tariffs to those exporters from the group of countries benefiting from preferential trade. Thus the share of imports from under preferential agreements matters. Similarly as in d) changes in demand could be so high that if the preferential rate is not zero, actual revenues are increasing. This is highly unlikely, but may happen easily if the normal rate effectively blocks any imports; thus revenues under the preferential terms would be higher than before.

2.4.2 *Secondary effects of tariff changes*

Changes in tariff barriers do not only affect tariff revenues, as shown in the previous section. Tariff barriers are a protection of internal domestic production by making foreign goods more expensive and thus also allowing higher prices in the internal market for equivalent products. Changes in those tariffs may cause changes in demand and supply. These changes could require adaptations of other internal policies, such as in the case of price support policies of the CAP. They could also trigger changes in the expenditures of the EU budget. Since the costs of agricultural export subsidies are linked to international tariff levels, they will fall if these are reduced. Furthermore, if the impact of the change in the terms of trade is strong, the EU might consider using public intervention methods to assist the affected sectors or regions to adapt.

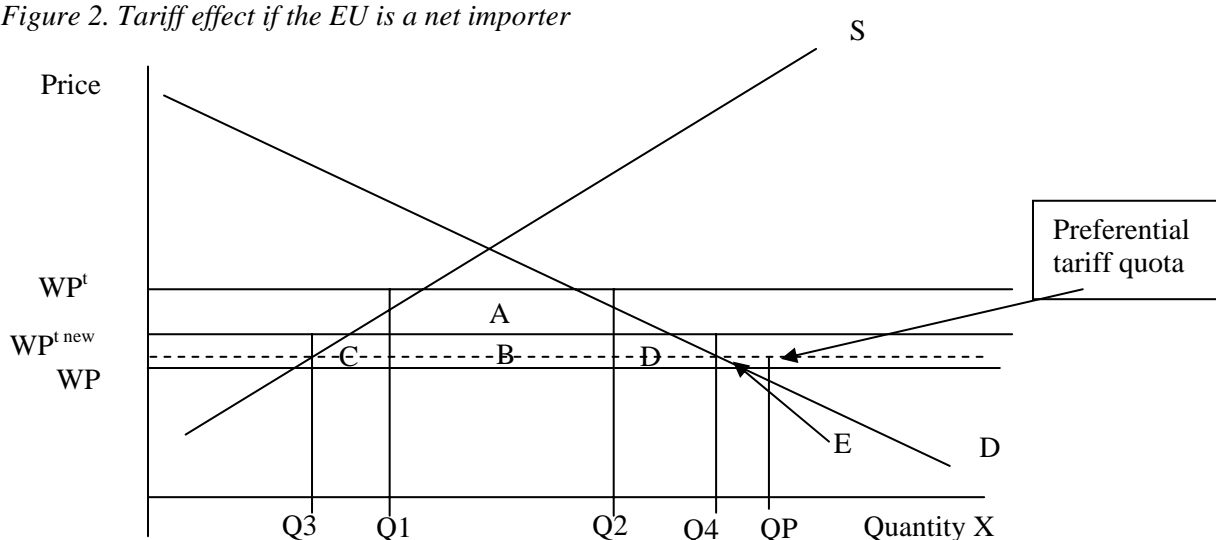
A description of the implications for the EU of tariff reductions is given below in three cases: where the EU is a net importer, a net exporter or subsidised net exporter.

EU as an importer

Figure 2 shows the effect of a fall in tariff barriers, where the EU is an importer. S and D are the supply and demand curves for product X. If we assume that WP is the world price and WPⁱ is

the WP with a tariff t , then the initial situation internal production is Q_1 with internal prices equal to WP^t , which is the expected outcome in a competitive economy. Imports are $Q_2 - Q_1$ as demand is higher than domestic supply at that price. Tariff revenues are the area $A + B$, the level of imports multiplied by the difference between the WP and WP^t . A reduction in tariffs to 't new' would reduce the entry price to $WP^{t\text{ new}}$. Under this new tariff, producers would reduce production to Q_3 and demand would increase to Q_4 , increasing imports by $Q_1 - Q_3$ and $Q_4 - Q_2$. Tariff revenues would fall by A , but increase by C and D . Depending on the size of C and D , tariff revenue would fall or increase. One can add that the effect of an increase in demand world wide of product X would increase WP and attenuate the impacts described.

Figure 2. Tariff effect if the EU is a net importer



QP in the diagram represents a preferential import quota. Depending on how the allowed import quantity has been set. It may or may not affect other production and consumption. Let's assume that in addition to the fall in tariffs, some preferential quotas are given to specific exporters, such as developing countries. If allowed imports under the preferential quota are $QP - Q_4$, the increased imports would increase consumption but not erode any imports or domestic production, with a tariff revenue E (if the preferential tariffs are higher than 0). If the quota is larger, either imports are eroded or domestic production or both, with a loss in tariff barriers for any products substituted between Q_4 and Q_3 used by a preferential quota.

The implications are as follows: Consumers benefit from a reduction in tariffs or an increase in the preferential quotas, where more competitive countries gain from the change. The domestic economy and other sectors benefit, as the price level of X falls, especially if the imported good is an important input for other industries. The internal market benefits as prices fall and the productive capacity shifts to more competitive areas. The loser is the particular sector affected. While from a purely economic point of view all changes are positive, politically, the effects on the affected sectors can be difficult to handle. The adaptation to the more competitive conditions is not instantaneous. The changes can cause temporary unemployment increases and if the labour market policies are not apt to ease the shift of the unemployed between sectors, this can bring additional political pressures. Preferential tariff quotas are positive and benefit the consumers without affecting producers or other imports, as long as the cheaper imports are taken over by additional demand, not affecting the demand of the remaining production.

Under higher international competition, companies can no longer work with a cost structure that is higher than the cost structure of imports (including transport and tariffs). Reducing production is, however, not the only option, because companies can restructure and increase their

competitiveness, shifting the S curve out, i.e. producing more at the same price, and/or can also increase quality, differentiating the domestic product from foreign imports allowing for a higher price than the imported lower quality products.

Therefore the implications for the EU budget are, that firstly there is the obvious effect on the tariff revenues, but secondly, that the EU may decide to use its budget to gain competitiveness, either by assisting the shift of resources away from product X (for example retraining of the redundant workforce) and/or offering financial assistance to the sector to increase its competitiveness (shifting the supply curve S, more products for same price) and/or improving quality, thus creating a differentiated product (see for example clothing brands or organic produce and protected designation of origin in agriculture). The Lisbon strategy of the EU is the development of such assistance, as are promotion and quality policies of the CAP.

EU as an exporter

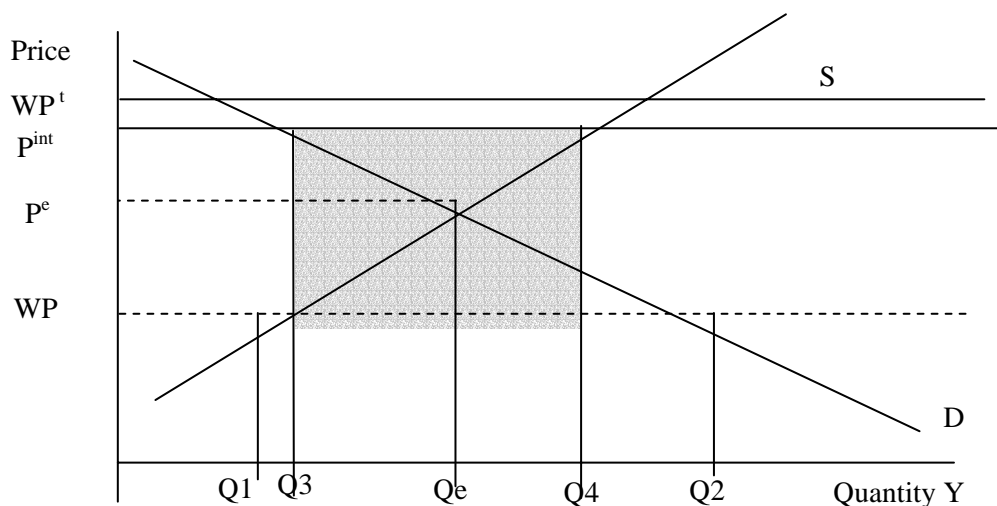
The budget implications in the case where the EU is a competitive exporter and has no imports should be non-existent, although the EU might help to increase competitiveness and further exports. In the case where the EU is an importer and exporter, the tariff income effect is more difficult to describe. If products were absolutely perfect substitutes and the EU produces more than it consumes and exports at the WP, there is no reason for the existence of imports with tariffs, otherwise products are clearly similar but not perfect substitutes.

A tariff fall would perhaps increase the imports of the product depending on the demand of the specific product, but it would not erode much of the domestic product, which is competitive due to price/quality factors; thus a fall would most likely be limited to a tariff revenue loss without much income from extra imports.

EU as a subsidised exporter

Export subsidies are a controversial policy of the EU for the agricultural sector and are used to sustain internal market prices at a higher level than world market prices. A fall in tariff barriers has a number of serious implications for these products and the EU budget.

Figure 3. Tariff implications: EU is a subsidised exporter



If we first assume that the EU imposes a tariff t , which effectively blocks any imports the EU exports with subsidies. Then the EU introduces an intervention price P^{int} which is above the internal market equilibrium price P^e ; thus EU production exceeds EU demand by $Q4-Q3$. Consumers are the main losers. Producers are the winners from price support, producing $Q4-Q1$ more. However, the excess production under P^{int} cannot be sold at the world market and the EU accumulates excess production equal to $Q4-Q3$. To solve the problem, the EU exports this amount to the world market under price WP , at the EU budget expense of the shaded area, which is the difference of the intervention price with the world price multiplied by the quantity exported. Under free world prices, the price drops to WP and demand increases to $Q2-Q3$.

Changes in tariffs can have important implications for a case like this, and explains the need for the reform of the CAP which reduced the intervention price. If an agreement at the WTO is reached that reduces tariffs to a level where WP^t ends below the P^{int} , the EU would need to reduce P^{int} . Price support policies are incompatible with reduction in tariffs barriers, as any other barrier to imports is not permitted.

Similarly, a limitation of export subsidies in volume or quantity below the levels required to maintain P^{int} is unsustainable unless demand increases or supply falls. Supply can fall without reducing P^{int} by introducing a production quota. The EU has often required both, price support reductions and quantity reduction mechanisms (quotas for dairy and sugar or set-aside for cereals) to keep under WTO commitments. However, as trade is liberalised for agricultural products, P^{int} needs to be lowered. In the case depicted above, a fall of P^{int} towards WP can turn the EU into a net importer. These shifts in the prices and production have repercussions on the sector affected.

The reduction in intervention prices has a general positive effect for the economy, with consumer welfare increasing as prices fall and a reduction in the expenditure for export subsidies, which is a deadweight loss and a cost to the taxpayers, who pay twice, as consumers and taxpayers.

The implications for the EU budget are numerous. The EU has attempted to cushion agricultural producers from the effects of reduced support by introducing direct payments and supporting the restructuring process through rural development funds, which have increased the budget expenditures in this sector. Any reduction in support, however, reduces the export subsidy expenditures, which is a savings for the CAP budget. The historical overview of the impacts of the WTO on the budget and policies are discussed in section 3.

2.5 Other implications of trade and WTO negotiations for the EU budget

Strictly speaking and from a purely theoretical point of view, which this section presents, there is no direct link between the EU budget and trade issues beyond the necessary changes caused by tariff and export subsidy mechanisms. There are, however, some possible indirect implications caused by the TBTs (technical barriers to trade) and SPS (sanitary and phytosanitary) rules. Non-tariff barriers can affect the level of imports of goods to the EU, which in turn affect the tariff revenues. Otherwise other links relate to a political decision to shift the objectives of the budget to address trade issues.

2.5.1 Impacts of non-tariff barriers on tariff revenues

TBTs are usually safety standards for materials or machinery and are based on scientifically sound risk assessments. Under these rules also fall labelling requirements for consumer information, certification of origin and quality or production methods. While most of the rules have genuine and important safety and information objectives, some may be difficult to comply

with and can cause strong barriers to trade, especially for developing countries. Thus, TBTs also create a certain level of market protection. They also can reduce imports, which on the one hand reduce CCT revenues, but increase the value and quality of the actual imported good on the other, potentially increasing CCT since ad-valorem tariffs are then higher per unit.

For agriculture, TBTs for food safety are important. They are treated separately in the SPS agreements and constitute one of the WTO instruments that can have clear impacts on imports. High food safety requirements can reduce the level of imports of certain products. Especially in the cases of meat and seafood products, the standards effectively do not allow imports from a number of countries and reduces the imports from cheap sub-standard products from abroad. The WTO allows a certain level of flexibility on the choices of countries on food safety standards and the EU has one of the strictest regimes in the world. The implications are likely lower CCT revenues, but also higher value imports, which increase revenues of ad-valorem tariffs. The expenditures from the budget can be affected, as this protection eases the price effect of liberalisation, but also increases the need for support to domestic producers to guarantee the high standards. Nevertheless, many importers adapt to the rules, and while some countries can find it difficult to comply, this often just alters the country of origin of the products rather than reduces imports.

2.5.2 Impacts of increased trade competition on EU expenditures

From a general theoretical point of view, increased trade liberalisation should induce the EU's public sector to intensify efforts to foster competitiveness. This includes decisions at EU level and can affect the EU budget expenditure objectives and structure. However, the EU budget is the result of a complicated agreement at supranational level, is limited in size and scope, and is very complicated to alter, requiring the unanimous agreement of all the member states.

The consequence of these deficiencies is that it is difficult to use the budget as a tool to address trade implications directly. Fostering competitiveness also largely depends on macroeconomic policies of the member states: labour market rules, fiscal policies, education system, etc. The EU budget can play only a limited role.

However, the EU budget has policies directly aimed at countries or regions with a low GDP per capita and industrial regions in decline (cohesion funds, and Objective 1 and 2 of the structural funds). These are mainly investment funds to increase the physical and human capital stock of regions lagging behind. This support is indirectly relevant in the EU's response to trade impacts. While the policies were designed with the internal market in mind and not international trade, these investments help regions affected by adverse terms of trade, both within the EU and as a result of external trade implications. A recrudescence in external trade competition would induce pressure to improve the appropriateness of the funds and alter the priorities of the member states' programmes to better address the international trade challenge ahead.

The agricultural policy has been adapted to the WTO liberalisation process. As a policy using trade as a means to protect internal prices, it was not designed to actually compete with external producers. The EU has had to fit the CAP to new rules. Lately, however, the EU has started to change the CAP not to fit the WTO agreements but to influence them. In the future the EU can choose to further change its reactive stance to WTO development to one of anticipation and active engagement, by increasing the focus on competitiveness and finding mechanisms to protect the EU's interests in this area (such as preservation of the European countryside through rural development measures) and by improving the design of the policy mechanisms.

The EU has seen a start in the transformation of its policies and section 3 explains how. Section 6 will discuss what further options there might be to change the EU budget into an instrument

that actively seeks to improve the EU's position in international trade and also preserves the EU's non-trade interests.

3. WTO effects on the EU budget and expenditures

The decisions at the WTO and the trade liberalisation process have influenced the EU budget in size, resource composition and objectives.

These effects have however been limited to two areas of the budget:

- a) The reduction in tariffs has affected the size of the custom tariff revenues, thereby affecting the Own Resources.
- b) The introduction of agriculture into the negotiations with the Uruguay round (1986-1994) has strongly affected the CAP and the EU budget structure.

3.1 Effects on the resources of the European Union

On the resources side, multilateral trade agreements have considerably reduced tariff barriers, thus partially reducing the share in Traditional Own Resources (TOR) in the resource composition of the EU budget.

CCT revenues for industrial goods have been considerably reduced since the start of multilateral trade negotiations, although meaningful data on CCT revenues for the years before the 1980s are difficult to find. Given the increase in the number of member states, the figures are also not easy to compare to today's totals. This section concentrates on the impact of the Uruguay round commitments on CCT revenues. By the time the Uruguay round started, the level of tariffs for manufactured goods was already quite low. High tariffs were to be found for agricultural products and it is on those that the Uruguay round concentrated. An agreement was reached to reduce the tariff levels in the agricultural sector by an average of 36%.

It is interesting to note, however, that the impact of the Uruguay round reforms on customs tariff revenue appears to have been negligible. There are two reasons for this: Agricultural tariffs, even if high, did not account for a large part of the revenues (only around 10%) and second, because tariffs were in various items prohibitively high. With this 'tariff slack', it was possible to distribute the tariff reduction commitments without changing trade flows or affecting tariff revenues.

Customs tariff receipts remained fairly constant during the period 1992-99, at between €13,000 million and €14,000 million per year, despite the fact that, according to the GATT commitments implementation had to start in 1995.

After the year 2000, the TOR fell to approximately €10,000 million, but this is almost entirely attributable to the Own Resources agreement of 1999, which allowed member states to retain 25% of the CCT revenues as collection costs compared to the previous 10%. The next round of WTO negotiations should, however, have a larger impact on TOR, as the proposal is to implement measures that will ensure tariffs are reduced effectively, with higher reductions for higher tariffs.

3.2 Effects on the expenditures of the EU budget

Certainly the most important impacts on the EU budget of the changing pattern of trade negotiations has been to induce the EU to change its agricultural policy. This happened under the Uruguay round with the MacSharry reforms and it is very likely that the DDA process had some influence in the latest reforms.

The introduction of agriculture as part of the negotiations for trade liberalisation has had considerable impacts on the budget. The Uruguay round of agricultural negotiations was instrumental in inducing the 1992 CAP reform and played an important part in framing the next generation of reforms – the Agenda 2000 and the mid-term review of the CAP. In practice, the rules of the WTO on the maximum levels of support have constrained the policy alternatives of the EU and required a rethink of the foundations of the policy.

Direct and tangible effects of the 1992 reforms were an increase in the expenditure of the CAP as support shifted from price support to direct payments (thus from support based on consumer transfers to one based on taxpayer transfers), a fall in the size of subsidised exports and some fall in the tariff revenues of the EU. While many would claim that the EU would have had to change direction anyway, which is true in principle, the WTO framework set the pressure to act and also determined the form.

The CAP budget during the period of 1988-91 stood at around €28,000 million a year, of which over 90% was spent on intervention buying and subsidised exports (approximately €10,000 million a year). With the reforms of the Common Agricultural Policy, the expenses on intervention and export subsidies decreased, while the costs of direct payments and rural development measures increased considerably. The net effect has been an increase in the EU budget by approximately 40% reaching €44,461 million in 2003. The lowering of export subsidies by €6,500-7,000 million has been crucial in dampening the budgetary cost increase caused by the increase in direct payments. After the Agenda 2000 reforms, export subsidies accounted for an average of €3,500 million a year between 2001-03. Today the fall of the US dollar has affected the external competitiveness of agricultural products, and export subsidies have in fact risen to around €4,000 million in 2004.

But changes were not only ‘passive’. There has also been a redirection in the objectives of EU expenditure. Rural development funds are now investing in the competitiveness of agricultural sectors and promoting an increase in product quality. The EU is mainly a processed food exporter. Exports of specialised products are one of the main strategies for improving the export competitiveness of agricultural products while preserving a price premium.

Direct payments originate from the requirements to reduce tariff barriers and trade-distorting export subsidies and are seen as a means to protect against the abandonment of agricultural land and rural areas feared after a liberalisation of trade and the expected price falls. These measures also serve other functions through cross-compliance, such as the use of better agricultural practices.

Through the TRIPS agreement, the EU has managed to achieve a level of protection through the certification of origin of agricultural products, allowing EU products to have their names of origin protected in international markets (e.g. Champagne) guaranteeing its provenance and quality. The EU budget has fostered the expansion of certified quality products, which in turn increases Europe’s competitiveness.

Food safety rules are also increasing in importance, which in one sense increases the costs of production and reduces the competitiveness of EU products when the standards are beyond those required in foreign markets. However, the standards can also have indirect effects. Imported goods have to fulfil the EU’s internal standards, and high standards for food safety are equivalent to a non-tariff barrier. Lately the SPS rules have become stricter, which makes imports into the EU harder. This can also reduce tariff revenues. EU budget expenditures for rural development have increased under the latest CAP reforms, incorporating new expenditures to help producers comply with the new standards.

However, these changes have not only been limited to agricultural expenditure. The EU has increased the area of intervention of the structural funds, not only increasing the scope of capital

investment, but increasing significantly the role of the funds in building human capital through the ESF. This policy, while not necessarily originating in an international trade concern, is clearly aimed at increasing the competitiveness of Europe. If the European economy is hit by trade-related competition in certain sectors and regions, the ESF gains in importance. Countries draw their development plans based on the situation in the economy, and if international competitiveness is a problem, EU funds are used to foster competitiveness.

The Financial Perspectives for the period 2007-13 formally acknowledge the need for an increasing role of the budget and adopted a more reactive, albeit modest, stance towards the increasing influence on the European economy of the trade liberalisation process. This is discussed in section 3.3.1.

3.3 Effects on the budgetary net balances of the European Union

As mentioned earlier, the agreements on tariff reductions at the Uruguay round had no tangible effect on tariff revenues and thus no effect on net balances. In any case, changes in tariff revenues alone while affecting the actual contributions of the member states are not visible in the official net balance calculations as presented by the European Commission.

The receipts of the traditional Own Resources are considered a fiscal resource fully ‘owned’ by the EU; thus the method for calculating net balances has been devised in such a way as to exclude changes in the TOR from net balances. The receipts from customs tariffs or agricultural levies are redistributed as if originating as a share of GNI from the member states. Any redistribution of CCT receipts or change in the size of the revenue will not be visible.

The official net balances of member states are however affected by the induced changes in the CAP. The shift in support from price support to direct payments increased the expenditure and thus the contributions of the member states, while countries with large supported sectors of agriculture saw their receipts from the EU budget increase considerably. Depending on the relationship between contributions and CAP returns, the net balances have been affected. Clear net beneficiaries from this change in the agricultural policy appear to be France and Spain. Despite the rise in structural operations, of which France is not a main beneficiary, France’s net contribution at the end of the period had fallen. For Spain, it simply added to the large increase in the net balances due to the increase in structural operations (European Commission, 1998a).

3.3.1 Effects on the policy orientations

The WTO has been instrumental in bringing the EU towards a reconsideration of the development strategy of the agricultural sector for rural areas. The policy probably needed to be adapted anyway but in 1992, when the McSharry reforms shifted the policy orientation towards direct payments, a strategic vision of the kind of agriculture the EU was aiming to support and an integrated strategy for the development of rural areas were missing.

Hence, the WTO process has certainly injected impetus into developing the underlying definition of the term ‘multifunctionality of agriculture’ and into developing the operational structures for the agricultural policy: reinforcing and reorienting the rural development side of agricultural policy and increasing the environmental conditionality of direct payments. It has therefore induced a complete rethink of the priorities behind agricultural policy, abandoning the notion that competitiveness has to equal product-related subsidies, and allowing the introduction of decoupled payments.

The EU has also started a radical change in the underlying principles of rural development. In the pursuit of ways to protect the interests of the European Union in the agricultural sector, it has redirected its attention to the general factors that allow intervention in the development of

rural areas. The notion that the development of rural areas depends on agriculture has been partially abandoned. The WTO process has given an impetus to the process of finding methods to support the growth potential of rural areas. The importance of rural development measures would have certainly increased regardless of the trade developments, but without the pressure to face stringent commitments on subsidies and the increased external competitive pressure, the process would most likely have occurred later. In any case the terms ‘multifunctionality of agriculture’ and the ‘protection of the European model of agriculture’, which are the philosophical foundations on which rural development support is being built, originate from the EU’s negotiation positions at the WTO (European Commission, 1998b).

The importance of these changes are particularly visible in the creation of a rural development sub-heading in the proposed financial perspectives for the 2007-13 period, integrating the funds of the guidance section of the EAGGF (European Agricultural Guidance and Guarantee Fund) with the guarantee rural development measures.

The next round of the WTO will push further in this direction, with the important difference being that the EU has defined a strategy to approach its problems in the agricultural sector eliminating the trade distortions that the WTO challenges. The EU, rather than adapting its policies to fit the WTO, will play a much stronger role in ensuring that this time the agenda is set by the EU rather than by the US or other WTO members.

For other sectors, the effects on the EU budget are indirect and not solely attributable to the WTO. The WTO is also a body created as a response to a growing globalisation process to allow countries to have an integrated approach to the increase in international trade. The globalisation process would have required a rethink of the EU’s policy orientation in any event. The WTO, however, sets the rules of engagement and thus affects the EU’s reactions. The influences are particularly visible in the Financial Perspectives of the EU for 2007-13 (COM(2004) 487 final), where international trade is repeatedly mentioned as a reason to redirect the EU’s priorities and increase budget expenditures to foster competitiveness.

The EU is starting to introduce trade concerns into the EU budget. The new proposed amendment to the objectives of the budget explicitly started adopting a more reactive albeit modest stance towards the increasing influence on the European economy of the trade liberalisation process. The proposals to reform the Own Resources would affect the internal distribution of the budget burden, but still maintain unchanged the custom tariff resource key.

The new EU budget reduces the number of headings and increases the flexibility amongst them. Those headings are Sustainable Growth, Preservation and Management of Natural Resources, Citizenship, Freedom, Security and Justice, the EU as a Global Partner, and Administration. Much of the difference with the old budget structure is a redistribution of the headings of the old budget, which now are classified as subheadings in the new structure. The CAP is under Natural Resources and the structural funds under the Sustainable Growth headings.

However, the proposed budget structure has some innovations that are relevant to the trade liberalisation process. With the realisation that the EU needs to adapt better to global challenges, it has created a new sub-heading under Sustainable Growth, namely ‘Competitiveness for Growth and Employment’, which should assist the EU to gain a comparative advantage in the knowledge economy or high-tech sectors vis-à-vis trading partners. Furthermore, the Commission has proposed a Growth Adjustment Fund, which can be used for boosting important EU initiatives and ‘help respond to unexpected shocks – such as trade disputes or unexpected consequences of trade agreements’ (p. 15). Finally, the EU has increased the funding for external actions considerably. Increasing the EU’s weight internationally should benefit the trade relationships of the EU.

However, the EU budget in its present or proposed form can do little to address many of the pressures on the EU stemming from the trade liberalisation process. The EU budget can also have little influence in the process of adaptation of the EU to new challenges, since much of the work has to fall on the governments of the member states through macroeconomic policy reforms.

There are in fact no immediate direct links to the EU budget outside the sphere of tariffs and agricultural export subsidies. However, the process of liberalisation can induce political pressure to adapt the budget.

4. Likely impacts of a successful DDA trade round

This section is divided into two main parts. The first describes the situation in the present round of negotiations and the most likely outcomes. On the basis of this analysis, the expected impacts on the EU and its budget are estimated with the assistance of two models. The first model analyses the impact on the agricultural sector and the subsequent impact on tariff revenues and on EU budget expenditures. The second model analyses how these changes are reflected in the net balances of the EU. The section concludes with some additional reflections on the complex sugar policy reform.

4.1 The objectives of the DDA

At its fourth ministerial conference in Doha (Qatar) in November 2001, the WTO concluded some far-reaching decisions on the future development of the organisation. The centrepiece of the conclusions was to launch a new round of trade negotiations – the Doha Development Agenda (DDA) – comprising both further trade liberalisation and new rule-making, underpinned by commitments to strengthen assistance to developing countries.

In addition, it was also agreed to help developing countries implement the existing WTO agreements and to interpret the TRIPS Agreement in a manner that ensures members' rights to take action to protect public health.

With the DDA, the WTO has attempted to move into a new era. This is because, besides a continued commitment to improving conditions for worldwide trade and investment, it should also be able to play a much fuller role in the pursuit of economic growth, employment and poverty reduction through enhanced and better rules. Better international governance and the promotion of sustainable development are claimed to be the ambitious backdrop to the agenda.

The launch of the DDA with a development-focused agenda was also in line with the EU's new policy approach. This advocated a mandate based on agriculture negotiations, as well as on industrial products, services, intellectual property (geographical indications and TRIPs), the four 'Singapore issues',¹ WTO rules² and trade and the environment.

According to the mandate adopted on 14 November 2001 in Doha, the WTO members committed themselves to substantially improving market access, reducing (with a view to phasing out) all forms of export subsidies and substantially reducing trade-distorting domestic support (WTO, 2001). Furthermore, it was also agreed that non-trade concerns and special and differential treatment for developing countries should become an integral feature of the negotiations.

¹ Investment, competition, transparency in government procurement and trade facilitation.

² Anti-dumping, subsidies and regional trade agreements.

However, the process of the negotiations has not been smooth. The steps needed to agree on the modalities were only negotiated with difficulty, most notably at the ministerial meeting in Cancún in September 2003, derailing further the negotiations until July 2004 when modalities were finally agreed in Geneva. Although even here, the document itself is light on precise details compared to past rounds of negotiations at a similar stage.

The question of greater market access in industrial goods was the core of the negotiations prior to the Uruguay round. The Uruguay round and now the DDA has moved on to attempt something similar in agriculture. However, agriculture looms large for developing countries as a protected sector and an export opportunity. Since the instruments used for protecting agricultural markets also generate tariff revenues, as with the Uruguay round, the DDA discussions have mainly become a single-issue negotiation, focused on agriculture.

The Framework Agreement from July 2004, if put into practice, would deliver a considerably larger farm-trade liberalisation. It would bring a substantial cut in trade-distorting agricultural support, the elimination of trade distorting export competition practices and a significant opening of agricultural markets.

4.1.1 Agriculture

The Doha work programme comprises an overall cut of all trade-distorting domestic support according to a tiered formula. Under this formula, higher levels of trade-distorting domestic support will be subject to deeper cuts in order to achieve a harmonised result. Furthermore, all developed countries would commit themselves to a downpayment of 20% of their scheduled tariff reduction commitments in the first year. The cut would be based on the present bound rates (rates of maximum tariff agreed in the Uruguay round). The reductions would be required for all members other than the LDCs. Countries can self-select sensitive products that would be treated in a more flexible way. As compensation, the tariff rate quotas (TQRs) of sensitive products have to be expanded.

Furthermore, a reduction of the *de minimis* loophole³ will be negotiated and the criteria for the Green Box⁴ will be reviewed. The Blue Box support should not exceed 5% of the average total value of agricultural production during an historical reference period that has yet to be specified. This stands in contrast to the Derbez text⁵, which suggests dates for the reference period (2000-02) and linear reductions for (x) number of years (ICTSD, 2004).

Under export competition, the Doha work programme also addresses the elimination of all forms of export support. The EU has managed to introduce into the negotiations the elimination of all other forms of trade-distorting export-support measures, such as export credits, export credit guarantees or insurance programmes with repayment periods beyond 180 days. Export credits of less than 180 days and trade-distorting practices of state-trading enterprises (STES)

³ Level of support that is exempt from commitments, presently at 5% of the value of agricultural production for developed countries and 10% for developing countries.

⁴ Within the WTO, subsidies are categorised in coloured boxes according to the level of trade distortion they generate. The red are banned subsidies, amber are distortive subsidies that are bound to limitations, blue box are specific subsidies of the EU and the US which were exempt from the limits in the amber box but could be challenged since 2003 (since the latest reform, the EU's direct payments are expected to fall into the green box) and the green box are non-trade-distorting policies which are not subject to any limitations.

⁵ Text presented by Chairperson Luis Ernesto Derbez on the fourth day of the Cancún Ministerial Conference.

should be subject to strict discipline. Moreover, food aid schemes should be clearly disciplined, eliminating the use of food aid as a hidden mechanism for surplus displacement.

For developing countries, special and differential treatment will be provided. They will be accorded longer implementation periods, lower tariff and subsidy cuts and special concessions for their market access. Furthermore, trade in tropical products will be fully liberalised and the erosion of trade preferences will be addressed. LDCs do not have to lower their tariffs or their domestic farm support. Developed countries and capable developing countries should provide duty and quota-free market access for LDC products (European Commission, 2004b).

The EU would be committed to a considerable degree of market opening, but will also look for comfort for certain ‘sensitive’ products. The EU already imports as much agricultural produce from the developing world as the US, Canada, Japan, Australia and New Zealand put together.

It is important to acknowledge that all countries have market access barriers, whereas only some have export subsidies or amber or blue box domestic supports. Therefore the range of interests involved in the market access side of the negotiations is more complex. Most governments are under pressure to protect their farmers, but many also want to export and therefore want to see other countries’ markets open up. Among developing countries, some are less confident about importing and exporting and take a defensive stance, while others are more confident and want to see more South-South trade as well as increased exports from poorer to richer countries.

4.2 Modelling the effects of a DDA agreement on the EU budget

For the EU budget, the strongest impact from an agreement will be felt in the agricultural sector. Thus the analysis concentrates on this sector. However, the results are also fed to a General Equilibrium Model that incorporates the changes for the other economic sectors. The analyses on the agricultural sector and tariff revenues implications of an agreement are based on the comparative static standard multi-regional general equilibrium Global Trade Analysis Project (GTAP) model used by FAL⁶ (see Annex 4 for a description). It provides an elaborate representation of the economy, including the linkages between farming, agribusiness and industrial, and service sectors of the economy.

4.2.1 The likely implication of the framework agreement

The framework agreement commits members to “substantial improvements in market access for all products”. Some key points emerged in the bargaining over the framework: the type of tariff reduction formula that would bring “substantial improvements in market access”; the treatment of sensitive products and safeguard actions to protect those; the treatment of conflicting interests among developing countries; market access for tropical products and crops grown as alternatives to illicit narcotics; developed countries’ subsidies and improved market access in developing countries. This model concentrates on market access, which is the area that has implications for the EU.

The discussion has focused broadly on the high levels of tariffs outside preferential access quotas and the quotas themselves. Two methods for tariff reductions are at the forefront of the negotiations and are considered by the authors as the most likely formulae for a decision: the Harbinson 1½ approach⁷ and the so-called ‘Swiss Formula’.

⁶ Federal Agricultural Research Centre (Braunschweig, Germany)

⁷ The ‘Harbinson 1½ proposal’ is the revised form of the Harbinson proposal, which was presented to the WTO on 12 February 2003, by Stuart Harbinson, Chair of the special (negotiating) session of the WTO

The Harbinson approach

The Harbinson 1½ paper calls for substantial reductions to the Aggregate Measure of Support (AMS),⁸ for the blue box and for *de minimis* support⁹ in developed countries. In addition, it calls for the elimination of export subsidies within two staggered categories (five and nine years). Export credits, export credit guarantees and insurance programmes as well as international food aid and state-trading export enterprises shall be subject to disciplines.

For tariffs it proposed for developed countries (which includes the EU) reductions over 5 years and increases in TRQ. For developing countries, special and differential treatment is proposed with reduction categories of 10 and 12 years. Table 1 presents the proposed cuts for the tariff in ad valorem equivalents.

Table 1. Tariff reduction formulas of the Harbinson 1 ½ proposal (%)

	Initial tariff rate (ad valorem)	Average reduction rate	Minimum cut
Developed countries	> 90	60	45
	≤ 90 and > 15	50	35
	≤ 15	40	25
Developing countries	> 120	40	30
	≤ 120 and > 60	35	25
	≤ 60 and > 20	30	20
	≤ 20	25	15

Source: Based on proposals in WTO (2003).

In addition to the special and differential treatment for developing countries, the Harbinson 1½ paper accords special treatment for least developed countries. They should be exempt from any reduction commitments and developed countries should provide duty and quota-free market access for all imports from developing countries.

The Swiss formula

In the course of the negotiations held in the Uruguay round, the Swiss formula was an approach proposed by Switzerland concerning tariff cuts in the field of industrial commodities. According to this formula, the new tariff rate is determined by the base rate (T0) and a coefficient (a): $T1 = (T0 * a) / (T0 + a)$. In the current agricultural negotiations of the Doha round, the US proposed applying a coefficient value of 25 to this formula. Under these conditions, all tariff rates on agricultural products will be harmonised at a level below 25% within a five-year period through a non-linear reduction process. Since tariff cuts based on the Swiss formula are dependent on the level of the base rate, it brings about larger reductions in the highest tariff rates.

Committee. This paper was not well received, however, and a partial revision was made; therefore the name 'Harbinson 1½', which can be found in some academic literature, is also used here.

⁸ AMS is an estimated value of the subsidies to the agricultural sector that are considered trade-distorting (amber box).

⁹ Level of support exempt from commitments, presently at 5% of the value of agriculture production for developed and 10% for developing countries.

The dispute on the ad-valorem equivalent (AVE)

The WTO members are disputing the methods used for the estimation of the ad-valorem equivalent (AVE) tariffs (overall rate of specific and ad-valorem tariffs) for the calculation of the commitments. AVE attempts to simplify the calculations to avoid a detailed estimation based on every individual product and its price. Cuts should be based on an average overall AVE for a goods category rather than by the individual imported good. The original idea was to use the average world price as the average entry price for a product and assume that the AVE is the difference between the world price and the EU price after tariffs.

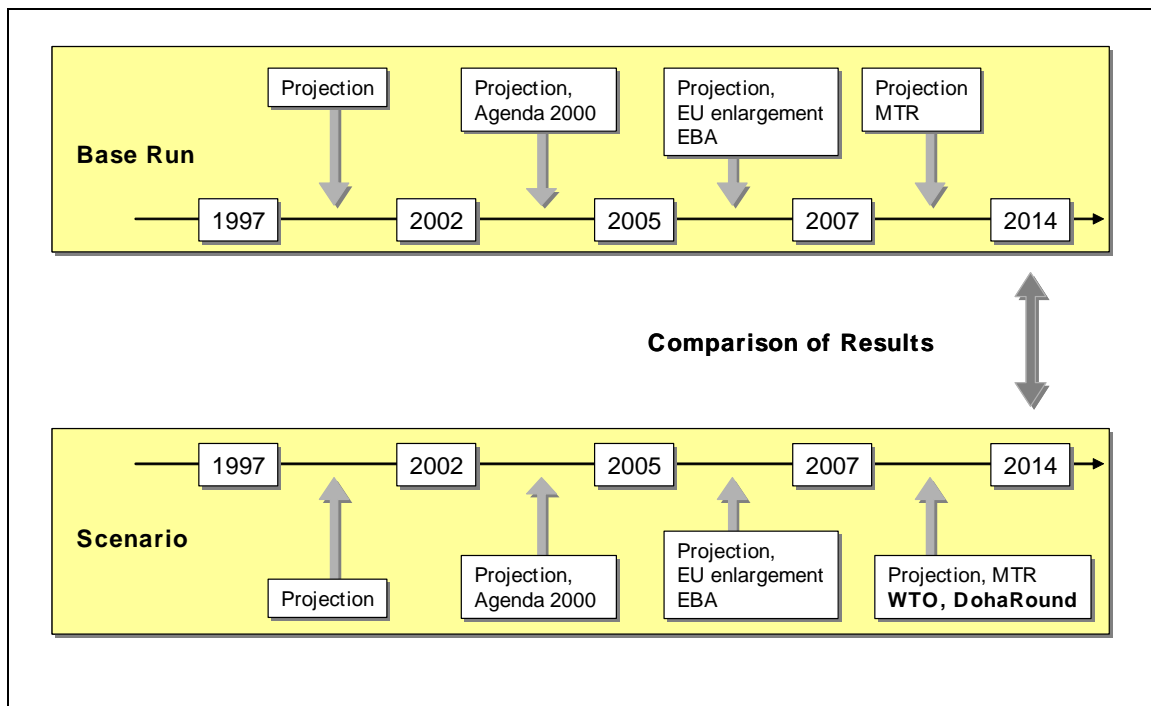
The EU cannot accept this. Due to the EU high standards on food safety and technical specifications (including packaging), the imported price of an agricultural product is higher before tariffs; thus this method would strongly overestimate the tariff rates of the EU. A dispute is in progress over which percentage price weighting for the EU should be adopted to take into account the average additional value of the imports due to quality differences.

4.3 The scenario analysis

This paper presents the results of three policy scenarios for the WTO compared to the base, which assumes no change in the trade rules.

Before the actual simulations are carried out, it is necessary to conduct some pre-simulations to implement the extended model structure and to update the protection rates. This includes CAP instruments and the Common Budget of the EU.

Figure 4. Base run and simulations



Source: Brockmeier et al. (2005, p. 6).

Based on the results of the pre-simulation, a base run is conducted, which represents a projection of the exogenous variables population, GDP and factor endowment up to the year 2014. Additionally, the AGENDA 2000, the EU enlargement and the EBA agreement, as well

as the MTR are implemented. The sugar and rice quota policies are not ‘adapted’, but are assumed abolished. The base run only considers political intervention in the EU-15 and in the 10 new member states. Developments in other regions, like the Farm Bill of the US, are not taken into account.

Parallel to the base run, a scenario is implemented as well. It takes account the same projections and policy shocks (Agenda 2000, EU enlargement, EBA agreement and MTR), but in the time period from 2007 to 2014, it additionally includes simulations related to the WTO round. The ‘July Package’ leaves a lot of room for speculation on how market access will be enabled through agricultural trade negotiations. Thus, in the following experiments, various options for market access implemented in the Doha round are played through. A total of three simulations are carried out. The first two simulations capture the Harbinson 1½ proposal and a possible modification, the third presents the case of the Swiss formula.

In Experiment 01, all countries implement a cut of the import tariffs according to the Harbinson 1½ proposal, while export subsidies are completely abolished. Experiment 02 is identical to Experiment 01, but all other developed countries implement the EU’s EBA initiative by granting preferential market access to LDCs. Experiment 03 resembles Experiment 01, but countries are obliged to reduce their import tariffs according to the Swiss formula using a coefficient of 33¹⁰. The effects of the WTO round are obtained by comparing the results of the base run and the scenario in 2014. Table 2 summarises the simulations.

Table 2. WTO Simulations

Experiment	Import Tariff Cut		EBA Adopted in
	Harbinson 1½	Swiss formula	Developed countries
01	X		
02	X		X
03		X	

Source: Brockmeier et al. (2005, p. 9).

4.3.1 Model results for the agricultural sector and the EU budget

The model presents results for the changes in net trade balances and related changes in CAP expenditure and impacts in tariff revenues. Table 3 presents the results for all the scenarios on the trade balance.

The first results show that the overall trade balance for the EU is favourable in all three scenarios, but that the situation is highly variable between products and the impact is highly negative for the agricultural sector in terms of trade balances. The results of the manufacturing and services sector are based on a General Equilibrium model in which the date for GTAP was fed (see Annex 4). Highly protected products, like beef or vegetables, lose considerably. However, trade liberalisation also has surprising positive effects for some products, due to the lower tariff barriers of countries to which the EU exports. The model predicts that in the dairy sector, which is one of the most protected sectors in the world, the EU would gain from the increased market access to other countries.

¹⁰ This is higher than the originally proposed 25, but the modellers considered an agreement impossible at the low level of tariffs.

Table 3. Changes in EU net trade balances of the simulations (\$ million)

	01	02	03
Wheat	-108	-100	97
Other crops	-618	-619	-498
Oil seeds	199	198	152
Rice	-124	-124	-176
Vegetables, fruits	-1338	-1287	-641
Cattle	250	248	600
Other animal products	352	353	459
Beef	-2672	-2673	-4068
Other meat products	-228	-227	76
Vegetable oils and fats	-693	-688	-95
Dairy products	223	226	1014
Sugar	797	794	969
Other food products	-5838	-5724	-4962
Beverages and tobacco	356	346	379
Primary products	153	163	136
Total agricultural	-9289	-9014	-6558
Manufactures	6109	6192	3480
Services	3648	3790	3650
Overall total	468	868	572

Source: Brockmeier et al. (2005, p. 11).

An implementation of the proposals of the Harbinson paper has a negative effect on the trade balances in the EU-27 for wheat, other cereals, rice, fruit, vegetables and plant products, as well as the processed oil and fat products, which show losses between €688 million and €693 million. A global liberalisation of agricultural trade leads to a relative increase in imports vs. exports for beef as well as pork and poultry meat production, resulting in a drop of the EU trade balance of €2,672 million. The implementation of the Harbinson paper, however, has a positive effect on the EU trade balance for oil seeds (€199 million), milk and dairy products (€223 million) and sugar (€794 to €797 million).

The model also shows a positive development for sugar. This is caused by the fall in imports from ACPs and LDCs as the preferences are eroded, i.e. their prices are reduced as the EU internal price falls due to the tariff cuts. This fall in preferential imports is not replaced completely by imports from other exporters, thus creating the positive final balance improvement, but this is not due to an improvement in the actual trade performance of the sector.

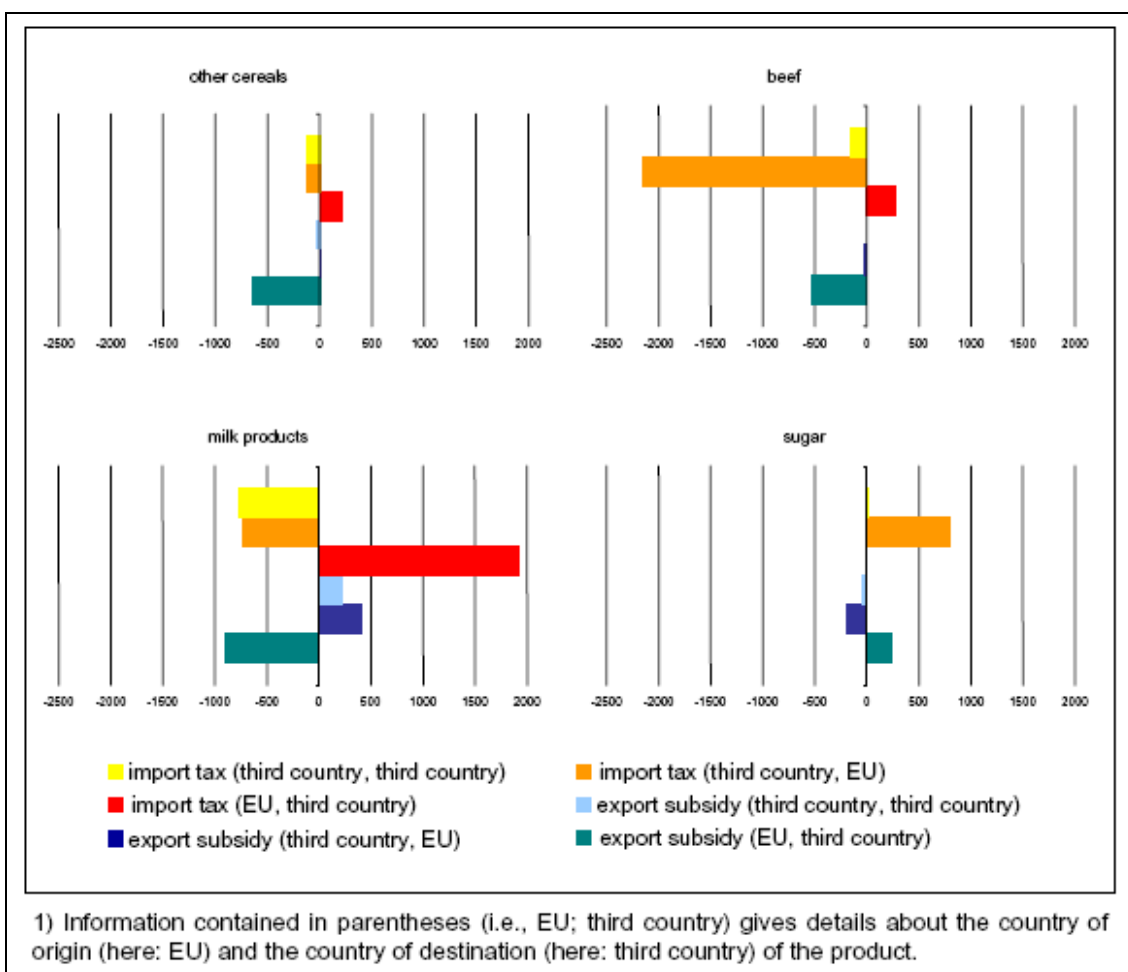
The model results allow for the decomposition of trade effects and the identification of the tariff impacts. Figure 5 shows the impacts of the Harbinson proposals. This is the graphical description of the different implications of tariff reductions, allowing us to see the complexity of the impacts that affect trade flows.

On the basis of decompositions, the following statements can be made:

- The elimination of EU export subsidies (see export subsidy (EU, third countries) in Figure 5) has a negative effect on the trade balance for other cereals, wheat, dairy products and beef. A complete elimination of the export subsidies has a particularly negative influence on these products.

- Other cereals, wheat and in particular dairy products gain from the elimination of import duties of third countries against the EU (see import tariffs (EU, third country in Figure 5), which has a positive effect on changes in the trade balance. This development is particularly significant in the high worldwide protection of dairy products. A less global elimination of import tariffs according to the EU recommendations would accordingly lead to losses in these areas for the EU.
- The reduction in tariffs benefits manufacturing and services, which exceeds the trade balance loss in the agricultural sector.

Figure 5. Decomposition of estimated trade effects of the Harbinson proposal



Source: Brockmeier & Salamon (2004, p. 6 of English Executive Summary). Results from a previous model analysis for illustration, the latest model runs do not show important differences and have not been decomposed.

4.3.2 Estimated impact on tariff revenues

The GTAP model has estimated the impact on tariffs listed in the Table 4, and is estimated at approximately 5% of the tariff revenue or approximately €1,000 million in all scenarios. For the agricultural sector the fall is more significant in percentage, but it only accounts for a fraction of the total tariff revenue and Traditional Own Resources.

Table 4. Overall tariff revenues implications (% change)

TOR and tariff revenues (% change to base scenario)				
		01	02	03
European Union total		-5 %	-5 %	-5 %
Agricultural sector		-20 %	-19 %	-21 %
TOR and tariff revenues in €million				
TOR	10355	9407	9395	9406
of which Agriculture CCT	866	695	698	683

As the results show, the fall in tariff revenues is not expected to be counterbalanced by increased revenues from imports. The tariff revenue impact in the agricultural sector is higher with the Swiss formula, as it focuses more sharply on cutting high tariffs. The tariff revenue fall of agricultural products is also much higher as the high tariffs are accumulated in particular in the agricultural products.

4.3.3 Estimated direct impacts on the CAP budget

The base scenario assumes that the EU budget in the no-change scenario would reach €48,829 million. In all scenarios this expenditure falls due to the elimination of the export subsidies and a fall in the size of the agricultural sector of the EU.

The first more obvious saving occurs from the total phasing out of the export subsidies by the end of the next Financial Perspectives (2013). The model assumes that this will be one of the decisions adopted by the WTO in all scenarios. This creates a savings compared to the no-change scenario of an estimated €3,945 million.

The changes in the EU budget expenditures on direct payments and other subsidies due to the trade implications and the effects on production are very small thanks to the decoupling of direct payments from production. The drop is estimated in all cases to be less than 0.2% of direct payments, less than €100 million. In total, falls in all subsidies together (area premiums, output subsidies, subsidies on intermediaries) would not exceed €50 million.

No assumption is made on shifting the savings to other items. These will be either deducted from the budget altogether or more likely used to pay for further reforms or redistributed to other items, such as increasing the rural development heading. This is a political decision that will have to be taken once the agreement is clear.

The model assumes that the sugar policy does not hold and is dismantled as tariffs fall. Internal production falls, as do imports from ACP and LDCs. A particular attention is given to the sugar policy situation in the next section.

Abolishing export refunds has implications, however. Export subsidies exist due to the level of internal price support. Not subsidising exports requires internal prices to be reduced or production quotas to exist or excess production to be stored or destroyed. The second option is clearly not on the agenda, and thus the first step is required.

The model also does not consider the possibility that due to the trade liberalisation process, there might be pressure to offer further payments to the farming sectors affected, such as sugar or dairy.

It is interesting to note that WTO negotiations are not necessarily linked to an increase in budget expenditures for agriculture. On the contrary, had the EU not decoupled payments, but undertaken to reduce export subsidies and intervention, an increase in market access would have not only reduced production in various sectors but also direct payment costs, as land is put out of production and meat and dairy production reductions affect the headage payments. While the single farm payment scheme might in fact lead to a greater fall in production, the sustained level of support will ensure that less farmers leave farming altogether. Thus the often feared land abandonment due to decoupling might well be less severe than under the case of no decoupling.

Linking the eligibility of direct payments to an obligation to produce could have had important negative effects for farmers. Under the old system, farmers would not have been able to switch production or stop it in case costs exceed the returns. The combined effect of obligatory production costs under unfavourable conditions in addition to even lower prices could well cause more damage and land abandonment than decoupling, which is connected to land management obligations and guarantees for the continuation of correct practices on the land. If the terms of trade are adverse under the new reformed system, farmers can reduce production and land under use without losing their entitlement to direct support.

Therefore the model predicts on the expenditure side a limited effect on the budget mainly due to the abolition of export subsidies. As far as other budgetary areas are concerned, no analysis has been performed because the WTO process does not have a direct impact on expenditures.

4.4 Estimated impacts on Own Resources and net balances

The impact analysis on the Own Resources and net balances originates from a budget model based on exogenously estimated expenditures. This model was developed to analyse impacts on decisions to reform policies or Own Resources. The first application of the model can be found at Núñez Ferrer & Emerson (2000) and has been adapted for the enlargement and the introduction of different alternative correction mechanisms. For this analysis the model closely follows the rules of the present Own Resources mechanism and has been used to calculate the budgetary net balances at the end of the next financial perspectives.

At this stage no information is available on how the Commission has estimated expenditures per country for the recent Own Resources report (European Commission 2004a). To avoid differences in the estimated outcomes, the authors have estimated the expenditures in each country using the given net balance figures in the report, allowing the reader to compare results. Based on the growth rates projection used by the Commission, which the modeller requested, it was possible to estimate a comparable GNI for the year 2013. The modeller has assumed that for the base scenario the European Commission would have used recent TOR and VAT contributions and an estimation of the contributions of the new member states.

The modeller has used actual TOR and VAT contributions for the year 2004 based on the annual budget figures (European Commission, 2004d). GNI contributions were estimated using the net balances before the UK rebate published in the Commission's Own Resources Report of 2004 and the estimated GNI of the member states. The model has then estimated the UK rebate which closely matches the figure by the Own Resources report and producing a resources estimation for 2013 based on the estimated appropriations for payments that year as in the financial perspectives.

Net balance results for the year correspond very closely to those of the Own Resources report which indicates that the calculation of the UK rebate and the use of actual VAT and TOR should match closely the figures used by the Commission. These balances have also allowed an estimate of the overall expenditures of the budget for the year for each country, although it is

then not possible to attribute it to the different headings. There is no public information on the estimations on expenditure on the CAP or Structural Funds in the countries for that year.

The rapid analysis for this short study did not allow for an analysis of the distribution of the cuts in import tariffs by country, except for the changes in Germany and France. For other countries, the shares in the tariff revenue fall will be distributed based on the past distribution of the CCT revenues. For this exercise the agricultural levies and sugar levies have also been completely deducted which reduces the TOR revenues further (by approximately €300 million).

VAT contributions are assumed to increase in proportion to GNI. This is because no change of the Own Resources mechanism is assumed in this analysis and because the VAT resource is capped. This capping has ensured that VAT contributions are for many countries similar to a GNI contribution.¹¹ Changes in consumption patterns in the member states are thus largely neutralised by the capping mechanism.

Two model results are presented. The first presents the effect on net balances from a TOR change assuming first no change in the CAP expenditures to isolate the tariff effect. This is also not an unrealistic assumption, as the savings could be redirected to other CAP areas of intervention to compensate the losers of the liberalisation process through direct payments, such as the sugar producers. This would maintain the financial expenditure distribution amongst countries unaltered.

If the compensation is time limited and regressive, however, it is possible that the savings would materialise by 2013. Thus, the second model result integrates the savings from the CAP. Savings from export subsidies are distributed amongst the member states according to the following criteria: An amount of export subsidies equivalent to the average for the period 2000-03 is reduced from the expenditures of the EU15 based on their shares of export subsidies in 2003 according to the financial accounts for the year by the European Commission (2004c). For the new member states, the remaining sum is distributed according to the distribution of CAP expenditures as was agreed in the accession negotiations for the year 2006 (DG Agriculture, Fact sheet MEMO/02/301, 20 December 2002). It is assumed that €100 million will be distributed 30/70 between Bulgaria and Romania. Other savings are distributed in the same manner. The effect is minimal, as the sums are very small.

Given the small differences in the magnitudes of the tariff effects in all simulations, only the case of the Harbinson1½ (simulation 2 with EBA) is presented. It shows the transmission of the changes to the actual contributions of the member states.

The model does not take into account that changes in international trade can have an effect on the growth rates of the EU. In fact, it is assumed that trade liberalisation should benefit the EU, increasing economic growth in theory.

Case 1 - Effects of the tariff reduction on budget contributions

Annex 1 lists the effects for the member states' contributions to the budget, with figures before and after the UK correction under the present rebate mechanism; the relevant figures are of course after those with the UK rebate. Countries that had proportionally higher contributions than their share in GNI contributions 'benefit'. Denmark reduces its contribution by 4%, Estonia

¹¹ "The resource based on value added tax (VAT). The VAT resource is levied on the statistical 'notional' harmonised VAT bases of member states, which is calculated on the basis of national VAT receipts. Furthermore, the notional VAT base is 'capped', where applicable, at 50% of each member state's gross national income (GNI) to reduce the effect of the slightly 'regressive' character of VAT. In practice, this turns the VAT-based own resource into a GNI-based resource for the countries concerned by the capping rule. The call rate on VAT cannot exceed 0.5 % of the base." COM(2004) 505 final.

by 2.9% and the Netherlands by 1.7%. Even the United Kingdom sees a reduction of 0.8 % in its contribution. No country suffers drastic increases due to higher GNI contributions; most are limited to 0.5% of their contribution. It is important to note the positive implication that the rebate is not affected, as TOR are excluded from rebate calculations.

The net balances of the countries do not change through tariff effects under the official net balance calculation method employed by the Commission, which cancels out tariff revenue changes. It is also necessary to take into account that savings or increased contributions from the CCT should not be regarded as a benefit or a loss, as it is a resource owned by the European Union and should not be considered a national resource. In fact, the 'benefits' can also be considered a 'loss', as countries that pay less through the TOR actually benefit less from the 25% they retain as administration costs, which is a real benefit for their exchequer.

Case 2 - Effects of a fall in CAP expenditures on net balances

Annex 2 presents the results of the fall in tariffs and CAP expenditures on contributions to the budget. As expected, member states benefit from a reduction in contributions to the budget. But interestingly the UK rebate increases, because even if the contributions to the budget fall, the net balance before the rebate deteriorates. The UK is a large exporter and the fall in export subsidies reduces the receipts more than it reduced contributions.

The most interesting aspect of the analysis is the net balance effect (EU official method) presented in Annex 3. As is the case for the UK, the saving in the agricultural sector of course can damage the net balance of the main beneficiaries of the export subsidies. Denmark and Belgium are the largest losers and see their net balance deteriorate respectively by 0.09 and 0.07% of GNI, followed not surprisingly by Ireland, the Netherlands and also Hungary. Ireland, Hungary and Lithuania see their net benefit from the budget fall by 0.06% of GNI. It is interesting to see that a saving in the budget for the CAP can have negative implications for some of the member states that are calling for a reduction in budget expenditures to reduce their net balances. France, while the largest loser from the CAP budget falls, also contributes a similar amount less to the budget, to a large extent neutralising the effect.

It is also interesting to note that the UK rebate is a considerable burden to the budget (last column in Annex 3, increasing the cost of the budget. Under the present system of rebates, the UK would be one of the lowest net contributors amongst the wealthy member states (see figure of 0.29 % of GNI in net contributions compared to -0.6% for the Netherlands or -0.53% for Germany), while the UK is expected to be the second-wealthiest EU member state (European Commission, 2004a). It is true that the UK would have in fact been the main contributor in the absence of a rebate and there is an argument for a possible compensation, but the rebate appears to be excessive. This is partly due to the fact that the rebate was not conceived in such a way as to correct for a change in the UK's wealth level; thus the rebate has increased with the UK's improved economic performance and not only due to an increase in the contributions. Furthermore there is now a strongly regressive factor in the UK rebate, as the main contributors and thus the wealthiest countries have their contribution to the UK budget rebate reduced to a 25% of the full amount, shifting the burden to the poorer members.

4.5 The special case of sugar

Sugar has long been a special case in international trade agreements. As one of the last bastions of the EU's heavily protected commodity regimes, sugar is still highly subsidised within the EU. It is therefore widely believed that a successful EU sugar reform may prove pivotal for this round of negotiations. This section discusses the interplay between WTO decisions and the

sugar regime, because it is one of the few agricultural sectors that can cause difficulties for the EU at the WTO negotiations, but also to the budget expenditures.

The EU is a major sugar producer worldwide and was placed second in 1999 in the ranking of all the major producers. In that year, the EU and Brazil, the most dominant sugar producers, accounted with Australia, Thailand and Cuba for about 70% of world exports. The EU is unique in a sense, because it is a major exporter of white sugar and an importer of raw sugar in the world market due to its commitments to import guaranteed levels of sugar from signatories of the sugar protocol (mainly ACP countries), and lately LDCs.

The dominant role of the EU in the world sugar market is the result of the high level of domestic support provided to its sugar sector. Through its Common Market Organisation (CMO) for sugar, the EU has established a minimum sugar support price, guaranteed by an intervention purchase system. To limit the amount of production eligible for price support, a quota system was introduced. The EU sugar producers (growers and processors jointly) are responsible for paying the costs to the EU budget of surplus quota-sugar disposal through the producer levies. The quota system is based on three quota types: an A quota to cover domestic consumption; a B quota determining the amount of sugar that could benefit for export subsidies; and finally a C quota which represents the excess over A and B that can be sold on the world market without export subsidies.

The EU is nevertheless an excess producer of sugar. Thus, a key aspect of the policy is that an equivalent amount of imports from the preferential tariff rate quota could be exported with export subsidies without having to declare them to the WTO. Even under this condition the EU was having difficulties to conform with the Uruguay Round Commitments (Huan-Niemi, 2003a). Thus, in order to stay within the final marketing year commitments of 2000-01, there was a 'temporary cut' of 498,800 tonnes in the total A and B-sugar quotas, which led to a decrease of subsidised sugar exports (A & B quota-sugar) while the unsubsidised sugar exports (C-sugar) have increased (Devadoss & Kropf, 1996).

The situation has become complicated, with the EU now having recently lost a challenge in the WTO on the export subsidy commitment exception used to channel the imports from the tariff rate quotas of the sugar protocol signatories and ACPs, which account for over half of the EU subsidised exports. The appeal also included the C-quota, considered by the WTO as a cross-subsidisation.

This has brought the DDA negotiations on sugar out of balance, inducing the EU to reconsider its negotiating position in this sector. In fact, Huan-Niemi (2003a) estimated that even under the original EU proposals to the WTO, it would have been difficult not to breach them.

However, the EU tabled a new proposal of its sugar regime on the 22nd of June 2005 for ratification by its member states. The main features of the proposal are a 39% reduction in the internal sugar price with no subsequent reduction in its quotas, and restructuring aid for the sugar industry. It has been argued that a subsequent reduction in quotas would force the most competitive producers out of the market, because of their inability to expand. It appears that this proposal is able to bring sugar in line with its WTO obligation. However, at the time of this report is not possible to assess its viability, but given that the EU is losing the case to protect the C quota and the TQRs, the Commission viewed this proposal as workable, while other stakeholders received it with mixed feelings.

The effects of such a reform would be that at face value the EU would save some money on export subsidies and domestic price support, although these 'savings' have to be distributed so as to compensate countries that enjoyed a special trade agreement with the EU, notably ACP countries. Also the new proposals would treat many ACP producing countries as 'domestic'

producers, because the guaranteed high prices received by those producers encouraged production without being naturally competitive in that sector.

According to Huan-Niemi (2003b), the EU could only maintain the present system of quotas with a 36% tariff cut, if prices were reduced by 25% and the C-quota and sugar protocol were not challenged. In the absence of the latter, it is clear that a reform would need to go well beyond such a cut.

Difficulties will arise even with this reform, if a WTO agreement imposes the Swiss formula of tariff cuts. The problem with the Swiss formula is that it will cut high tariffs more than low tariffs, ensuring no individual tariff exceeds 25%. Sensitive products such as sugar will be pressured to go through drastic reforms to protect the EU border from massive imports if this formula is to be implemented. The *ad-valorem equivalent* tariff for EU raw sugar is 169.5%. Thus the Swiss formula would cut the tariff by 85%, a big difference from a Harbinson option of a cut by 45%, which would keep the tariff around 90%. The Swiss formula would require a price cut of 67%, eliminating practically any price support, with a level which would correspond to a 'safety net' level (Huan-Niemi, 2003b).

In sum, a successful and strong sugar reform is crucial for the DDA negotiations as well as for the CAP expenditure. The anticipated proposal by the EU Commission is expected to address all these issues. It also addresses the possibility that the saved funds for export subsidies might be channelled for capacity building in competitive sugar-producing ACP countries, as a form of compensation for their losses in exporting sugar to the EU under the preferential trade agreement. This final point was not incorporated in the budget analysis performed in section 4, although there is an expectation that costs of compensation and restructuring would erode part of the savings.

5. Increasing trade competition and the role of the EU budget

As discussed earlier, the WTO process does not directly affect the budget in any large extent today, especially after the latest reforms for the CAP. The tariff income is a small share of the EU budget Own Resources, barely reaching 10% of the budgetary needs.

The expenditure side of the EU budget is still not directly directed towards trade-related issues. Nevertheless, if the EU is to support its competitiveness in the trade arena, the EU budget should be seriously reformed with the aim to increase its effectiveness and relevance. This is fully in line with the Lisbon strategy, which is considered a key aspect for Europe's trade performance. The budget can complement national investments in this area. The most important efforts, however, will still fall on national governments to perform the necessary macroeconomic and labour market reforms.

The EU budget is in fact still strongly affected by political agreements reached in the past between the EU15, which partially used the structural and agricultural funds as a compensation for structural differences or net balance issues.¹² The EU should ensure that the budget is spent where the best impacts can be expected. It should consider revisiting the way the structural funds and the CAP are operating to ensure that the instruments match the needs of the EU. Cohesion and competitiveness are not mutually exclusive operations.

¹² The CAP is considered a relic of an agreement between Germany and France to counterbalance the industrial supremacy of Germany. The cohesion fund is considered a compensation for the effects of the single market to Spain. The former Objective 6 regions of the structural funds were largely considered a method to reduce the negative net balance of Sweden and Finland (Nugent, 1999, p. 414; House of Commons, 2005, p. 16).

The European Union is facing a growing challenge in the future by its internal (e.g. ageing) and external (competitiveness) challenges and its budget is not in line with the growing priorities. Criticisms of the lack of rationale of the present budget are well documented in the literature. The recently Sapir report (Sapir et al., 2005) commissioned by the European Commission has called for a radical change. These calls are echoed by a number of European actors in the testimony presented to the House of Lords (2005), members of the Group of Policy Advisors of the Commission (Butti & Nava, 2003) and think tanks (Gros & Micossi, 2005).

The financial perspectives for 2007-13 have started the process of revisiting the functioning of the budget in line with the Lisbon strategy of the EU. It is, however, the view of many analysts that this process is not fast enough. The member states and the EU Commission will need to rethink where the best value for EU intervention lies, especially as the budget ceiling is increasingly restricted and needs are changing.

The present proposals for the financial perspectives appear to deny the profound changes in the nature of the EU and the challenges it faces. As a result of enlargement the EU has become considerably poorer (on average) and has incorporated regions with a GDP per capita at 30% of the EU average. This calculated, using Purchasing Parity Prices (PPP), nominal incomes are often near to 10% of the average (Eurostat data). Despite this radical change, the EU budget would still concentrate more on the EU15, thanks to the intensity of the CAP aid, which is based on past production, but also due to a very slow adaptation of the structural funds. The financial perspectives still allocates an important part of the funds to the EU15, thanks to a very low phasing out process for regions which have seen their average GDP as percentage of the EU rise due to the 'statistical effect'¹³ and the fact that CAP spending still accrues mainly to the EU due to the way it is allocated (based on an historical production reference period).

The lack of perspective in the budget is partially caused by the obsession with the net balances on the part of the member states. Any reform would affect the net balances, which are the outcome of difficult compromises, limiting the policy reform options drastically. This is reflected by the inability of the EU to accept the profound changes the enlargement has caused, leading to the present absurd and contradictory disputes on net balances and the future budget, with countries simultaneously calling to reduce budget expenditures, but defending their benefits from it. The EU should find a system to eliminate the net balance influence on strategic decisions.

The EU needs to concentrate its resources on improving Europe's competitiveness, as this will be crucial to maintain Europe's wealth and social standards. The social welfare standards need the means to be sustained.

The EU should reinforce its action in the development of human capital through the ESF and the investments in R&D. While the EU budget can only be a complement of the total investment in human resources or R&D, the long-term returns from an improvement in these areas are important. However, as Gros & Micossi (2005) make also clear, more funding is not enough without an increase in openness and competition inside the EU.

The programming for the use of EU structural funds should also improve, creating more integrated programmes and induce incentives also for governments to improve their programming through conditionality. Only the cohesion funds have at present a conditionality attached to excessive public deficits, but the Commission has rarely been able to successfully implement it. Apart from the conditionality of EU funds, time limits for EU support could be introduced or an element of reinforced conditionality, which should induce the local authorities

¹³ Statistical effect: As poorer countries enter the EU, the EU average GDP per capita falls. Some regions lose their eligibility for Objective 1 funds because of this.

to try to invest the support wisely on sustainable growth-oriented strategies. The performance reserve (see European Commission, 2000) of the structural funds has already taken this role, but its importance is relative, as it is an additional assistance for performing a structural operation and not a sanction for underperformance. The n+2 rule by which funds have to be used within a maximum of two years from the date these have been allocated also does not challenge the quality of the investment but rather addresses the funds' absorption speed.

For agricultural policy, the objectives should be clarified and narrowed. The blanket payments per hectare should be phased out, especially for the larger commercial farms, while the funds should concentrate on saving the rural areas from decline, by developing the infrastructures and providing relevant training in rural areas, with a strong focus on non-agricultural employment. The EU should aim at developing economic potential of rural areas as far as possible and assist them to access and benefit from the internal market. Information technologies could play an important role in this respect, as these reduce the impact of the distance to the market centres.

6. Summary and Conclusions

This paper has presented an analysis of the relationship between the EU budget and the process of trade liberalisation, in particular the likely effects of a WTO agreement. The analysis is structured in three main parts: the historical influence on the EU budget; the possible direct implications of the Doha round; and how the budget might react to future developments, including how it might better address the challenges facing the European Union.

Historically, the budget was not created to be a proactive tool in international trade. The linkages to trade were restricted to raising revenues for the budget or exporting excess production in the agricultural sector via subsidies. This is not surprising, as the budget expenditures were mainly limited to agricultural policy at first and only later to the structural funds. The first strong impact on the EU budget has arisen due to the integration of agricultural trade into multilateral trade negotiations following the Uruguay round. Due to the strong reliance of EU agricultural policy on a system of high tariffs and large export subsidies, such decisions have had a profound effect on the CAP, changing the policy nature and even objectives.

Agriculture has dominated trade negotiations ever since. For the EU it is an important domestic policy and for developing countries an important development area. Hence, agriculture remains the area in which the WTO process has the most direct effect on the EU budget. In other areas the effects on the EU budget are either small or indirect. Thus the implications of the Doha round for the budget will still mainly occur via the effects on the CAP. Export subsidies are likely to be eliminated in the coming years, producing a cost saving of €4,000 million, which can have implications for member states' net balances.

On budget revenues, it is estimated that the revenues from the Common Customs Tariff will fall by approximately €1,000 million, which is 1% of the EU budget at present. The shortfall is then collected through the GNI contributions of the member states. Thus these implications are fairly limited.

Tariffs do not have an effect on official net balances, as these are not taken into account for the purposes of net balance calculations. The savings, if not re-channelled into other expenditure areas in agriculture, will have implications on the net balances of the member states. It would damage the net balance of those countries that benefit from export subsidies, but do not register savings in their contributions to the EU budget of a similar magnitude. The savings, if not re-channelled into other expenditure areas in agriculture, will have different implications on the net balances of member states. These would diminish the net balance of those countries that benefit from export subsidies but do not see a savings in their contributions to the EU budget of a

similar amount. Large exporters, especially those with low contributions are the worst off. Hungary and the Netherlands see their net balances deteriorate by 0.06% of GNI and Denmark by 0.08 %. It is interesting to see that a saving in the budget for the CAP can have negative implications for some of the member states that are calling for a reduction in budget expenditures to reduce their net contributions.

While the direct impacts of the WTO on the EU budget are limited, it is important to consider the role of the EU budget in the future, given the EU's increasing domestic and international challenges. These arguments call for a deep revision of the budget and a speeding up of its restructuring in line with the Lisbon strategy and the need to promote Europe's competitiveness. Even the policies aimed at cohesion have to be improved. Increased growth potential in the poorer EU regions may accelerate convergence, cohesion and the reduction of regional disparities. This requires an update of the integrated planning framework. The paper also calls for an improvement in the support for human capital investments from the EU budget.

The future of the EU's economic strength and welfare depends on its competitiveness. The EU budget today is a partial 'relic' from the outdated objectives of a different kind of EU. Now, with countries with much lower GDP per capita having joined the EU, an ageing population and increased international competitive pressures, the present budget is losing touch with reality. The financial perspectives for the period 2007-13, while acknowledging the challenges ahead, do not present a sufficiently altered agenda.

The lack of such a perspective in the budget is partially caused by a preoccupation with the net balances of the member states. They are the outcome of difficult compromises that drastically limit policy reform options. This is reflected in the inability of the EU to accept the profound changes that enlargement implies, leading to the anomalous and contradictory disputes over net balances and future budgets, wherein countries simultaneously call for a reduction in their budget expenditures but also defend their benefits derived from it. The EU should try to find a system that eliminates this extremely unhelpful 'net balance influence' on such important strategic decisions.

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Annex 1. The Own Resources simulations – Tariff effect only, year 2014

A. Before UK correction, base scenario and after Harbinson proposal

Base scenario

	2014	TOR	VAT	GNI	TOTAL
Belgium		1026.5	426.8	3074.3	4527.6
Czech Republic		50.5	102.2	917.4	1070.0
Denmark		197	287.6	2075.6	2560.2
Germany		2091.2	3614.0	22716.7	28421.8
Estonia		6.7	11.2	109.5	127.4
Greece		132.1	337.0	2081.5	2550.6
Spain		676.9	1538.9	9418.8	11634.6
France		898.3	2933.1	18278.0	22109.4
Ireland		103.3	256.9	1611.0	1971.2
Italy		984.2	1908.5	14334.3	17227.0
Cyprus		9.5	16.9	154.1	180.5
Latvia		5.1	12.6	150.4	168.1
Lithuania		17	25.1	269.6	311.8
Luxembourg		12.8	39.6	242.2	294.6
Hungary		79	100.5	942.0	1121.5
Malta		5.4	5.6	46.6	57.6
Netherlands		1021.9	853.6	4909.0	6784.5
Austria		159.3	408.9	2516.3	3084.6
Poland		92.6	274.2	2463.2	2830.0
Portugal		93.8	264.4	1497.9	1856.1
Slovenia		14.1	36.9	319.8	370.9
Slovakia		25.1	46.5	432.7	504.2
Finland		75.3	235.5	1659.5	1970.3
Sweden		265.4	445.1	3152.9	3863.4
United Kingdom		2112.2	3273.4	20567.9	25953.5
Bulgaria		100	20.5	304.7	425.2
Romania		100	56.8	966.5	1123.3
Total		10355	17532	115212	143100

Harbinson proposal

	2014	TOR	VAT	GNI	TOTAL
Belgium		991.0	426.8	3106.9	4524.7
Czech Republic		33.7	102.2	927.1	1063.0
Denmark		62.6	287.6	2097.6	2447.8
Germany		1989.7	3614.0	22957.8	28561.4
Estonia		1.5	11.2	110.7	123.4
Greece		114.6	337.0	2103.6	2555.1
Spain		552.8	1538.9	9518.8	11610.4
France		802.1	2933.1	18472.0	22207.2
Ireland		78.4	256.9	1628.1	1963.4
Italy		933.1	1908.5	14486.4	17328.0
Cyprus		8.6	16.9	155.8	181.3
Latvia		4.7	12.6	152.0	169.3
Lithuania		15.4	25.1	272.5	313.1
Luxembourg		12.7	39.6	244.7	297.0
Hungary		71.8	100.5	952.0	1124.3
Malta		4.9	5.6	47.1	57.6
Netherlands		856.5	853.6	4961.1	6671.2
Austria		142.1	408.9	2543.0	3094.0
Poland		84.2	274.2	2489.4	2847.8
Portugal		79.2	264.4	1513.8	1857.4
Slovenia		12.8	36.9	323.2	373.0
Slovakia		22.8	46.5	437.2	506.5
Finland		70.6	235.5	1677.1	1983.2
Sweden		249.6	445.1	3186.3	3881.0
United Kingdom		1745.3	3273.4	20786.2	25804.9
Bulgaria		96.0	20.5	307.9	424.4
Romania		96.0	56.8	976.8	1129.5
Total		9132.3	17532.4	116435.3	143100.0

change	%
-2.9	-0.06%
-7	-0.65%
-112.4	-4.39%
139.6	0.49%
-4	-3.14%
4.5	0.18%
-24.2	-0.21%
97.8	0.44%
-7.8	-0.40%
101	0.59%
0.8	0.44%
1.2	0.71%
1.3	0.42%
2.4	0.81%
2.8	0.25%
0	0.00%
-113.3	-1.67%
9.4	0.30%
17.8	0.63%
1.3	0.07%
2.1	0.57%
2.3	0.46%
12.9	0.65%
17.6	0.46%
-148.6	-0.57%
-0.8	-0.19%
6.2	0.55%

B. After UK correction, base scenario and after Harbinson proposal, Tariff effect only, year 2014**Base scenario**

2014	TOR	VAT	GNI	Rebate	TOTAL
Belgium	1026.5	426.8	3074.3	337.8	4865.5
Czech Republic	50.5	102.2	917.4	100.8	1170.8
Denmark	197.0	287.6	2075.6	228.1	2788.3
Germany	2091.2	3614.0	22716.7	443.6	28865.4
Estonia	6.7	11.2	109.5	12.0	139.4
Greece	132.1	337.0	2081.5	228.7	2779.3
Spain	676.9	1538.9	9418.8	1035.1	12669.6
France	898.3	2933.1	18278.0	2008.6	24118.0
Ireland	103.3	256.9	1611.0	177.0	2148.3
Italy	984.2	1908.5	14334.3	1575.2	18802.3
Cyprus	9.5	16.9	154.1	16.9	197.5
Latvia	5.1	12.6	150.4	16.5	184.7
Lithuania	17.0	25.1	269.6	29.6	341.4
Luxembourg	12.8	39.6	242.2	26.6	321.2
Hungary	79.0	100.5	942.0	103.5	1225.0
Malta	5.4	5.6	46.6	5.1	62.8
Netherlands	1021.9	853.6	4909.0	95.9	6880.4
Austria	159.3	408.9	2516.3	49.1	3133.7
Poland	92.6	274.2	2463.2	270.7	3100.7
Portugal	93.8	264.4	1497.9	164.6	2020.7
Slovenia	14.1	36.9	319.8	35.1	406.0
Slovakia	25.1	46.5	432.7	47.5	551.8
Finland	75.3	235.5	1659.5	182.4	2152.7
Sweden	265.4	445.1	3152.9	61.6	3924.9
United Kingdom	2112.2	3273.4	20567.9	-7392.0	18561.5
Bulgaria	100.0	20.5	304.7	33.5	458.7
Romania	100.0	56.8	966.5	106.2	1229.5
Total	10355.2	17532.4	115212.4	0.0	143100

Harbinson proposal effect

	TOR	VAT	GNI	Rebate	TOTAL	change	%
Belgium	991	426.8	3106.9	337.8	4862.5	-3	-0.06%
Czech Republic	33.7	102.2	927.1	100.8	1163.8	-7	-0.60%
Denmark	62.6	287.6	2097.6	228.1	2675.9	-112.4	-4.03%
Germany	1989.7	3614	22957.8	443.6	29005	139.6	0.48%
Estonia	1.5	11.2	110.7	12	135.4	-4	-2.87%
Greece	114.6	337	2103.6	228.7	2783.9	4.6	0.17%
Spain	552.8	1538.9	9518.8	1035.1	12645.5	-24.1	-0.19%
France	802.1	2933.1	18472	2008.6	24215.8	97.8	0.41%
Ireland	78.4	256.9	1628.1	177	2140.5	-7.8	-0.36%
Italy	933.1	1908.5	14486.4	1575.2	18903.3	101	0.54%
Cyprus	8.6	16.9	155.8	16.9	198.2	0.7	0.35%
Latvia	4.7	12.6	152	16.5	185.8	1.1	0.60%
Lithuania	15.4	25.1	272.5	29.6	342.7	1.3	0.38%
Luxembourg	12.7	39.6	244.7	26.6	323.6	2.4	0.75%
Hungary	71.8	100.5	952	103.5	1227.8	2.8	0.23%
Malta	4.9	5.6	47.1	5.1	62.7	-0.1	-0.16%
Netherlands	856.5	853.6	4961.1	95.9	6767	-113.4	-1.65%
Austria	142.1	408.9	2543	49.1	3143.1	9.4	0.30%
Poland	84.2	274.2	2489.4	270.7	3118.5	17.8	0.57%
Portugal	79.2	264.4	1513.8	164.6	2022	1.3	0.06%
Slovenia	12.8	36.9	323.2	35.1	408.1	2.1	0.52%
Slovakia	22.8	46.5	437.2	47.5	554.1	2.3	0.42%
Finland	70.6	235.5	1677.1	182.4	2165.6	12.9	0.60%
Sweden	249.6	445.1	3186.3	61.6	3942.6	17.7	0.45%
United Kingdom	1745.3	3273.4	20786.2	-7392	18412.9	-148.6	-0.80%
Bulgaria	96	20.5	307.9	33.5	457.9	-0.8	-0.17%
Romania	96	56.8	976.8	106.2	1235.8	6.3	0.51%
Total	9132.3	17532.4	116435.3	0	143100		

Annex 2. The Own Resources simulations – tariff and CAP savings effect, year 2014

A. Before UK correction, base scenario and after Harbinson proposal

Base scenario

	2014	TOR	VAT	GNI	TOTAL
Belgium		1026.5	426.8	3074.3	4527.6
Czech Republic		50.5	102.2	917.4	1070.0
Denmark		197	287.6	2075.6	2560.2
Germany		2091.2	3614.0	22716.7	28421.8
Estonia		6.7	11.2	109.5	127.4
Greece		132.1	337.0	2081.5	2550.6
Spain		676.9	1538.9	9418.8	11634.6
France		898.3	2933.1	18278.0	22109.4
Ireland		103.3	256.9	1611.0	1971.2
Italy		984.2	1908.5	14334.3	17227.0
Cyprus		9.5	16.9	154.1	180.5
Latvia		5.1	12.6	150.4	168.1
Lithuania		17	25.1	269.6	311.8
Luxembourg		12.8	39.6	242.2	294.6
Hungary		79	100.5	942.0	1121.5
Malta		5.4	5.6	46.6	57.6
Netherlands		1021.9	853.6	4909.0	6784.5
Austria		159.3	408.9	2516.3	3084.6
Poland		92.6	274.2	2463.2	2830.0
Portugal		93.8	264.4	1497.9	1856.1
Slovenia		14.1	36.9	319.8	370.9
Slovakia		25.1	46.5	432.7	504.2
Finland		75.3	235.5	1659.5	1970.3
Sweden		265.4	445.1	3152.9	3863.4
United Kingdom		2112.2	3273.4	20567.9	25953.5
Bulgaria		100	20.5	304.7	425.2
Romania		100	56.8	966.5	1123.3
Total		10355	17532	115212	143100

Harbinson proposal + CAP savings

	2014	TOR	VAT	GNI	TOTAL	change	%
Belgium		991.0	426.8	2998.8	4416.6	-111	-2.45%
Czech Republic		33.7	102.2	894.8	1030.7	-39.3	-3.67%
Denmark		62.6	287.6	2024.6	2374.8	-185.4	-7.24%
Germany		1989.7	3614.0	22158.7	27762.3	-659.5	-2.32%
Estonia		1.5	11.2	106.8	119.5	-7.9	-6.20%
Greece		114.6	337.0	2030.4	2481.9	-68.7	-2.69%
Spain		552.8	1538.9	9187.4	11279.1	-355.5	-3.06%
France		802.1	2933.1	17829.0	21564.2	-545.2	-2.47%
Ireland		78.4	256.9	1571.4	1906.8	-64.4	-3.27%
Italy		933.1	1908.5	13982.2	16823.8	-403.2	-2.34%
Cyprus		8.6	16.9	150.3	175.9	-4.6	-2.55%
Latvia		4.7	12.6	146.7	164.0	-4.1	-2.44%
Lithuania		15.4	25.1	263.0	303.6	-8.2	-2.63%
Luxembourg		12.7	39.6	236.2	288.5	-6.1	-2.07%
Hungary		71.8	100.5	918.8	1091.2	-30.3	-2.70%
Malta		4.9	5.6	45.5	56.0	-1.6	-2.78%
Netherlands		856.5	853.6	4788.4	6498.5	-286	-4.22%
Austria		142.1	408.9	2454.5	3005.5	-79.1	-2.56%
Poland		84.2	274.2	2402.7	2761.1	-68.9	-2.43%
Portugal		79.2	264.4	1461.1	1804.7	-51.4	-2.77%
Slovenia		12.8	36.9	312.0	361.7	-9.2	-2.48%
Slovakia		22.8	46.5	422.0	491.3	-12.9	-2.56%
Finland		70.6	235.5	1618.7	1924.8	-45.5	-2.31%
Sweden		249.6	445.1	3075.4	3770.1	-93.3	-2.41%
United Kingdom		1745.3	3273.4	20062.7	25081.4	-872.1	-3.36%
Bulgaria		96.0	20.5	297.2	413.7	-11.5	-2.70%
Romania		96.0	56.8	942.8	1095.5	-27.8	-2.47%
Total		9132.3	17532.4	112382.3	139047	-111	-2.45%

B. After UK correction, base scenario and after Harbinson proposal - tariff and CAP savings effect**Base scenario (no WTO change)**

2014	TOR	VAT	GNI	Rebate	TOTAL
Belgium	1026.5	426.8	3074.3	337.8	4865.5
Czech Republic	50.5	102.2	917.4	100.8	1170.8
Denmark	197	287.6	2075.6	228.1	2788.3
Germany	2091.2	3614	22716.7	443.6	28865.4
Estonia	6.7	11.2	109.5	12	139.4
Greece	132.1	337	2081.5	228.7	2779.3
Spain	676.9	1538.9	9418.8	1035.1	12669.6
France	898.3	2933.1	18278	2008.6	24118
Ireland	103.3	256.9	1611	177	2148.3
Italy	984.2	1908.5	14334.3	1575.2	18802.3
Cyprus	9.5	16.9	154.1	16.9	197.5
Latvia	5.1	12.6	150.4	16.5	184.7
Lithuania	17	25.1	269.6	29.6	341.4
Luxembourg	12.8	39.6	242.2	26.6	321.2
Hungary	79	100.5	942	103.5	1225
Malta	5.4	5.6	46.6	5.1	62.8
Netherlands	1021.9	853.6	4909	95.9	6880.4
Austria	159.3	408.9	2516.3	49.1	3133.7
Poland	92.6	274.2	2463.2	270.7	3100.7
Portugal	93.8	264.4	1497.9	164.6	2020.7
Slovenia	14.1	36.9	319.8	35.1	406
Slovakia	25.1	46.5	432.7	47.5	551.8
Finland	75.3	235.5	1659.5	182.4	2152.7
Sweden	265.4	445.1	3152.9	61.6	3924.9
United Kingdom	2112.2	3273.4	20567.9	-7392	18561.5
Bulgaria	100	20.5	304.7	33.5	458.7
Romania	100	56.8	966.5	106.2	1229.5
Total	10355.2	17532.4	115212.4	0	143100

Harbinson proposal effect

	TOR	VAT	GNI	Rebate	TOTAL	change	%
Belgium	991	426.8	2998.8	346.2	4762.8	-111.1	-2.28%
Czech Republic	33.7	102.2	894.8	103.3	1134	-39.3	-3.36%
Denmark	62.6	287.6	2024.6	233.7	2608.5	-185.4	-6.65%
Germany	1989.7	3614	22158.7	454.5	28216.8	-659.6	-2.29%
Estonia	1.5	11.2	106.8	12.3	131.8	-7.9	-5.67%
Greece	114.6	337	2030.4	234.4	2716.3	-68.6	-2.47%
Spain	552.8	1538.9	9187.4	1060.7	12339.8	-355.4	-2.81%
France	802.1	2933.1	17829	2058.4	23622.5	-545.2	-2.26%
Ireland	78.4	256.9	1571.4	181.4	2088.2	-64.5	-3.00%
Italy	933.1	1908.5	13982.2	1614.2	18438	-403.3	-2.14%
Cyprus	8.6	16.9	150.3	17.4	193.2	-4.7	-2.38%
Latvia	4.7	12.6	146.7	16.9	180.9	-4.2	-2.27%
Lithuania	15.4	25.1	263	30.4	333.9	-8.2	-2.40%
Luxembourg	12.7	39.6	236.2	27.3	315.8	-6.1	-1.90%
Hungary	71.8	100.5	918.8	106.1	1197.2	-30.3	-2.47%
Malta	4.9	5.6	45.5	5.2	61.2	-1.7	-2.71%
Netherlands	856.5	853.6	4788.4	98.2	6596.7	-286.1	-4.16%
Austria	142.1	408.9	2454.5	50.3	3055.8	-79.1	-2.52%
Poland	84.2	274.2	2402.7	277.4	3038.5	-68.9	-2.22%
Portugal	79.2	264.4	1461.1	168.7	1973.4	-51.4	-2.54%
Slovenia	12.8	36.9	312	36	397.8	-9.1	-2.24%
Slovakia	22.8	46.5	422	48.7	540	-13	-2.36%
Finland	70.6	235.5	1618.7	186.9	2111.7	-45.5	-2.11%
Sweden	249.6	445.1	3075.4	63.1	3833.2	-93.2	-2.37%
United Kingdom	1745.3	3273.4	20062.7	-7575	17506.4	-872.1	-4.70%
Bulgaria	96	20.5	297.2	34.3	448	-11.5	-2.51%
Romania	96	56.8	942.8	108.8	1204.4	-27.7	-2.25%
Total	9132.3	17532.4	112382.3	0	139047	-4053	-2.83%

Annex 3. Impact of the CAP export refunds savings on net balances

	CAP expenditure fall due to end of export subsidy (€million)	Base scenario no rebate (1)	Harbinson No rebate (2)	Change % (2)-(1)	Base scenario With rebate (3)	Harbinson With rebate (4)	<u>Change Harbinson to base with rebate (4)-(3)</u>	<u>Change to Harbinson non rebate Rebate effect (4)-(2)</u>
Belgium	413	1.51	1.42	-0.09	1.41	1.32	<u>-0.09</u>	-0.10
Czech Republic	63	3.61	3.58	-0.03	3.51	3.48	<u>-0.03</u>	-0.10
Denmark	253	-0.2	-0.28	-0.08	-0.3	-0.37	<u>-0.07</u>	-0.09
Germany	460	-0.53	-0.51	0.02	-0.54	-0.53	<u>0.01</u>	-0.02
Estonia	7	3.88	3.85	-0.03	3.78	3.75	<u>-0.03</u>	-0.10
Greece	26	1.71	1.73	0.02	1.61	1.63	<u>0.02</u>	-0.10
Spain	115	0.11	0.13	0.02	0.02	0.04	<u>0.02</u>	-0.09
France	798	-0.3	-0.31	-0.01	-0.4	-0.41	<u>-0.01</u>	-0.10
Ireland	169	0.54	0.48	-0.06	0.44	0.38	<u>-0.06</u>	-0.10
Italy	288	-0.3	-0.29	0.01	-0.4	-0.39	<u>0.01</u>	-0.10
Cyprus	3	-0.2	-0.19	0.01	-0.3	-0.28	<u>0.02</u>	-0.09
Latvia	10	4.13	4.11	-0.02	4.04	4.01	<u>-0.03</u>	-0.10
Lithuania	26	4.17	4.11	-0.06	4.07	4.01	<u>-0.06</u>	-0.10
Luxembourg	0	6.42	6.45	0.03	6.32	6.35	<u>0.03</u>	-0.10
Hungary	98	3.64	3.58	-0.06	3.54	3.48	<u>-0.06</u>	-0.10
Malta	0	1.7	1.74	0.04	1.61	1.64	<u>0.03</u>	-0.10
Netherlands	521	-0.54	-0.60	-0.06	-0.56	-0.62	<u>-0.06</u>	-0.02
Austria	34	-0.2	-0.18	0.02	-0.22	-0.20	<u>0.02</u>	-0.02
Poland	209	3.9	3.85	-0.05	3.8	3.76	<u>-0.04</u>	-0.09
Portugal	23	1.49	1.50	0.01	1.39	1.41	<u>0.02</u>	-0.09
Slovenia	10	1.56	1.56	0.00	1.46	1.46	<u>0.00</u>	-0.10
Slovakia	27	3.58	3.55	-0.03	3.48	3.46	<u>-0.02</u>	-0.09
Finland	83	-0.17	-0.19	-0.02	-0.27	-0.28	<u>-0.01</u>	-0.09
Sweden	39	-0.47	-0.45	0.02	-0.48	-0.46	<u>0.02</u>	-0.01
United Kingdom	278	-0.63	-0.61	0.02	-0.31	-0.29	<u>0.02</u>	0.32
Bulgaria	30	4.34	4.28	-0.06	4.24	4.18	<u>-0.06</u>	-0.10
Romania	70	4.34	4.30	-0.40	4.24	4.21	<u>-0.03</u>	-0.09

Annex 4.

Description of the GTAP Modelling Approach

The analyses in this paper are based on the comparative static standard multi-regional general equilibrium Global Trade Analysis Project (GTAP) model. It provides an elaborate representation of the economy including the linkages between farming, agribusiness, industrial and service sectors of the economy. The use of the non-homothetic constant difference of elasticity (CDE) functional form to handle private household preferences, the explicit treatment of international trade and transport margins and a global banking sector which links global savings and consumption are innovative in GTAP. Trade is represented by bilateral trade matrices based on the Armington assumption. Further features of the standard model are perfect competition in all markets as well as a profit and utility maximizing behaviour of producers and consumers. All policy interventions are represented by price wedges. The framework of the standard GTAP model is well documented in the GTAP book (Hertel, 1997) and available on the internet (<http://www.gtap.agecon.purdue.edu/>). The GTAP model is implemented using the GEMPACK (General Equilibrium Modeling Package) Software, Version 8.0, and RunGTAP, Version 3.23 (Harrison & Pearson, 1996).

Extension to the Model

Agricultural policy instruments are represented via price wedges in the standard GTAP model. Therefore, the Standard GTAP model is complemented with an explicit modelling of the most important policy instruments of the Common Agricultural Policy (CAP).

Due to the implementation of the WTO negotiations' outcome, the EU trade regime, and consequently also the prices on the internal market, will be changed. How does this affect the raw milk and sugar market which are both regulated via quantitative restrictions? Whether an implemented quota restricts production depends on the actual price reduction caused by the changing trade regime. If the market prices exceed production costs, a quota rent exists, and the quota is binding. When the relevant price drops below production costs the quota rent disappears and the quota might become non-binding. Thus, a quota module would be favourable that allows for a binding and a non-binding quota system in dependence of the economic environment. Such a formulation can be integrated into the GTAP model in the form of a complementary approach (Bach & Pearson, 1996; Van Tongeren, 2002). This approach enables the model to endogenously switch between binding and non-binding states. Additionally, the quota rent is determined endogenously as well.

Another important modelling issue is related to the Mid-Term Review (MTR) of the EU. Following the approach of Frandsen, Gersfeld & Jensen (2002), we introduce an additional land subsidy rate into the model that is equalised across all sectors entitled to direct payments. With the implementation of the MTR, the existing domestic support measures are converted into a region-specific fully decoupled land area payment, while budgetary outlays for total domestic support are held constant.

Modelling budgetary impacts

The EU budget is introduced in the GTAP model using an innovative Social Accounting Matrix (SAM). This SAM not only covers the expenditures and revenues of already existing agents (e.g. producers, government, private household, etc.), but also of the European Agricultural Guidance and Guarantee Fund (EAGGF). This EU budget receives 75% of the import duties for agricultural and non-agricultural products from producers, private households, the government and the capital account. The model is not developed to describe the impacts on the own

resources of the EU budget and the implications are calculated feeding the estimated % changes in tariff revenues to an Own Resources model presented in section 4.4, specifically designed to simulate the EU budget.

Projection Module

In addition to changes in the political environment of an economy, macroeconomic developments such as technological progress are of great importance for the economic growth of an economy. In order to take these changes into account, corresponding trends are incorporated into the present analysis. For this purpose an approach by Walmsley et al. (2000) is used that allows the inclusion of exogenous projections of the global and regional GDP and factor endowment into the extended GTAP model. In the simulations, technical progress is generated endogenously by the model, enabling the projected growth pattern.

Data Base and Aggregation

The simulations are based on the GTAP data base Version 5 with 1997 as base year. The data base consists of bilateral trade, transport and protection matrices that link 57 sectors in 76 countries or regions. In order to keep the calculation effort within a reasonable scope, the data base is aggregated into 23 regions and 19 sectors. The regional sets are put together with regard to geographical proximity, developmental status or membership in a certain regional agreement. With regard to the sectoral aggregation, it was important to distinguish between primary and processed agricultural production sectors as well as between production commodities regulated via a quota and sensitive products.

Annex 5 List of Abbreviations

ACP	African, Caribbean and Pacific countries
AMS	Aggregate Measure of Support
AVE	Ad-valorem equivalent
CAP	Common Agricultural Policy
CCT	Common Customs Tariff
CMO	Common Market Organisation
DCs	Developing Countries
DDA	Doha Development Agenda
EAGGF	European Agriculture Guidance and Guarantee Fund
EBA	Everything but Arms
ECU	European Currency Unit
ESF	European Structural Funds
EU	European Union
GATT	General Agreement on Tariffs and Trade
GATS	General Agreement on Trade in Services
GDP	Gross Domestic Product
GNI	Gross National Income
GTAP	Global Trade Analysis Project
LDCs	Least Developed Countries
m	Million
MTR	Mid-Term Review
PPP	Purchasing Power Parities
R&D	Research and Development
SPS	Sanitary and Phytosanitary
STES	State Trading Enterprises
TBT	Technical Barriers to Trade
TOR	Traditional Own Resources
TQR	(Preferential) Tariff Quota Rates
TRA	Trade-Related Assistance
TRIPs	Agreement on Trade-Related Aspects of Intellectual Property Rights
VAT	Value-Added Tax
WP	World Price
WTO	World Trade Organisation

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