

ACP

and



The value of the Sugar Protocol

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Abstract

The CMO Sugar, jeeringly called the 'Sweet Stronghold', is the last real market regime of the EU's common agricultural policy. This CMO defines the Sugar Protocol, one of the preferential trade agreements the EU maintains with a group of African, Caribbean and Pacific countries, known as the ACP-countries. The EU undertakes to import a specified quota of sugar from these countries and remunerates this quota with a guaranteed price that is often thrice as high as the world price for sugar. Not surprisingly, the Sugar Protocol has been of immense value to small sugar dependent countries. To quantify exactly the direct value of the Protocol, Fiji and Cuba, both sugar dependent, are analysed for their annual profit reaped from the Protocol.

This paper develops a simple model to estimate the direct value of the Protocol. By assuming that a competitive Fiji lost its ACP status in 2000 the value of the preferential trade agreement is estimated to lie between 1.31 and 1.68 per cent of GDP annually for the period 2000-2002. The outcomes depend crucially on whether Fiji is competitive or not. A non-competitive Fiji cannot sell the quantity normally sold to the EU on the world market. This scenario is disastrous and logically the value of the Protocol is higher, amounting to 2.52 per cent of GDP. In the longer run, the paper shows that the low price elasticity of world demand for sugar is a great barrier for the island's competitiveness and that consequently the value of the Protocol increases.

Cuba, that does not benefit from the Sugar Protocol, is the second country the paper investigates. To analyse the value of the trade agreement for this country, Cuba is assigned a 'hypothetical quota' on the basis of data gathered from several ACP countries. The value of the quota depends on its size, obviously, but the study shows that even a relatively small quota would still have contributed to between 0.7 and 1 per cent of GDP annually.

The EU Sugar Regime stands on the brink of reform and this paper analyses how this changes the value of the Protocol. The most important assumption is a world sugar price increase of 30-38 per cent. The value of the quota diminishes in the light of this development. For Fiji the value decreases to between 1.38 and 1.08 per cent. A large decrease but still a considerable value. Cuba, assumed to be competitive on the world market, profits greatly from the world price increase and the value of the Protocol decreases accordingly to around half a per cent of GDP. Again, the importance of the ability to compete is shown, as is the world sugar price increase, the extent of which determines a countries ability to compete. The survival of many a national sugar industry depends on the nations ability to compete and the extent to which world prices increase once EU border protection disappears.

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Introduction

The value of the Protocol

The common agricultural policy of the European Union is a heavily debated policy. It is made up of many common market organisations of which most have been reformed in compliance with WTO regulation. However, the CMO Sugar has long escaped reform and, being the last real market regime, it is jeeringly called the 'sweet stronghold'. One of the sharply criticised aspects of the CMO is the lack of competition it brings about. It does so by protecting the Union's borders against outside influences and by regulating supply. Preferential access is granted to some privileged countries in the form of the Sugar Protocol and Most Favoured Nations clauses, which are part of the protectionist nature of the market organisation. But these preferential trade agreements are obviously very important for the privileged countries; amongst these the so called African, Caribbean and Pacific group, or ACP countries. This results in a strong lobby from this group to keep in place the CMO as it stands.

Recently, reforms have been announced following a WTO ruling against the EU's dumping practices on the world sugar market. It seems inevitable that the CMO will be reformed and that will mean a serious blow to the ACP states. This essay tries to quantify the value of the Sugar Protocol. It does so by analysing the sugar industry of Fiji that has the ACP status and has benefited from the Protocol for long. Also, the hypothetical value of a quota under the Sugar Protocol for another island, Cuba, is discussed. This country has the ACP status, but has acquired so only recently and does not (yet) benefit from the Protocol.

However, in order to understand the workings of the CMO and the Protocol it is important to look at the CAP as a whole first. This is done in the first chapter. Why has a common agricultural policy been installed and by which principles does it 'live'. Which objectives have been the pillars to its creation and how does it work. The second chapter then investigates in more detail the specificities of sugar. The CMO Sugar, and the preferential trade agreements are outlined extensively and the supply and demand sides of the sugar market are analysed. Applying economic theory to the market reveals the workings of ABC quotas and the Variable Levies System in combination with price support. Although all levies have been 'tarrificated' conform the Uruguay Round Agreements Act, it is worthwhile to examine them to understand the protectionist history of the CAP. The inefficiencies of the EU sugar market are treated and reforms are shortly introduced.

Then, in the third chapter, it is time to introduce the two countries. Fiji is to start. In order to quantify the value of the Protocol, data is gathered and necessary assumptions are made. One of the most important is that only direct costs are estimated. In this chapter,

reform is left for what it is for now. A relatively simple model shows us how important the Protocol is to this specific country. The value differs with the varying assumptions of competitiveness and time. Furthermore, the analysis shows that being competitive is a crucial aspect when the Protocol should disappear. Fiji also faces the problem of the low price elasticity of demand on the world market for sugar.

Cuba is not assigned a quota under the Protocol, but it may be very interesting to see what value a quota could have had for this island. In trying to quantify the value in this case, Cuba is assigned a hypothetical quota based on data gathered from four other ACP countries. The size of the quota is crucial to its value, obviously, but the paper shows that the value is substantial regardless of the size. The long recession the island was confronted with in the 1990s could have been avoided to some extent in the presence of a quota.

In the fourth chapter the value of the Protocol is analysed assuming one big difference as opposed to the previous chapter. Reforms have now taken place, and trade barriers are assumed to have been taken down. The 'sweet stronghold' no longer exists and this has major consequences for the world price and the EU price. The effects of the liberalisation on the price elasticity of demand are shortly discussed but including them in the estimates is beyond the scope of this paper. The revenues the Protocol yields are estimated again, accounting for a higher sugar price. The value of the Protocol decreases considerably but is still quite large in some scenarios. After the estimation of a considerably high value of the Protocol, it is time to face the drawbacks of the policy. These are discussed in one of the last sections of chapter four. The Protocol does not at all seem fair or equal.

The last chapter summarizes shortly the analyses of the first two chapters and then reports the findings for the two countries. The estimates of the value of the Protocol are compared.

Chapter 1:
Common Agricultural Policy

1.1. Introduction

Before trying to understand the profits countries may reap from preferential trade agreements with the EU, it is straightforward that the common agricultural policy as a whole is treated. In the following, the common agricultural policy is discussed as are its presence and the tools of which it makes use to protect the EU internal market from external influences. First of all, the reasons for the CAP's existence are discussed. What principles does it adhere to and what does it try to achieve? Then the instruments that it has at its disposal are treated one at a time. Finally, the aspect of welfare and distribution is given appropriate attention as is the last item in this chapter, the phenomenon of dumping.

The three principles of the CAP, Community preference, solidarity amongst Member States and the principles of a single market, all show the protectionist nature of the policy. The severe criticism the CAP has had to endure might lead one to question why a protectionist agricultural policy should be in place. As it turns out, the insurance of a fair standard of living is the most important reason. The four other objectives are clearly inferior and even contradictory.

The instruments the CAP used work with variable levies, import levies when the world price is lower than the EU internal price and export levies when the EU internal price is lower than the world price. In practice, import levies were the most important instrument, whereas now almost all agricultural sectors are protected by tariffs. The Variable Levies System, or VLS, was the most important instrument as it covers over 90 per cent of EU agricultural output. The VLS was often combined with intra-EU price support, through which EU farmers received a specified price for a certain quantity. With the URAA, there was a tariffication of all nontariff barriers and in most sectors the VLS disappeared, but the level of protectionism does not seem to have altered all that much. Besides these two instruments, the CAP makes use of supply quotas, deficiency payment schemes and direct income payments.

The chapter makes clear that, in terms of welfare, farmers gain and consumers lose from the policy. However, even amongst farmers the distribution of welfare is highly unequal. Finally, the economics of dumping are explained. The two necessary conditions of a segmented market and imperfect competition are met in most agricultural sectors. The CAP distorts market structure and the high level of protectionism enables the EU to dump its products on the world market.

1.2. Why the CAP?

Being the most heavily criticised policy of the European Union, there seems to be ample support for a case for the Common Agricultural Policy. The Internet hints at the controversy that exists around the CAP. The protectionist nature of the policy runs counter with the aims of the WTO and has caused many disputes with trade partners. Other criticisms¹ arise over welfare losses, small income support for farmers (since the benefits are said to leak to input suppliers) and the disproportional taxation of consumers. The CAP is even known to cause financial transfers between Member states, exporting Member countries gaining from agricultural policy and importing Members losing. But how does the CAP work and can a case for the CAP be made? If there should be so many negative direct and indirect effects, why is there such a protectionist Common Agricultural Policy? In this section the reasoning of the policy makers is investigated and a short historical overview is given.

J. Pelkmans (1997)² argues that “an economic case for the CAP’s income support is difficult to make in a market economy where economic agents in other sectors also face the risk of gradual or sudden income decline.” However, he goes on to explain the special features of agricultural income that help explain aspects of agricultural policy. First of all, since consumers consider “most agricultural produce as part of the food budget”, income elasticities are low. Frank (1997) explains this in further detail with Engel’s Law, which states that with rising incomes, the share of expenditures for food products declines. It suggests that consumers increase their expenditures for food products (in % terms) less than their increases in income. This means that if demand for agricultural products is to rise this expansion must arise from increases in population levels instead of income levels. Second, there has been a structural excess supply due to a technological innovation rate larger than the population increase. So supply has increased faster than demand, which logically means a downward pressure on prices and thus on farmer’s income.

However, this need not be a problem as yet, since labour mobility can adjust to prices and incomes. If labour would migrate from the agricultural sector to the secondary and tertiary sector, the incomes of the remaining farmers need not drop. If the price falls, some farmers should thus leave the industry but they will typically not do so “once settled and capital investments will have to be recouped”³ A price fall would then only marginally increase

¹The Free Encyclopedia, http://en.wikipedia.org/wiki/Common_Agricultural_Policy.

² J.Pelkmans, European Integration, Methods and Economic Analysis, Open University of the Netherlands, Longman, New York, 1997.

³ Idem

demand, because of the low price elasticity of demand but would leave (the excess) supply nearly unchanged. The result is a “structural downward pressure on absolute agricultural income, [...], as well as on relative agricultural income.”⁴ In addition, short run supply side conditions and shocks such as bad weather add to price volatility and threaten the short-term stability of income.

To guarantee farmers a reasonable income, the EU feels it has to step into the arena and intervene in the market by erecting trade barriers and introducing income-supporting policies. Before analysing exactly how the CAP works, a short overview of the developments over time concerning the CAP is given.

With the memory of postwar food shortages still lucid, European policymakers had agriculture high on their agenda. This is reflected in the signing of the Treaty of Rome, agriculture being one of the key foundations of the European Community. The general objectives of a common agricultural policy were defined in this Treaty and in July 1958, the principles of the Common Agricultural Policy were set out at the Stresa Conference. In 1960, the six founding Member States adopted the CAP mechanisms and two years later, in 1962, the CAP came into force. The CAP is comprised of a set of rules and mechanisms, which regulate the production, trade and processing of agricultural products in the European Union. Extra attention is directed towards the development of rural areas.

Because of the large share of the CAP in the EU budget and the extent of sovereignty transferred from the national to the European level, but also because of the symbolic idea of (traditional) farming, the CAP is regarded as one of the most important policy areas. The significance of the CAP, nowadays, is also portrayed by the fact that it is directly related to the Single Market and the EMU, two key areas in achieving the European integration. Over the years many reforms have been proposed and implemented, of which the Uruguay Round is the most famous. In November 1992, the EU and US settled most of their differences on agriculture in a deal known informally as the “Blair House accord”. However, criticism on the CAP is still growing and many countries loathe the protectionist nature of the policy. In June 2003, European Commissioner Franz Fischler proposed new reforms that will have mammoth consequences for EU agricultural policy. “Our common aspiration is a CAP geared without reservation to economic, social and environmental goals”⁵. These reforms will be directed more attention later on.

⁴ Idem

⁵ European Commission, <http://europa.eu.int/comm/agriculture/newsdigest/2003/46.htm>

1.3. Principles

The first principle the CAP adheres to is that of a single market. European economic integration has reached a significant stage towards total economic integration, with its unification of monetary policy. The Customs Union is an essential element of the European Union's single market with its four basic freedoms: the free circulation of persons, goods, capital and services. The single market with no internal economic frontiers is the apparatus for the economic integration of the European Union. The European Commission lists a number of Community aims concerning the Union, three of which are “to foster world trade, to promote fair trade [...], to promote development elsewhere.”⁶ True, common agricultural policy would not be possible if there was no customs union and it is one of the major fields of cooperation within the Union. However, if one takes a look at the aims of the EC, it seems highly questionable whether the CAP fosters world trade or promotes fair trade.

The second principle is that of Community preference. The member states of the European customs union all apply a common external tariff on imports from outside the EU and a unified commercial policy toward third-country goods. Once an imported good clears customs in the EU, it moves freely throughout the full customs territory. However, the tariffs ensure the principle of Community preference. EU countries are favoured above importing non-EU countries because high trade barriers around their single market constrain the natural functioning of markets. Simply stated, it means ‘EU first’.

The last principle is financial solidarity among Member States. Member states will share levies and other revenues collected from their customs policy and will ensemble pay for intervention costs. The original Treaty of Rome provided for a common fund to finance the agricultural policy. The European Agricultural Guidance and Guarantee Fund (EAGGF) has been the biggest single item in the Community budget, since it came into existence. Naturally, it is a constant focus of consideration when the Council and the European Parliament are taking decisions about the Community budget. The Member States, irrespective of who will benefit most from the expenditure on agriculture, provide for the EAGGF's resources. This financial solidarity between rich and less rich Member States is one of the Community's basic principles. It is a prerequisite for a greater degree of economic and social balance within the Community - an aim that is coming to play an ever-greater role in agricultural policy. Besides the national contributions, the Community budget is also filled by revenue from customs duties on imports from non-EU countries. The common agricultural policy itself also provides

⁶ European Commission, http://europa.eu.int/comm/publications/archives/booklets/eu_glance/09/2000-1/back_en.htm

revenue, in the form of the duties on farm trade and the sugar levy. These are also entered in the Community budget as own resources.⁷

1.4. Objectives

The CAP has five objectives that are listed below in box 1. There is a problem of contradictions between objectives as pursued in practice and between principles and objectives, which is touched upon in this section.

Box 1 CAP objectives

1. Increase agricultural efficiency
2. Ensure fair standards of living for farmers
3. Stabilise agricultural markets
4. Assure availability of supply
5. Ensure reasonable prices for consumers

It is quite obvious from practice that the second objective is by far the most important. The CAP has pursued policy in such a manner that it contradicted with some of the objectives and principles stated above. Article 39 of the Rome Treaty lists as the first objective to increase agricultural efficiency by promoting technological progress but in practice it has been instrumental to the second objective, namely “to ensure a fair standard of living” for farmers. Although Kelsh (2003) shows that “[b]ased on the Leetmaa, *et al.* analysis, it appears that most EU countries continued to experience technology-based productivity growth following the MacSharry reforms while other important countries such as Germany, France, and Spain registered growth in efficiency”⁸, it always remains a problem to identify exactly what part of growth has been contributed by the CAP. Besides, “productivity increases should be matched by a decrease in factor inputs, especially labour, before efficiency translates into (fair) incomes” (Pelkmans 1997) but the Treaty is silent on the issue of the desirable rate of labour mobility.

Another thing that seems contradictory about the CAP can be found in the Treaty of Rome, where article 18 mentions the Member States’ ‘readiness to contribute to the development of international trade and the lowering of barriers to trade’. This runs directly counter to the protectionist spirit of the agricultural policy and the EU preference principle. In

⁷World Confederation of Labour, <http://www.cmt-wcl.org>.

⁸ Kelsh, D., Agricultural productivity: Possible implications for Enlargement and WTO Negotiations, www.ecostat.unical.it/2003agtradeconf/Contributed%20papers/kelch.pdf, 2003.

addition, the CAP has totally disposed of the principle of trade liberalisation but this contradicts the fifth objective.

All things considered, the CAP objectives run counter to some of the most important EU principles and this makes it a heavily debated policy. Understanding the principles and objectives it is time to understand the instruments. How does the CAP work?

1.5. URAA

Before answering this question, it should be noted that the CAP's workings changed in the mid 1990s. In the Uruguay Round Agreements Act (URAA), the EU agreed to engage in gradual liberalisation. The reforms started in 1995 and brought a regime of import restrictions that was more transparent. Quantitative import restrictions, like variable levies, were replaced by bound tariffs. Besides, ceilings on the levels of export subsidies were introduced, as were provisions on minimum market access and agricultural support. Maechler and Shiells (1999) describe thoroughly the reforms the URAA brought, but for this paper the tariff-related provisions will suffice.

All nontariff barriers were to be converted to ordinary customs duties and tariffs were bound and to be reduced over a period of six years. All variable levies had to be converted to tariffs, a process called 'tariffication'. Thus, the Variable Levies System, as described below, is no longer in place but instead of levies there are tariffs that protect the market to a slightly lesser extent. These "[t]ariffs must be reduced over six years by an unweighted average of 36 percent in equal annual reductions from their 1986–88 base period levels with a minimum cut of 15 percent per tariff line. By the end of implementation period, import tariffs must be bound at their final level"⁹.

The threshold prices were abolished and all variable levies were replaced with fixed tariffs (in specific or ad valorem terms). The major exception was the "vegetable and fruit sector where the previous reference price system was replaced by an "entry price" that acts as a [...] minimum import price system".¹⁰ One might wonder whether the EU has moved to a regime of fixed tariff rates. Indeed, Maechler and Shiells demonstrate that the URAA is likely to yield little actual agricultural trade liberalization in the EU. Patrick Messerlin (2003) seems to agree and shows that total support to the EU's agriculture has been almost unchanged since 1995. The process of tariffication resulted in high tariff equivalents to the levies and these provide for a significant level of border protection, even after the reductions. Tariffs remain

⁹ Maechler, A.M. and Shiells, C.R., An Assessment of Agricultural Trade Liberalization by the European Union in the Context of the WTO, UCSC Department of Economics Working Paper No. 427, 1999.

¹⁰ Idem

high, and few new trade opportunities have been promoted, whereas other protectionist measures that are allowed under the URAA have been implemented.

“The URAA did not deliver the liberalization dynamics it was supposed to generate. It may even have put the Doha negotiators in a situation worse than the one faced by the Uruguay negotiators a decade ago. This is because today, many farmers and a noticeable share of the public opinion in protectionist OECD countries are convinced that agriculture was liberalized by the Uruguay Round, and that this liberalization has been the cause of all their difficulties since 1995. This belief is wrong. [...] [T]here has been no liberalization since 1995, and current farmers’ difficulties are mostly self-inflicted by existing domestic farm policies. In other words, Doha negotiators will try to launch a liberalization, whereas many people believe that there has already been a welfare-deteriorating liberalization—the worst situation possible from a political perspective.”¹¹

Messerlin advocates “an ‘uniform farm tariff’ policy (the same tariffs on all farm products)”, which would allow for resources to be allocated in a welfare enhancing way. This way, comparative advantages of OECD countries, as well as developing countries, will be revealed.

1.6. Instruments

To ensure farmers a fair standard of living, the CAP uses several income protecting methods. Nowadays, tariffs protect the EU borders. But before 1996, the Variable Levy System (VLS) with or without intra-EU price support was a predominate policy in most agricultural sectors. Besides the VLS, there are Deficiency Payments Schemes (DPS), Direct Income Payments (DIP) and Supply Quotas (SQ), which rest at the CAP’s disposal. Often a combination of income protection methods resided. In this section, the economics of each system is analysed and in the next welfare effects are distinguished.

1.6.1. The Variable Levy System

The CAP used the variable levy system as its main policy and it covered about 90-95 percent of the European Union’s agricultural output. This system of income protection “shields domestic agricultural prices from those in the world market by import levies, if the world market prices are lower, and by export levies, if world prices are high.” (Pelkmans, 1997, p. 168) In practice, of course, mainly import levies were realised and this way EU agricultural prices were kept artificially high. The VLS is designed to protect EU markets from non-EU supply. It shields the domestic market from external effects, so an increase of non-EU supply will not affect the domestic price, but an increase in EU supplies will. Why variable? Well, the

¹¹ Messerlin, P.A., Agriculture in the Doha Agenda, World Bank Policy Research Working Paper 3009, April 2003.

world price in most agricultural sectors is highly volatile. Thus, the levy has to be able to adapt, in some cases daily although the Uruguay Round has been somewhat embanked the variability of the levies. Because the VLS has created a long-term deviation from the world price, it is a true income policy. The economics of this policy are best explained using a graph (cf. Pelkmans (1997)¹²).

In the event that the EU is an importer of good x , the EU's self-sufficiency¹³ price lies above P_w (See figure 2). In order to ensure farmers of a fair income, the CAP estimates that P_{EU} is the price that ought to prevail.

Thus the CAP sets a variable levy of $P_{EU}-P_w$, which restricts imports from non-EU countries to AB . This 'price floor' is shown in the graph alongside the welfare effects. Consumers naturally pay the higher price, P_{EU} instead of P_w , so they lose consumer's surplus of $(a+b+c+d+e)$.

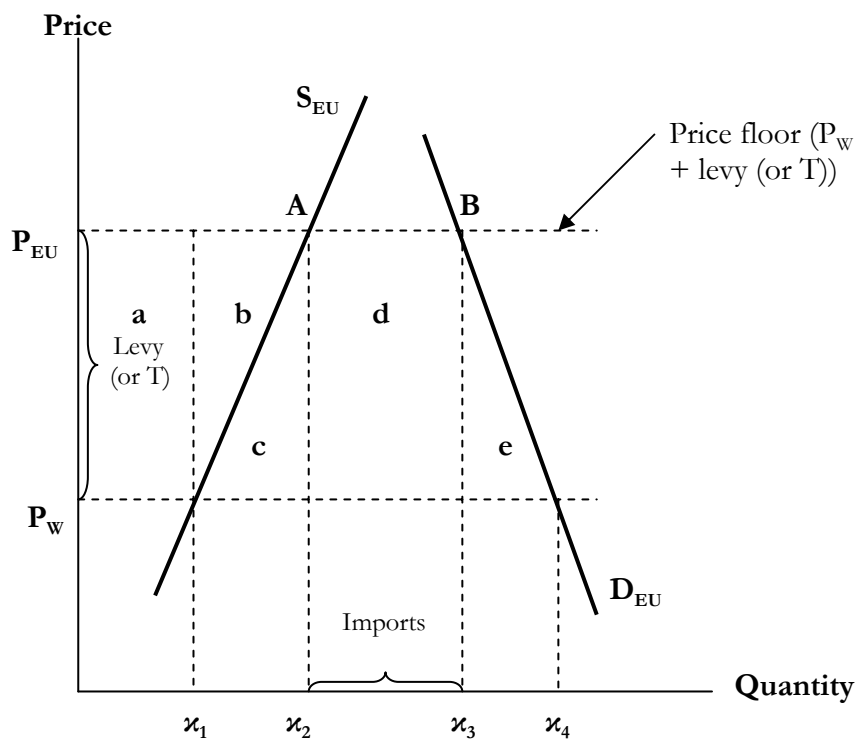


Figure 1 Variable levies with the EU as an importer of good x .

¹² Pelkmans, J., European Integration, Methods and Economic Analysis, Open University of the Netherlands, Longman, New York, p.168, 1997.

¹³ Self-sufficiency is defined as domestic production over domestic consumption (of about 100 %).

The areas (a+b) are an income transfer from consumers to producers, thus the farmers gain (a+b). Area (d) is paid for by consumers to the Agricultural Fund as levy revenue. Baldwin and Wyplosz (2003) explain this by showing that the VLS can be thought of as “(i) free trade in the presence of (ii) a consumption tax equal to T and (iii) a production subsidy equal to T .” This way, consumers pay P_w plus T , which is the price floor, and they consume κ_3 . EU producers sell κ_2 at the world price plus a subsidy of T , P_w+T . “The consumption tax revenue from this scheme is consumption $[\kappa_3]$ times T , and the production subsidy payment to farmers is production $[\kappa_2]$ times T , so the government’s receipt net of its payments is equal to $[\kappa_3-\kappa_2]$ times T .” This is equal to the area (d). Finally, the areas (c) and (e) are welfare losses, due to a loss of willingness to pay (e) and due to the larger inefficiency of domestic production as compared to imports (c).

In the case of the EU being an exporter, figure 2 explains that the excess supply is channelled to the world market with a subsidy. Now, EU farmers supply H of good γ but EU consumers demand only G . At the world price, P_w , the EU would import JK but the variable levy ensures P_{EU} . Producers gain from this policy by the increased producer’s surplus (a+b+c).

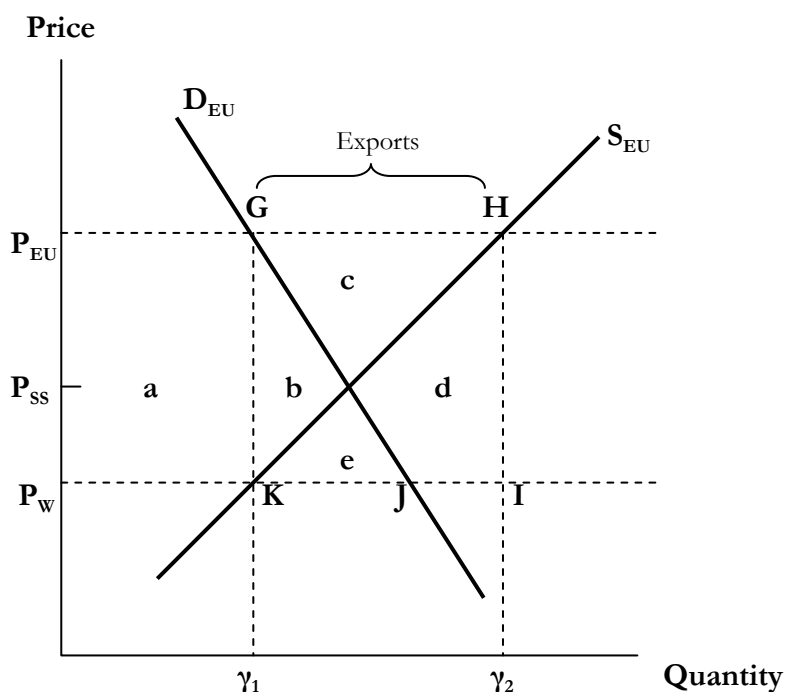


Figure 2 Variable levies with the EU as an exporter of good γ .

The Agricultural Fund pays the subsidy to farmers, $(P_{EU}-P_W)(GH)$, of which HIK , or $(e+d)$ are additional resources needed to produce at H . Tax revenues finance this subsidy ultimately, so consumers pay $(a+b+c)$. P_{SS} is the self-sufficiency price, the price at which the EU would neither import nor export any of its agricultural produce.

This welfare analysis is an overall analysis that does not take into account farm size on the producer side or wealth on the consumer side. In a following section a more detailed welfare description is given to account for these factors. But first the other income protection methods are discussed.

1.6.2. VLS with intra-EU price support

For many agricultural products the variable levy system was used in combination with intra-EU price support. For sugar, beef, pork, grain, milk and fish products this was the case. Again a graph is the easiest way to understand the economics of this slightly different version of VLS.

There are five prices that are relevant for the analysis. First of all, the *target price* is the price decided upon by meetings of the EU Council of Ministers and is thus an ex ante price. The Council believes this to be the price at which farmers in the EU are supposed to maintain or even improve their standard of living. Second, the *threshold price* is another ex ante price, which is more relevant for customs union officers. It is defined as “the target price minus the estimated transport cost of the product from the outer EU frontier to the place of consumption. [...] The difference between the threshold price and the (normally) lower world price is the variable levy: it is variable, not because the threshold price is variable [...], but because the world price may vary.”¹⁴ Third, the last ex ante price is the *intervention price*¹⁵ that we have already encountered. Since the VLS is an income protection policy and we have seen that a downward pressure on prices means a similar pressure on income, the CAP will intervene if supply of κ is higher than demand (and the price falls below the intervention price) by being the ‘buyer of last resort’. This way it ensures farmers of the intervention price for κ , quite simply the price at which the CAP intervenes in the market (cf. Baldwin and Wyplosz (2003)¹⁶).

The last two prices are ex post prices and are determined by supply and demand. The *world price*, as mentioned before, is the price of an agricultural product on the world market. It

¹⁴ Pelkmans, J., European Integration, Methods and Economic Analysis, Open University of the Netherlands, Longman, New York, p.170, 1997.

¹⁵ The terms used for intervention price vary according to the product (price floor, guaranteed price, basic price or norm price), but intervention price will be used in this paper in light of the sugar industry.

¹⁶ Baldwin, R. & Wyplosz, C., Manuscript for The Economics of European Integration, chapter 8, p.3, 2003.

is a highly volatile price since many countries have protectionist agricultural policies and rest supplies enter the world market and vary wildly. Excess production in the EU is often dumped on the world market adding to the price instability and uncertainty. In this analysis, for reasons of simplicity, the assumption is made that the world price is given. Finally, there is the *actual market price* in the EU. It is quite obvious that this price must be equal to or higher than the intervention price or else the CAP steps in.

Now consider figure 3¹⁷, where the five prices are shown. P_1 being the target price, P_2 the threshold price, P_3 the intervention price and P_4 the market price in the EU. P_w is the world price, and D_{EU} and S_{EU} are demand and supply in the EU respectively. Several supply schedules are drawn to investigate different situations. To begin with, assume that the S_{EU}^1 supply schedule prevails. At this supply, the EU market will clear at the target price P_1 . Nothing the matter! Imports will carry a levy of $P_2 - P_w$ and will incur $P_1 - P_2$ of transportation costs. The Agricultural Fund does not have any revenues nor does it incur any costs and there is no need for any interventions.

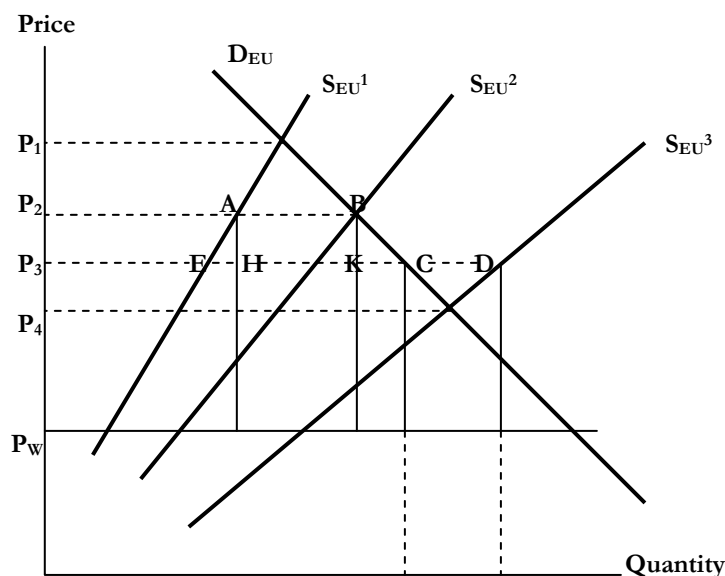


Figure 3 Variable Levies with intra EU price support

Now assume S_{EU}^2 prevails, and the forecast (the target price) cannot be realised because supply is larger than expected. However, nothing will change. P_2 is above the intervention price and imports will be too expensive because of transportation costs. But what happens if the third supply schedule shows up, maybe because the summer of 2003 has given an incredible boost to supply? The answer can be found in the graph. Supply has outgrown

¹⁷ Figure 3 is figure 11.5 in Pelkmans (1997), p.170.

demand and there is a natural downward market pressure on the price. Even so that the price might fall below the intervention price, P_3 . This is where the intervention offices step in and as buyers of last resort they will purchase the quantity CD . To reduce the costs of this policy, for some agricultural products (non-perishable) export subsidies of $(CD)(P_3 - P_w)$ are distributed.

If the target price is set below self-sufficiency, the EU will have to import the agricultural good in question to meet demand. Suppose the target price is set at P_2 , the threshold price is P_3 and the intervention price is P_4 . If the forecasted S_{EU}^1 prevails, there is potentially EC of imports. However, these will shrink down to AB because of transportation costs. The market clears at the target price P_2 and the variable levy will be $P_3 - P_w$. Variable levy revenue will be $(HK)(P_3 - P_w)$. If S_{EU}^2 prevails, imports would reduce to zero and with a supply schedule of S_{EU}^3 there is a red alert at the intervention offices, standing guard to intervene as soon as the price drops just a little more.

1.6.3. Supply Quotas

Although not an income policy in itself, supply quotas were often used in combination with the costly price-based income policies to limit the negative effects on output growth. VLS induce farmers to produce beyond the self-sufficiency point because they can earn an unnaturally high price. This creates excess supply and this in turn puts pressure on governmental budgets that have to act as buyers of last resort. For some dairy products and sugar, the long run effect of high prices on supply elasticities (lower) have created such excesses that quotas to restrict output were the only way to relieve the EU budget. Supply quotas thus discourage overproduction and serve to reduce the government's budgetary burden. Tying supply quotas to the VLS system, figure 4 shows that the welfare loss is smaller than under VLS without quotas.

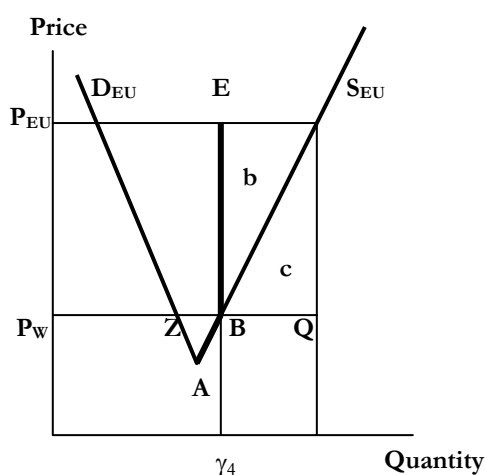


Figure 4 Supply quota with guaranteed price.

Supply is restricted to γ_4 by the quota so the supply schedule is now ABE . The government expenditures for subsidies are reduced with b and c , compared to figure 3. Domestic demand and price per unit for farmers remain untouched by the quota. Another positive effect is that world prices become less volatile through this policy, since there is less excess supply (or none at all) that is channelled through to the world market.

1.6.4. Deficiency Payment Schemes

As with the VLS, Deficiency Payment Schemes (DPS) are based on ex ante prices. Quite simply, the farmer is guaranteed a price for a product and the Agricultural Fund makes up for the difference between this guaranteed price and the market price, the deficiency. Basically, deficiency payments are a subsidy per unit of an agricultural good, for that range of units that would be sold at the EU guaranteed price but would not be sold at the world price.

Now compare figure 5 to figure 1. It can be seen that the increase in producer's surplus is $(a+b+c)$. Since free trade allows for imports, the welfare loss under DPS will be smaller than under VLS, (e) as compared to $(c+e)$. The area (d) is the subsidy from the Agricultural Fund to farmers. However, the administrative costs are much higher because the subsidies to farmers appear on the EU budget and are thus far more bureaucratically complex than the VLS system, where the income redistribution from consumers to producers is 'invisible'.

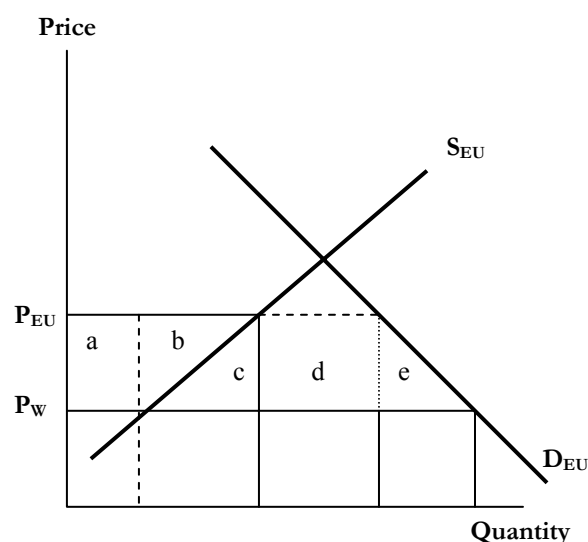


Figure 5 Deficiency Payments Schemes

1.6.5. Direct Income Payments

The most straightforward way to ensure farmers a fair income would seem to foster policy that focuses on income itself. Direct Income Payments (DIP) are theoretically the best method to maintain a reasonable standard of living for farmers since they do not distort prices, have no direct effect on trade and create no welfare loss. DIP can be designed per unit of land, per animal, per family head in farming or as a negative income tax for farmers. Farmers will have a guaranteed income irrespective of performance, which will result in a decrease of production since utility functions that schedule labour and leisure tell us that farmers would increase their time spent on leisure (cf. Frank 1997, p.484-486). Also, depending on the level of guaranteed income, farmers could be leaving the agricultural sector

(if income is low enough to create an incentive to migrate to other sectors). However, the implementation costs of DIP are very high and politicians fear the social security character of the system, replenishing income irrespective of performance. Besides, who is there to guarantee an income for? Is there one farmer per farm, or does the system provide for children or part-time workers?

1.7. Welfare and distribution

Above, a short analysis of consumer and producer welfare is given and it concluded that farmers gain from agricultural policy and consumers lose. This section shortly investigates whether all farmers win and which consumers pay the most.

Across Europe, farms differ in style, tradition but mostly in size. This has a considerable importance in assessing the welfare effects of EU policy. Baldwin and Wyplosz (2003) show that the distribution of benefits among farmers is quite inequitable indeed. A simple comparison of supply curves clarifies their point.

As can be deduced from the graph large farms can increase their production more and gain A_{large} as compared to the small firms that earn A_{small} . The large farmers already had B as an income, so they were richer to start with. Baldwin and Wyplosz go on in further detail about larger farmers reaping more profit from the CAP. “1.38 million big-farm owners receive 52% of the whole EU budget! [...] over half the budget went to help just 0,4 % of the EU population. Worse yet, these owners overwhelmingly tended to be the richer ones.”¹⁸

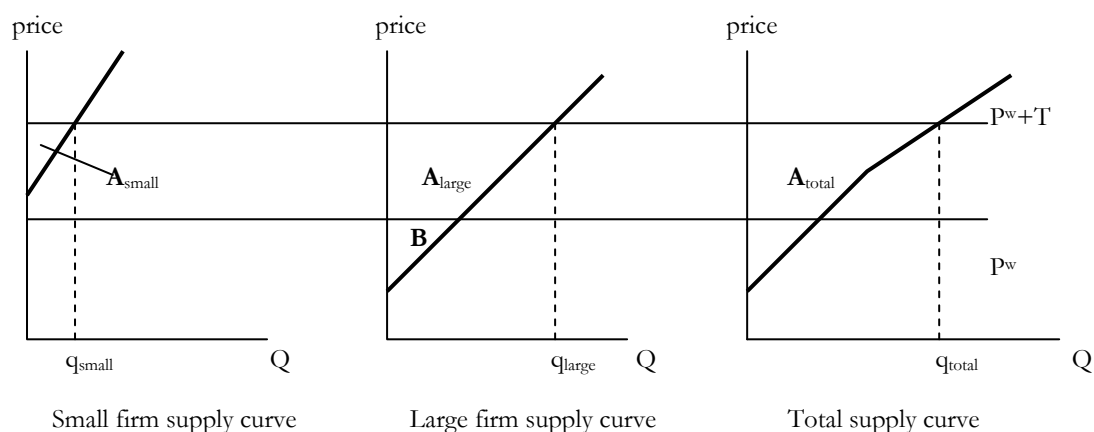


Figure 6 CAP and farm size

¹⁸ Baldwin and Wyplosz, chapter 8, p. 7, 2003.

Since the intervention price is ultimately paid for by consumers a short note on who pays most is in place. Food is an extremely inelastic part of the consumption basket and thus price increases fuelled by EU policy will not have large effects on food consumption. Another characteristic of food is that saturation will cause a disproportional increase of food consumption when income increases. Thus, there is a similar (basic) food basket for rich and poor, that is not effected by price changes. Not surprisingly, food “tends to be more important in the budget for poor families than it is in the budget of rich families”¹⁹ Raising prices of food, essentially what the CAP does, is like a regressive income tax. The policy has a tendency to find its way to the wallets of poor families and redistribute spending power from poor consumers to rich farmers.

1.8. Dumping

The excess supply that was created with the CAP has often found its way to the world market in such quantities and at such prices that the effects to the world price had ruinous effects to developing countries. Dumping is a form of price discrimination, whereby a lower price is charged for exported goods than is charged for the same goods on the domestic market.

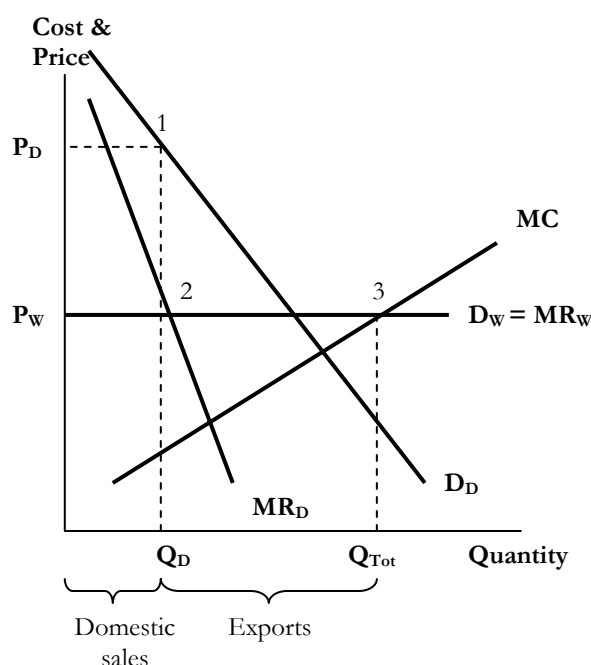


Figure 7 Dumping

The two conditions for dumping to be able to occur are that the market must be segmented and the industry must be imperfectly competitive. Both conditions are met in most agricultural sectors. CAP distorts market structure and the characteristics of agricultural produce make the EU and the world two divided markets.

If we consider all EU farmers for good γ as one monopolist on the EU market, an analysis by Krugman and Obstfeld (2000) helps us understand the economics behind dumping. Consider figure 7²⁰.

¹⁹ Baldwin and Wyplosz, chapter 8, p. 9, 2003.

²⁰ Figure 7 is a slightly adapted version of figure 6-8 in chapter 6 (p.143) of Krugman, P.R.& Obstfeld, M., International Economics, Theory and Policy, Addison-Wesley, 2000.

The monopolist can sell Q_D at P_D on the domestic market, setting the profit-maximizing quantity where marginal revenue (MR_w) is equal to marginal costs (MC)(point 1). Note that it sets MC equal to the world marginal revenue. It also faces the world demand curve, the horizontal line P_w , which is assumed to be infinitely elastic. As long as MR_D is higher than P_w , the monopolist will sell on the domestic market, but as soon as P_w is higher than MR_D , the marginal revenue of an extra unit is no longer MR_D but P_w , or better MR_w (point 2).

The monopolist can get this given world price for any additional sales, thus it will set its marginal costs equal to the marginal revenue for foreign sales, MR_w (point 3).

The monopolist will produce Q_{Tot} , of which it exports $Q_{Tot}-Q_D$ and sells Q_D on the domestic market. Because P_D is higher than P_w , the monopolist exports at a lower price than it charges domestic consumers.

1.9. Conclusions

The reasons for the CAP's existence are to be found in the low income elasticities for agricultural products. Expansion in demand must arise from population increases rather than increases in income levels. Simultaneously, on the supply side, technological innovation is larger than population growth and so supply grows faster than demand, putting downward pressure on farmer's income. Besides, the symbolic and emotional ideas attached to farming play a big role in European society.

The foundations of the CAP were erected in the Treaty of Rome (1957) and the policy came into force in 1962. The three basic principles it adheres to are that of the single market, Community preference and solidarity. It is designed to protect the EU market, although this does not appear amongst its official objectives. Stabilising agricultural markets, assuring availability of supply, ensuring reasonable prices for consumers and increasing agricultural efficiency are four of its objectives. The most important, however, has been to ensure fair standards of living for farmers. These objectives can arguably be seen as contradictory amongst them and run counter to some of the EU principles. This makes it a heavily debated policy.

Today, the internal market is protected by tariffs. But the most important instrument the CAP had at its disposal before 1996 is the Variable Levies System, very often used in combination with intra-EU price support. The VLS entails levies on imported goods so that (mostly) import is restricted and accordingly, the price will remain high. This policy affects

prices indirectly. A direct way to influence prices is the intra-EU price support. Basically, this policy guarantees farmers a price, called the intervention price. Should the market price fall below this price, the EU intervenes. But in most years the market price does not fall below the intervention price because of the variable levy, which is based on the following. The target price is decided upon in meetings of the EU Council of Ministers. The threshold price is the target price minus the transport costs. The levy is the difference between the threshold price and the world price, variable because the world price is variable.

This policy encourages overproduction and another important policy, that of supply quotas, is often combined with VLS in order to prevent this. Farmers may produce quotas, but the way the quota rights are distributed prevents an efficient production since the most efficient farmer need not get the largest quota. Yet another policy is that of Deficiency Payment Schemes. Basically, deficiency payments are a subsidy per unit of an agricultural good, for that range of units that would be sold at the EU guaranteed price but would not be sold at the world price. However, this policy is bureaucratically complex and considered inferior to the VLS. The most straightforward policy seems to be Direct Income Payment. But the implementation costs of DIP are very high and income is replenished irrespective of performance.

The distribution of welfare of the CAP is another point of critique. It appears that large farmers gain more than smaller farmers. Over half the budget went to barely a half per cent of the EU population, and the recipients tended to be the richer to start off with. Also, the way the policy affects consumers does not seem fair. The poor consumer is taxed more than the rich consumer, explained by the extremely inelastic nature of food. Price changes hardly affect the food basket and this basket is more important in the poor family's budget than it is in the rich family's budget. The CAP raises the prices for food and this is like a regressive income tax.

Finally, the CAP distorts market structures so that the EU farmers can practice dumping, as would a monopolist. The monopolist can get a given world price for any sales on top of what it sells domestically, thus it will set its marginal costs equal to the marginal revenue for foreign sales. The monopolist exports at a lower price than it charges domestic consumers.

Chapter 2:
The Sugar Regime

2.1. Introduction

The common agricultural policy is made up of numerous Common Market Organisations, or CMOs. The CMO for sugar is a special market organisation in that it is the last real market regime in the EU. All the other CMOs have been reformed to some extent in order to make them comply with WTO regulations. The sugar industry has escaped major reforms up to the present, because of a strong lobby by farmers and ACP countries. Another important aspect is the self-financing nature of the policy. In this chapter, the EU sugar policy is treated first, explaining the workings of the CMO Sugar, the A-, B- and C-quotas farmers in the EU face and it explains the preferential agreements with non-EU countries.

In the next section, the economics of sugar are discussed. The market as a whole, but also the supply and demand specificities of the sugar market. The economic workings of the quota system explain how the EU production is regulated. Then a model, based on Frandsen et al., digs deeper into the mechanism of the EU Sugar Regime. Finally, inefficiencies of the system are treated and the specific characteristic of vertical integration is discussed. The following section hints at the reforms to come. It is clear that even the sweet stronghold is to change eventually.

The CMO Sugar involves a large number of policy tools, some of which have already been touched upon by the account of CAP instruments. It combined the VLS with intra-EU price support. Farmers produce A-, B-quota sugar for which an intervention price exists. For C-quota sugar this price does not exist and this sugar is to be sold on the world market. There are two sorts of preferential agreements. The first is the Sugar Protocol, in which trade agreements are specified with the African, Caribbean and Pacific countries, or the ACP group. The second is the MFN clause. This clause defines the status of Most Favoured Nation, another preferential trade status.

The specificities of sugar result in some special characteristics of demand and supply for this product, which partly explain the persistency of the policy. The inefficiencies of the policy arise to a large extent from the system of quotas in combination with the preferential agreements. These inefficiencies have kept farmer's standards of living high, but have been the source of criticism as well.

Reforms are on its way, and although they will be directed more attention at a later stage, it is clear that the Sugar Regime is the last major stronghold of the CAP. Many reforms have been proposed but miraculously, it seems, the Sugar Regime got off scot-free. Those days are gone.

2.2. EU Sugar Policy

In this section a look is taken at the common market organisation for sugar in the EU. How is this sector organised? Furthermore, the difference in the status of sugar is explained and finally the preferential agreements that exist are discussed.

2.2.1. CMO Sugar

Only at the end of the 19th century was sugar beet introduced in Europe with the objective to shred the reign of colonial cane sugar, the sole source of sugar at the time. Sugar was a preciously rare commodity and so the production of sugar beet spread from the northern part of France over Europe. From the 1920s onward, transportation costs decreased in the light of maritime transport development and sugar beet production was challenged by the imports of cane sugar. Ever greater tariff protection is the lone reason for the beet industry's survival.

The Common Agricultural Policy is made up of common market organisations (CMO) for each agricultural market. These CMOs are sets of rules and regulations that are to make certain that the goals of the CAP are achieved. Like any other CMO, the CMO Sugar pursues the five CAP objectives listed in the previous chapter, but again it seems obvious from the protectionist nature and the inefficiencies that will be discussed at a later stage that ensuring a fair standard of living for the agricultural community is paramount amongst these objectives. Initiated in 1968, the CMO Sugar has escaped major CAP reforms in 1992 (MacSharry reform) and 1999 (Agenda 2000 decisions), making it the last major market regime under the EU's common agricultural policy. The 'Sugar Regime' covers not only sugar and sugar beet, but also isoglucose (a liquid concentrated fructose syrup extracted from wheat and maize starch used primarily in the food industry) and inulyn syrup (syrup with very high sweetening power extracted from *Cichorium* roots).

The CMO sugar involves a large number of policy tools, some of which have already been touched upon by the account of CAP instruments. An intervention price system guarantees a minimum price for beet growers and the EU internal market is protected from world market influences by a system of import levies and export refunds. Variable levies system with intra-EU price support. However, there are some specific features of the CMO Sugar, which are touched upon in this chapter. First of all, a system of A and B production quotas limits the total eligible quantity for price support. Second, sugar producers pay production levies to finance both the export refunds for the exported quota sugar and the production refunds for the chemical and pharmaceutical industry. Third, there exist

preferential agreements for importing raw sugar from (for the most part) former colonies of EU Member States. In the following, the difference in sugar status and its consequences are explained, as are the preferential agreements.

2.2.2. ABC Sugar

The Community prices are guaranteed for sugar production only within quotas. This quota sugar is split up into A-quota and B-quota. These quotas are allocated by the Member State to sugar plants and each plant converts its quotas into ‘delivery rights’ for beet growers. The CMO Sugar identifies the A-quota as the ‘basic’ quota “corresponding to Community production and split among the Member States on the basis of their previous production”²¹. This originally guaranteed each Member a share of the Community Market. The B-quota is an addition to the basic quota defined as “an additional quantity set at between 30% and 45% of the basic quota, according to market disposal potential”²². In theory, B-quota gives producers that have “the capacity, i.e. the most competitive, the possibility of expanding by producing, on less favourable terms, quantities additional to the A sugar”²³. The excess supply would have to be exported with a subsidy that was to be paid by levies on B production. The rationale was that B sugar prices net of the levies would converge to prices under world market conditions.

However, this belief was unsubstantiated and B sugar slowly became general which forced the CAP to freeze B-quotas at earlier production levels in the 1980s. C sugar was to take over the role originally assigned to the B-quota. C sugar is sugar produced outside the quota and exports do not enjoy the export refund. The value of this non-quota sugar is the price of sugar traded on the world market. The value of C beet is thus freely bargained between growers and manufacturers.

2.2.3. Preferential Agreements

Sugar imports into the EU have always been restricted by levies and subsidies, but there are preferential agreements with mostly former colonial countries of Member States. These countries are called African Caribbean and Pacific countries, or ACP countries. Sugar trade between the EU and these ACP countries is regulated by two trade agreements:

1. The ACP/EU Sugar Protocol.
2. The Agreements on Special Preferential Sugar (SPS).

²¹ Commission of the European Communities, Common Organisation of the Sugar Market, Description, Brussels, p.9, 2003.

²² Idem.

In 1958 the six founding member states of the EEC decided to grant financial aid to the countries that were under their authority at the time. In the late 1950s and early 1960s, many of these countries gained their independence and gradually the road to cooperation was opened. In 1963 the first Yaoundé Convention between the six EEC Members and the Associated African and Malagasy States (AAMS) was signed, in which trade and aid agreements were negotiated. With the accession of the UK in the EEC in 1973, the Commonwealth Sugar Agreement (CSA) countries drew their chairs up to the negotiation table. These countries had a long history of intensive cooperation with the UK sugar industry and in the year that followed, the three groups of countries ('A', 'C' and 'P') now managed to extend the cooperation to the EEC. In 1975, the Sugar Protocol came into existence after negotiations between ACP and EEC countries during the Lomé Convention. The Sugar Protocol translated the UK commitment to CSA countries into an EU commitment to ACP countries.

The ACP/EU Sugar Protocol is an agreement of indefinite duration stating that “the [European] Community undertakes for an indefinite period to purchase and import, at guaranteed prices, specific quantities of cane sugar, raw or white, which originate in the ACP States and which these States undertake to deliver to it”²⁴. The CMO Sugar has incorporated in its regulation that the Protocol quantities are irreducible even in cases where the Community has to reduce A and B production quotas in relation to its Uruguay Round devotion.

In June 2000, the new ACP/EU Partnership Agreement was negotiated in Cotonou between 77 ACP countries and the 15 Member States of the EU. The strategic importance of this agreement to the economies of the ACP countries cannot be underestimated. In many of the economies the sugar industry makes up for a relatively large part of GDP, sugar often being a major part of total agricultural production and a primary exports product. The ACP/EU website puts forward the case that the indirect benefits become apparent in the health-care sector, education and rural development. Intuitively, a guaranteed price and quantity demanded of a product can have a stabilising effect on the industry of that product. Since the EU is a large market for the sugar producers, the ACP/EU website states, the positive effects of this guaranteed market are plentiful and multifunctional. For the EU, the

²³ Idem.

²⁴ Article 1 of the ACP/EU Sugar Protocol.

agreement with the ACP countries ensures port-related refining industries of a steady supply, which constitutes a “valuable complement to the beet processing industry”²⁵.

Besides the ACP/EU Sugar Protocol there are SPS agreements, Special Preferential Sugar. In June 1995, the ACP states reached an agreement with the EU that is similar to the Protocol in the fact that it is a bilateral agreement, government to government. However, it differs from the Protocol in its duration. Whereas the Protocol is of indefinite duration, the SPS is an agreement of a fixed duration on exact quantities of sugar to be supplied. It is installed primarily to cover any deficiencies EU refineries might encounter.

“The key to the special preferential sugar arrangements is the concept of 'maximum supply needs'. Maximum supply needs are established with reference to the needs of seven sugar cane refineries, two in the UK, two in France, two in Portugal, and one in Finland. In 2001, these MSN were set at 1779 000 tonnes of white sugar equivalent. Any imports above these requirements have to pay the full duty and receive no processing aid.

Maximum supply needs are met through:

- an ACP sugar protocol quota of 1 294 700 tonnes;
- an Indian quota of 10 000 tonnes;
- the Finnish MFN quota of 85 463 tonnes;
- the exportable production of the French Overseas Territories;
- the Special Preferential Sugar arrangement for ACP countries and India.

Because the production of the French Overseas Territories varies, the amount of special preferential sugar imports allowed from the ACP and India is effectively a residual amount.”²⁶

2.3. Economics of Sugar

In the following, the market of sugar is analysed in more detail, inevitably looking at possible substitutes. Demand and supply are treated an economic analysis and the variable levies system in the sugar sector is given appropriate attention with the knowledge of the first chapter. Finally, inefficiencies in the EU sugar market are passed in revue.

2.3.1. The market

It is common practice to analyse the relevant market when investigating a specific market situation. In order to determine what kind of competition and which substitutes

²⁵ European Commission, Council Regulation No 1101/95.

²⁶ CTA: Technical Centre for Agriculture and Rural Cooperation ACP-EU, http://agritrade.cta.int/sugar/executive_brief.htm, 2003.

prevail it is important to understand the idea of the relevant product and geographical market. “By the market definition the boundaries of competition between firms can be identified and defined. It also makes it possible to calculate market shares for the purpose of assessing dominance when it comes to the unilateral conduct of one or several firms acting in an abusive manner, or for the purpose of coming to terms with anti-competitive agreements between firms. The definition of the market is essentially a matter of substitutability.”²⁷

The relevant product market is defined as being that set of substitutes for a given good or service. Substitutable can be defined as substitutable by physical characteristics, by price or intended use. The relevant geographical market is that area to which the substitutability of the product holds. Thus it is an area in which such conditions of supply and demand for a product or service exist that makes competition in that area homogeneous but appreciably different from another area. To assess competition in the sugar market the product market and the geographical market must be analysed in combination.²⁸

To start off with the product market, the different categories of sweeteners can be divided up into natural sweeteners, which are sugar and sugar like products and high-intensity sweeteners (HIS). The CMO Sugar covers the natural sweeteners with its protectionism and support. HIS are not covered by the CMO. Sugar is the conventional name for the substance called sucrose, which is extracted from both beet and sugar cane. The sugar processed from both crops is identical and consist of 99.9 per cent sucrose.

India, Brazil, China and Mexico are the major providers of cane sugar whereas the EU, the USA, Turkey and Poland are the largest producers of beet sugar. Cane sugar makes up for about 70 per cent of the total world sugar production compared to 30 per cent for beet sugar.

Of all sweeteners, only isoglucose (or High Fructose Syrups (HFS)) can be regarded as a potential substitute for industrially used sugar. But isoglucose has not been a very profitable investment since the costs of production relative to sugar have until now been high. Improvements have been made through technical progress and a reduction in the cost of raw material input, but HFS currently accounts for no more than 2 % of the sugar quota. Inulin syrup cannot be considered a substitute nor can the other sweeteners, polysols and HIS. At current input costs inulin syrup is barely profitable and HIS may be cheaper in most EU countries but when comparing functional properties the industrial users cannot substitute them for sugar. The primary user of sugar is the food processing industry, 70 per cent of total

²⁷Blume, C., Strand, N., Färnstrand, E., Sweet Fifteen: The Competition on the EU Sugar Markets, Swedish Competition Authority, 2002

²⁸ European Commission, Commission Notice on the definition of relevant market for the purposes of Community competition law, Commission of the European Communities, Brussels, 1997.

EU human sugar consumption originating from sugar incorporated in food and drinks. Other major users are the chemical and pharmaceutical industry.

A description of the relevant geographic market is not particularly interesting for this paper and it suffices to state that within the EU there are several different geographical markets for sugar. Areas with sufficiently homogeneous conditions that are separated from other areas. Interesting is that “[w]ere it not for the CMO it cannot be excluded that the EU would constitute one market for sugar or even that the European Union would be part of a market larger than the Union”²⁹.

2.3.2. Supply

Keyzer et al. (2001) explain that sugar has specific properties that have immediate implications for supply. Whether sugar originates from sugar cane in (semi-) tropical areas or from sugar beets in the temperate zone it must be processed very soon after harvesting because of the chemical instability of sugar. In addition, it cannot be transported over long distances and trade is impossible in its unprocessed form. This processing is a relatively capital intensive activity and thus demands lumpy investments which are beyond the scope of individual farmers. The processing factories can only operate seasonally, a brief period annually, due to the seasonal character of the sugar harvest but capital remains operative the whole year. These properties have two direct implications.

The first implication is that factories must be assured a steady supply from farmers around them. To guarantee this supply, the sugar beet price is kept well above the prices of other crops, thus shielding any possible incentives for farmers to produce any other crop than sugar. The second implication is that processing factories become local monopsonists “that enjoy significant discretion in sharing their revenues with the farmer. Conversely, since the factories cannot be converted to any other use, they have little bargaining power over farmers once they organise themselves into a cooperative”³⁰.

This lumpiness in investment and the monopsonist structure of the sugar supply in combination with low substitutability make the sensitivity to price changes relatively low. This means that there is a low price elasticity of supply. This is enforced by the price support system that has been put in place by the EU. Factories sell at a guaranteed price and thus produce as much as possible (taking a quota into account), keeping prices high so supply to

²⁹ Blume, C., Strand, N., Färnstrand, E., Sweet Fifteen: The Competition on the EU Sugar Markets, Swedish Competition Authority, 2002

³⁰ Keyzer, M., Merbis, M., van ‘t Riet, M., Reforming sugar, stronghold of agricultural protection, CPB, p. 2, 2001.

these factories is assured. In contrast to world prices, the price within the EU can be kept relatively stable with the CAP.

World supply is highly volatile because of sugar’s dependency on weather and because the protectionist nature of most sugar exporting economies leads them to dump any excesses on the world market. Prices thus vary accordingly, which is clearly indicated by figure 8.

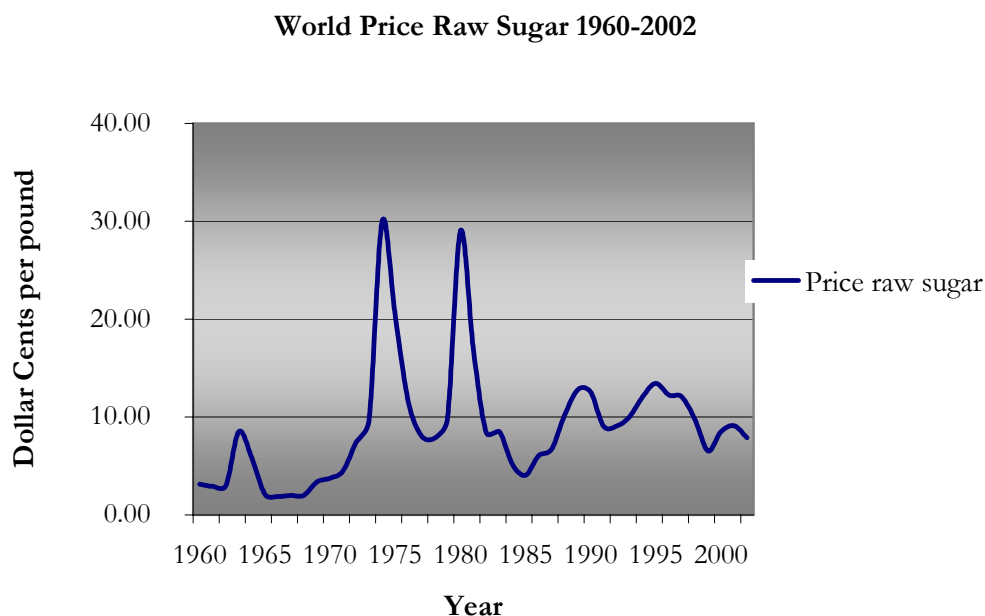


Figure 8 World Price Raw Sugar 1960-2002.

Data source: US Department of Agriculture.

2.3.3. Demand

After the processing of sugar the product can be sold to the food and beverage industry where it is used in other processes. Another industry that uses sugar is the pharmaceutical and chemical industries. Sugar can also be consumed directly or be exported. The food and beverage industry is characterised by a low price elasticity of demand, since they have little substitutes for sugar. The same holds for the pharmaceutical and chemical industries. The direct consumption of sugar has a specific characteristic. “Worldwide, rural and poor people tend to rely on other sweeteners, such as palm sugar and sticky rice, or to process the sugarcane themselves (gur, pan sugar). Refined sugar is to some extent a luxury good – albeit a peculiar one, as those who buy it can afford it and will hardly adjust their demand to a changing price.”³¹

³¹ Idem.

In developed countries saturation has caused total demand to stagnate. In the EU the kilogram per capita figures published by FAOSTAT show that from 1965 to 1995 sugar consumption has levelled out at 37 kilogram per capita. In developing countries, however, there has been an increase from 9 to 16 kilogram in the same period. Total world consumption has increased because of this more than proportional increase in developing countries.

Within the EU supply exceeds demand because of the guaranteed price for farmers. Quotas embank the excess supply, which means that the demand schedule is vertical at the different quotas. This will be shown in the next section.

2.3.4. Quotas

Frandsen et al. start off by plotting the demand and supply curves with marginal costs to show taxes and quota rent for producers of sugar beet (EU producers). Figure 8 shows this graph in a slightly adapted form and explains how the economics of the quotas works.

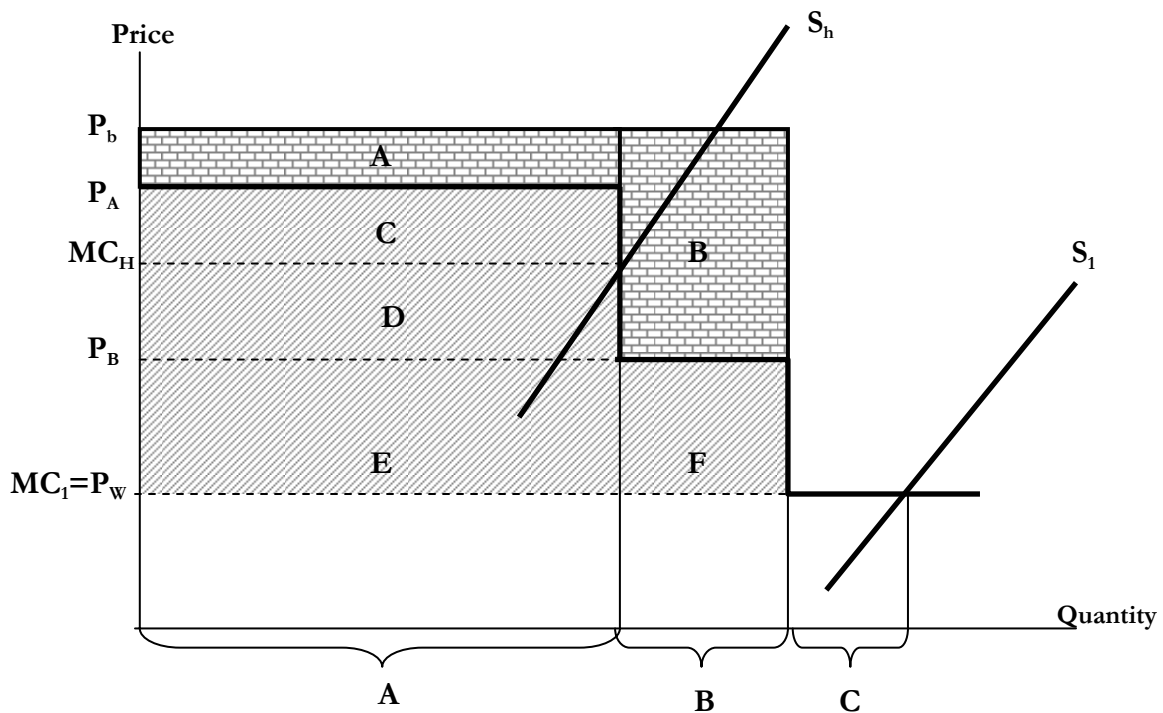


Figure 9 *Quota Rents for EU producers of sugar beet*

“Under the EU sugar regime, for each member country, sugar refineries’ intermediate demand for domestically produced sugar beet is subject to different taxes according to the

assigned national quotas by the EU³². Figure 8 captures this. The base price (P_b) minus a levy of 2% (marked as the shaded area A in the figure) is the price (P_A) received for the A-production of sugar beet. Similarly, P_B is the price of B-production and is derived by subtracting a B-levy of maximum 37.5% (shaded area B in the figure) from P_b . The quota rents will therefore be different for each producer depending on the marginal cost.

The supply curve S_H prevails for a high cost producer A with a marginal cost of MC_H and the producer receives the price P_A for all his production. At the given marginal cost, the shaded area (C) corresponds to the quota rent, which is the difference between price P_A and the marginal cost MC_H . A low cost producer with supply curve S_L in the figure has marginal costs equal to the world market price and is thus able to supply more than the A-quota. The producer will get the high price P_A for A-production, a lower price P_B for the quantity produced in excess of A but still within the B quota, and P_w for any additional quantity in excess of quota deliveries (C-production). The shaded area CDEF will in this case be the quota rent.

Member States differ in marginal costs and are thus expected to react differently to price changes. In figure 8, the level of production will be maintained by the high cost producer as long as the quota rent (C) is positive. The low cost producer will not change his production, because the production at the margin is determined by world prices. Because of this difference in reaction to price changes, and in the light of possible reforms, it is very important to understand each Member's marginal cost position and how production is expected to react.

2.3.5. Modelling the EU Sugar Regime

The assessment made above can be used to create a model for the EU sugar regime. Following Frandsen et al., figure 10 illustrates how different EU countries can be positioned in the sugar regime.

³² Frandsen, S.E., Jensen, H.G., Yu, W., Walter-Jørgensen, Modelling the EU sugar policy-A preliminary study of

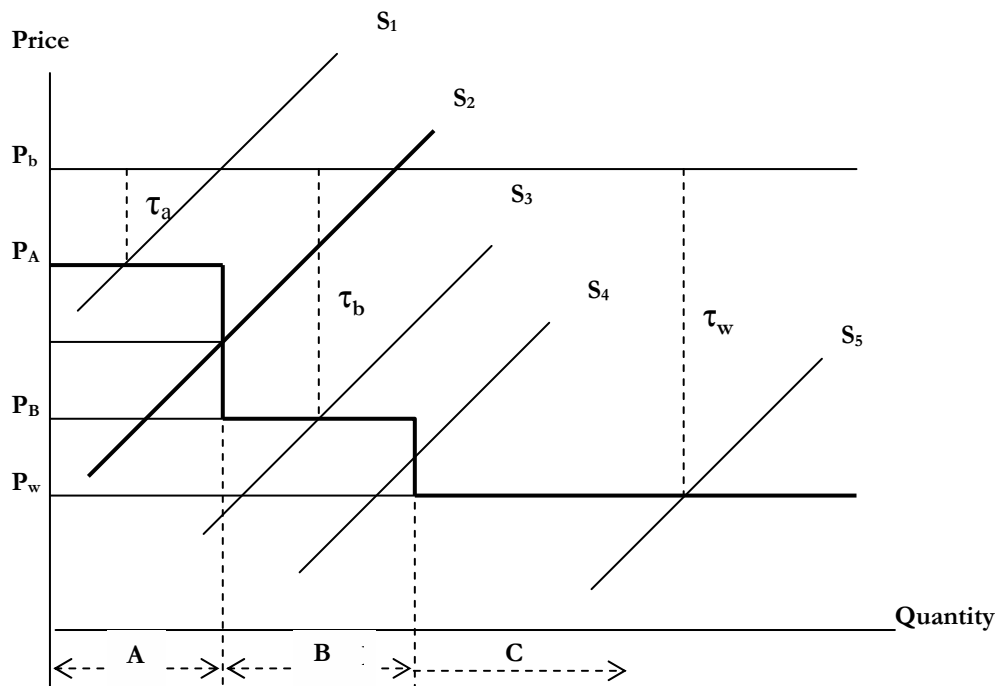


Figure 10 Modelling the EU sugar regime

There is an input tax levied on the input of beet in sugar refineries and a quota rent, which can also be seen in figure 9. Prices within the EU are kept artificially high by border protection in the form of import tariffs and export subsidies. For ACP countries it is assumed that exports to the EU are exogenously fixed, and it is assumed that the base price for beet follows the market price for sugar. The following variables are needed to completely portray the sugar regime. Consider figure 10.

S_1 - S_5 represent five potential producers with different marginal costs. τ_a is the power of input tax for in-quota-A sugar beet. The power of input tax is the ratio of the post-tax value over the pre-tax value, or one plus the tax rate³³. This was already illustrated in figure 9. Similarly, τ_b is the power of input tax for out-of-A-quota (within B-quota) sugar beet and τ_w is the power of input tax for out-of-total-quota sugar beet. The actual power of input tax, τ , can be deducted from the graph in combination with a given supply curve. For example, producer 2 with supply curve S_2 , experiences an actual power of input tax of somewhere between τ_a and τ_b . This producer has γ_a of 1, which is the ratio of the actual sugar beet produced over the A-quota. γ_b represents the ratio of the total quota over the A-quota. γ_a is equal to γ_b when the B-quota is filled exactly.

policy reform scenarios, Danish Institute of Agricultural and Fisheries Economics, Helsinki, p.4, 2001.

³³ Cf. Frandsen et al.

Frandsen et al. continue with an account on the actual extra power of input tax, which is not particularly alluring to this essay. However, they provide a framework in which Member States can be positioned on the basis of their marginal costs and this is worth repeating.

Figure 11³⁴ shows where each country is positioned and who can fill which quota and gains which quota rent. It is important to know this in order to be able to estimate what happens to which country with the possibility of reforms of even trade liberalisation lurking in the future. This ranking of Member countries shows us that only the UK, France, Austria and Germany are at present proficient to produce for the world market. Spain, Belgium and Denmark can fill their national quotas but in Sweden, the Netherlands and Ireland the costs of production are so high as to prevent these countries to produce B-quota. Finland and Italy, but particularly Greece and Portugal have difficulties filling their A-quotas.

Relative Prices

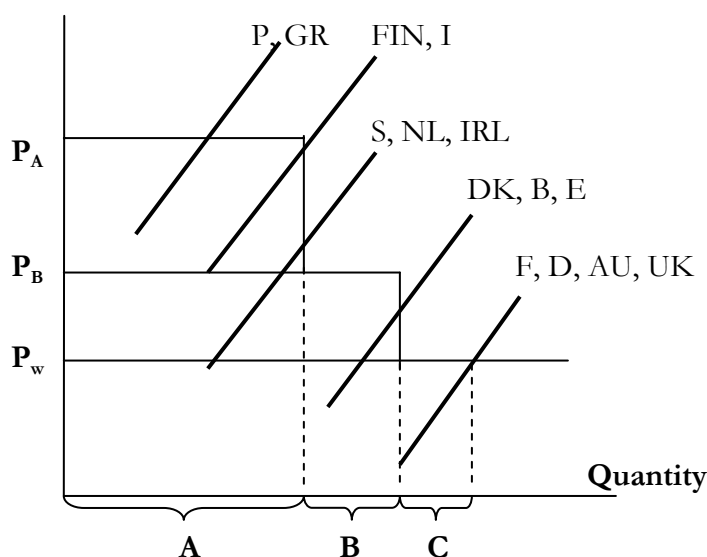


Figure 11 Member's position in sugar regime

2.3.6. Inefficiencies

Guyomard and Réquillart³⁵ show in their 2001 paper that there are two main sources of inefficiency in the European Union sugar regime. The first source of inefficiency is the “rigid allocation of production imposed by the present Common Agricultural Policy arrangements which are based on a price support mechanism and a system of non-tradable quota rights. [...] Empirical results suggest that the non-tradability of quotas results in large producer welfare

³⁴ Figure 10 is Figure 3 on p. 11 of Frandsen et al.

³⁵ Guyomard, H., & Réquillart, V., *On Inefficiencies in the European Sugar Regime*, Jean-Christophe Bureau, Paris, 2001.

losses.”³⁶ The intuition behind this is that in a competitive market for quota rights, producers will be forced to operate as efficient as possible, which in turn exhausts all the welfare losses. However, “the equilibrium rental price of production rights does not necessarily clear the quota market in each region separately.”³⁷ Producers, be they sellers or buyers of rights, could gain considerably from implementation of a competitive leasing market at the EU scale.

For example, an efficient farmer could produce B-quota sugar at the cost of 25 Euro per tonne of beet but he does not have the quota rights to produce B-quota sugar. The less efficient farmer, however, does and produces B-sugar at 29 Euro per tonne of beet. At the 2003/04 Community minimum price for beet of 32.42 Euro, the efficient farmer is willing to pay 7.42 Euro per tonne of beet for the B-quota right to the less efficient farmer who is willing to sell it as soon as he is offered more than 3.42 Euro. The non-tradability thus results in a producer welfare loss.

The second source of inefficiency came from the levy system, which might be self-financing and budget neutral but creates the incentive for farmers to keep on producing at a marginal cost that is much higher than the world price. A- and B-quota sugar in excess of domestic consumption is exported on the world market with a subsidy. This subsidy is financed by the producer levy on the sugar under the quota. This “provides an incentive for farmers to produce sugar beets at a marginal cost that exceeds the world price, even though they must fund export subsidies. A decrease in the global level of sugar quota would result in an increase in domestic producer surplus.”³⁸

2.3.7. Vertical Integration

The sugar industry is a classical example of vertical integration due to the complementary nature of the industry. The sugar beet producers are dependent on the local factory and the food processing industry depends on its suppliers. In combination with contemporary food quality and safety concerns new forms of integration are emerging in increased numbers. These “new forms of integration also relate to the mode of production regarding environmental friendliness, labour standards and animal welfare.”³⁹ By vertically integrating, a firm can control the desired product characteristics along the chain of production in addition to keeping the costs low. If such firms operate in the importing and exporting country they can duck from national competition. The multinational players on the sugar market are characterised by a high degree of vertical integration. Not only the

³⁶ Idem.

³⁷ Idem.

³⁸ Idem.

production and processing activities are integrated but also the compounding, the overseas transportation, the refining and the marketing are undertaken by one and the same company. A good example is Tate and Lyle Ltd.⁴⁰, which have their own sugar plantations and are integrated up to the marketing of their product. Economic theory shows that although the profit margin of a firm can be greatly positively affected by vertically integrating, the disadvantages arise mainly due to the fact of a loss of efficiency. Competition increases efficiency and by vertically integrating exactly competition is eliminated. This form of imperfect competition is something the WTO would have to deal with when proposing reforms, since a tariff reduction alone will not suffice to reduce agricultural protection.

2.4. Reform

The CAP has always been a subject of debate and many reforms have been proposed, slightly fewer have been implemented. The strange thing is that sugar has remained relatively unaffected by reform. It has mockingly been called the stronghold of agricultural protection. But why should this be so?

2.4.1. Changes

In response to changing economic and market conditions, the EU sugar policy has been bespoken several times since its implementation in 1968. The latest reforms were in 1995 and 1999, and changes were instigated in order to ensure compliance with the WTO's Uruguay Round (UR) commitments. But the principal instruments of the policy have been retained, namely the production quota and self-financing systems, from variable levies to bound tariffs. Import and export policies were adapted so that they complied with UR agreements and production and refining quotas were adjusted so as to meet the terms of the UR with respect to export subsidies. In 1995, national aid to the sugar industries of Italy and Spain was phased out and a new arrangement governing the import of raw sugar for refining was established. This way the EU refiners were assured access to raw sugar for refining. This anticipated the Special Preferential Sugar Agreement. An EU balance sheet of estimated supplies in combination with national quotas, called 'maximum supply needs' (MSNs), determines the quantities of raw sugar for refining. In order to meet the refiners' MSNs, raw sugar is supplied and imported under the following hierarchy of preference: French Overseas Departments

³⁹ Keyzer et al., p.3, 2001.

⁴⁰ Tate and Lyle Ltd., <http://www.tateandlyle.co.uk/TateAndLyle/default.htm>.

(DOM) cane raw sugar and, if available, domestically produced beet raw sugar; ACP Sugar Protocol and Indian preferential sugar; SPS sugar; and MFN (Most Favoured Nation) sugar.⁴¹

But over the years, relatively little has changed in the EU sugar regime. A paper dating back to 1980, by H.J. Voorend⁴², shows that the system is still quite intact, set aside revisions in the light of economic changes and new UR commitments, and it seems to operate without any major changes in its mechanism. How this can be the case for the sugar industry whereas other CMOs have undergone drastic changes is explained in the next section.

2.4.2. Stronghold

The reasons for this lack of reforms in the CMO Sugar come in threefold. The self-financing nature of the variable levies system with intra-EU price support had long kept reforms at a safe distance. In combination with quotas, it can probably be referred to as the chief reason for the conservative character of sugar policy. Besides, there is strong support from ACP countries to keep the system intact, because an alteration of the system (or a full scale liberalisation for that matter) would seriously endanger their privileged position on the EU market. Finally, mishmash the nostalgic idea of farming with the notion of self-sufficiency and a situation has been created in which farmers have a strong political bargaining position.

The self-financing nature is easily explained. Keyzer et al. mention that “production in excess of quotas, for which the minimum beet price guarantee does not hold, is [...] sold on the world market, but without subsidy. On the exports that are eligible for subsidies, the Commission pays the difference between the world market price and the intervention price, and subsequently charges the sugar industry for these export refunds. Thus, the system is self-financing with respect to export refunds.”⁴³ A levy paid by the industry and the farmers makes up for the necessary proceedings. This self-financing nature makes the sugar system extremely resilient to reform, because it does not place any demand on the EU budget and thus, from a budgetary point of view, the sector is not as attractive as other sectors. “With the exception of subsidies related to the re-export of sugar from Lomé countries, the EU incurs no budgetary outlays through the sugar regime.”⁴⁴ The URAA tariffication has changed the system in the fact that the levies are no longer variable and that there exists a ceiling of protection. However, it has been argued that the level of protectionism has not decreased.

⁴¹ About ACP Sugar, www.acpsugar.org, 2004.

⁴² Voorend, H.J., *Het EEG-Suikerbeleid en de Caraibische Suikerrietcultuur*, Vakgroep OAE, Vrije Universiteit, Amsterdam, August, 1980.

⁴³ Keyzer et al., p. 4.

⁴⁴ idem

These Lomé countries have argued again and again that trade liberalisation would only hamper the development of their economies. And indeed, the privileged position of these ACP-countries is a boost to economic performance, especially where sugar makes up for a large part of the export basket. The cost of not being an ACP country becomes ever greater, however, since excess supply of these countries is also dumped by the EU. What these costs are will be estimated in the next chapter. For now, it suffices to understand that the ACP-countries will have strong interests in the EU Sugar Policy the way it is, and this translates in strong political support, which has for long kept out drastic changes in the sugar industry.

Finally, the traditional idea of a small farmer appeals to many European citizens who do not recognize the modernization and large scale production within the farming sector. Also, it is scary for many consumers to think of being totally dependent of other countries when it comes to food products. The belief that a country must be self-sufficient to a certain extent has led to the belief that EU farmers must be protected. This has had the effect of fortifying farmer's bargaining position which has helped creating the stronghold of agricultural policy as it stands today. However, very recently, ministers of agriculture have acknowledged the need for reform and have called for drastic changes in the EU sugar regime. The stronghold is starting to crumble and it seems inevitable that it will break.

2.5. Conclusions

Because sugar cane was the only source of sugar in the 19th century and sugar was a very valuable commodity, the production of sugar beet was introduced to European soil. However, with the decrease of transportation costs around 1920, the market needed tariff protection to survive. The CMO Sugar provided this protection.

This CMO ensures a fair standard of living for EU sugar farmers and has escaped major reforms since its initiation in 1968. It made use of a VLS with intra-EU price support accompanied by three specific features. Firstly, A and B production quotas limit the total quantity of sugar entitled price support. Second, levies paid by producers finance the export refunds for the exported quota sugar. This makes the policy self-financing. Third, preferential trade agreements, the Sugar Protocol and the Agreements on Special Preferential Sugar, allow preferential access to the EU market to ACP States and India. In 1995 the URAA obligations forced the EU to switch to fixed tariffs with a ceiling but arguably so the level of protectionism has been attained.

The Protocol came into existence in 1975 and specifies that the EU is to import irreducible quotas at guaranteed prices from ACP states. The direct and indirect benefits to

the ACP countries are plentiful, and the agreement is beneficial to the EU in that it ensures port-related refining industries of a steady supply of sugar.

The market for sugar is defined by its substitutes. There are several sweeteners, but only isoglucose is a potential substitute. However, production costs are relatively high compared to sugar. Cane sugar and beet sugar are perfectly substitutable. Sugar has some specific characteristics that have consequences for supply. Sugar beet or cane must be processed soon after harvesting and cannot be transported over long distances nor can it be traded in its unprocessed form. This processing calls for lumpy investments, since it is capital intensive. Also, the processing factories can only operate seasonally, due to the seasonal harvest period. The results are that factories must be assured a steady supply and to ensure this, prices are kept high. Additionally, processing factories become local monopsonists. The world supply of sugar is highly volatile.

On the demand side it can be said that developed countries are confronted with saturation. Increases in demand for sugar come from developing countries and population growth. The demand schedule in the EU is vertical due to supply quotas. A-quota sugar is guaranteed a price minus a two per cent levy. The levy for B-quota sugar is 37.5 per cent at the highest. C-quota sugar is sold at the world market. The quota rents depend on each producer's marginal costs. With a model based on Frandsen et al. (2001) a country can be positioned in a graph with the three quotas. Only Germany, Austria, the UK and France can fill the A- and B-quotas and still sell on the world market. Portugal and Greece cannot even fill their A-quota.

Two sources of inefficiency stem from this system. The first is the rigid allocation of production. The quota rights are non-tradable and this results in large producer welfare losses. The second source of inefficiency stems from the high level of protection system that creates the incentive for farmers to keep on producing at a marginal cost that is much higher than the world price.

The inefficiency and the lack of competition had until recently not predominated in the discussion whether or not to reform. The self-financing nature of the policy and the fact that it is budget-neutral have helped escape reforms. Also, the strong lobby by farmers and ACP countries has helped the prevention of changes. But recently reforms have been announced and it is inevitable that the stronghold will fall. How this affects the relation with the ACP states will be discussed in the following chapters.

Chapter 3:
Poor Man's Sugar

3.1. Introduction

The Sugar Protocol is of great importance to sugar producing ACP countries. These countries receive the intervention price for an agreed upon quantity. But is the value of the Protocol quantifiable? To try and answer this question, two countries are analysed. Fiji, a sugar dependent ACP country and Cuba, a big player on the sugar market that doesn't have the same preferential access to the EU market. Then the value of the Protocol is estimated under different assumptions.

The first part is dedicated to Fiji. A general introduction on the island's sugar industry is given and the importance of the Sugar Protocol is highlighted. It is shown how the Protocol reduces the instability of export incomes. Also, a glance at future prospects is given. Then the analyses plunges into data in order to acquire the basics of a slightly more mathematical analysis. The framework within which the value is estimated is discussed. For Fiji, it is simply assumed that the island loses its ACP-status at a certain point. The estimates are placed in different scenarios, accounting for the short- and medium run, and finally a discussion on how the future might develop ends the section.

Cuba stands central in the second part. Again, a short introduction places this island into perspective. It is compared to Fiji, so that to some extent the estimates can be compared. Then, because Cuba doesn't profit from the Sugar Protocol⁴⁵, Cuba is given a hypothetical quota based on data from several ACP countries. The size of the quota is crucial to the value and the probability of each quota assigned is discussed. Finally, since data on Cuba's economy is not readily available, several limitations of the analysis are treated.

The value of the Sugar Protocol is quite large. That sugar is important to these two islands is commonly acknowledged but the estimates quantify the value to top even 5 per cent of GDP under certain conditions. But most estimates lie around 2 or 3 per cent. Also, it is very interesting to see that the world price elasticity of demand is a complicating factor for a small country such as Fiji. For Cuba, the analysis shows that being left out of preferential agreements means it misses out on large profits. Especially in the years after the Soviet Union's withdrawal from the island, a quota could have been an economic insurance against harsh times.

⁴⁵ As will be explained later, Cuba does have the ACP status as of December 2000, but does not participate in the new partnership agreement with the EU.

3.2. Fiji

In this chapter, an attempt is made to estimate the costs of not being an ACP-member. In order to make this estimation, two countries are analysed, Fiji and Cuba, quite similar in characteristics. In the following section, Fiji will be directed appropriate attention with respect to its sugar industry and export figures. Then, Cuba is given a similar treatment.

3.2.1. Cane Sugar

Fiji, one of the largest of the Pacific island countries, is classified as a lower middle income developing country with per capita GDP amounting to \$5,500 in 2002 (purchasing power parity). Fiji exhibits a high level of social development, average life expectancy being 71 years and an adult literacy rate of 89 per cent. However, it has some typical characteristics that make clear that Fiji is still a developing country. Agriculture accounts for between 20 and 30 per cent of GDP and agriculture and natural resources activities for 70 per cent of exports. Also, agriculture is the main source of employment: over 75 per cent of all households work in forestry, crop production, fisheries and livestock, be it full-time or part-time.

It has been commonly acknowledged that sugarcane is indigenous to the Islands of the South Pacific and from this origin several of the world's main commercial varieties of sugarcane were obtained. Although sugarcane was probably first processed as early as 1862, sugarcane farming and processing were not seriously introduced until the 1980s, when the sugarcane industry in Fiji reached its peak. The world market price peaked in 1980 and in combination with the establishment of the Lomé Convention of 1975, production went up from 2.2 million tonnes in 1975 to 4.0 million tonnes in 1980. Figure 1 clearly shows this surge in production, 1980 indicated by the red dotted line. Since then, the crop has dominated the Fijian agricultural economy, contributing directly to 12 per cent of GDP in 1997 and 9 per cent in 2000.

In 1997, the farming side of the sugar industry accounted for over 40 per cent of the total agricultural sector, and the processing side for around 30 per cent of the total manufacturing sector. The sugar industry is one of the largest provider of jobs, employing around 15 per cent of the labour force (1999). In addition, 40 per cent of the country's exports consisted of sugar in 1997. Simply stated, the most important industry of the Fijian economy is the combination of sugarcane farming and processing.

Fiji: Sugar Cane

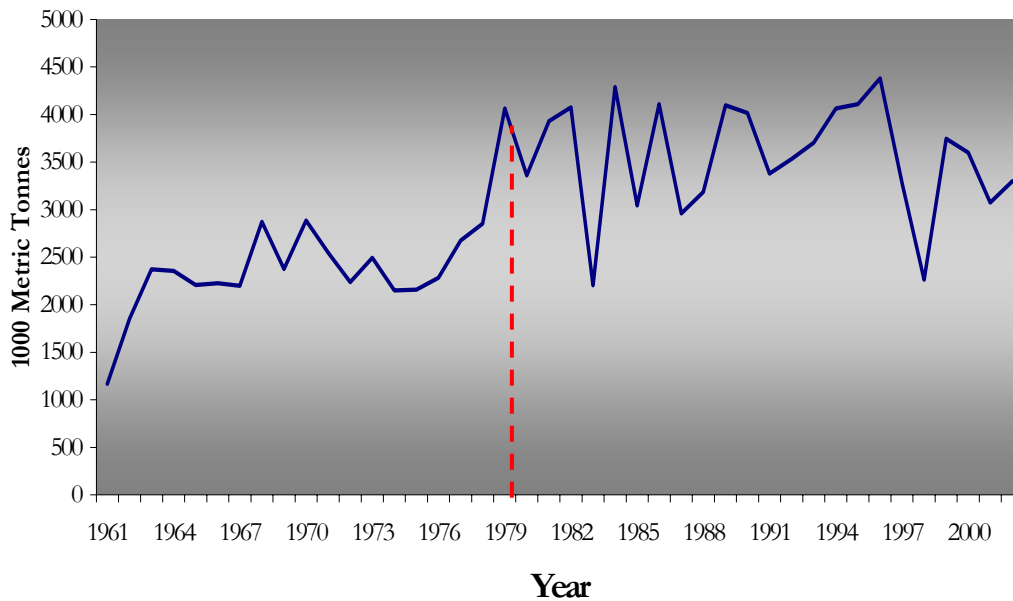


Figure 1 *Fiji's surge in sugar cane production*

The majority of sugarcane farms are small production units operating for most of the year with household labour, replenished with seasonal hired forces. The processing of sugarcane into raw sugar is performed at mills that are owned by the Fiji Sugar Corporation (FSC). The government owns 68 per cent of the shares of this publicly-listed company. Fiji has four mills, capable of producing 500 000 tonnes of sugar a year. “The earnings which accrue to farmers and the FSC from processing are based on an average price earned from sugar sales in all markets, after making certain deductions for industry costs (1.92 per cent of proceeds in 1994). Farmers receive approximately 72 per cent of the total net proceeds in four payments, with the remaining 28 per cent going to the miller.”⁴⁶

3.2.2. The Sugar Protocol

Fiji has always had tight economic bonds with its former colonial power, the United Kingdom and was part of the Commonwealth Sugar Agreement (CSA) of 1950. Under this preferential agreement the United Kingdom guaranteed to purchase specific quantities of sugar for a predetermined price. The average mark-up over the world price between 1951 and 1973 was 165 per cent. When the UK joined the EC, the CSA was replaced by the Sugar

⁴⁶ Barrack, G.S.W., and May, J., Fiji and the Sugar Protocol. (ECDPM Working Paper No. 17). Maastricht: ECDPM, 1997.

Protocol in 1975 and Fiji was ensured a higher price for its sugar than it would get on the world market for at least another three decades. For the last decade, Fiji has been granted a preferential quota of 165 348 metric tonnes, which is 12.7 per cent of the EU's total preferential quota of 1 304 700 metric tonnes.

The benefits of the ACP Sugar Protocol to the Fijian economy come in twofold. Firstly, because the CAP is designed to support price, the guaranteed price Fiji gets for its sugar exported to the EU is much higher than the world market price. In the 1990s, the EU price was more than twice as high as the world price, which is illustrated by figure 2⁴⁷. The graph exhibits the intervention price because that is the price ACP countries like Fiji are guaranteed.

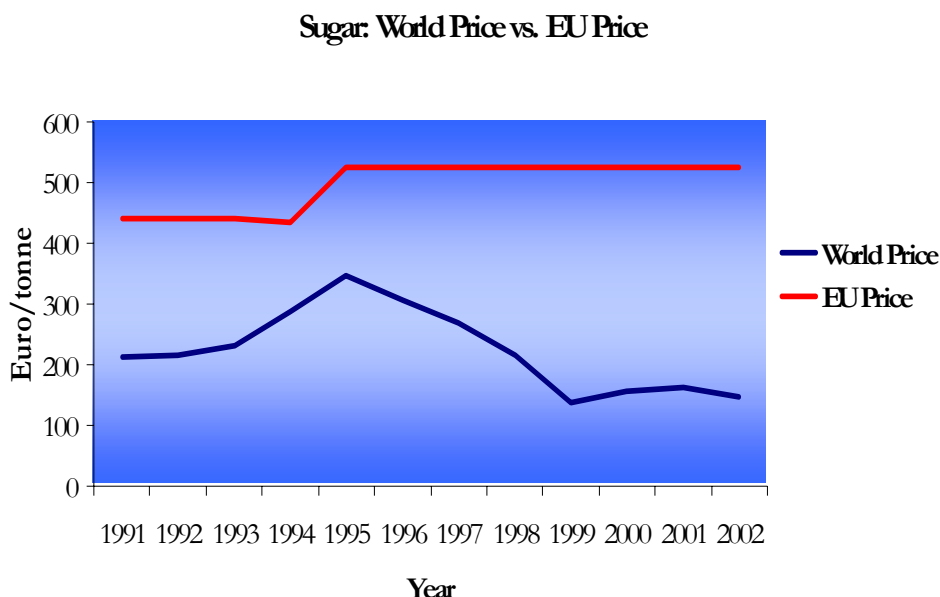


Figure 2 The EU price of raw sugar vs. the world market price.

Secondly, the guaranteed price for specific quantities stabilises the sugar industry's sales. The Fijian economy is not as prone to the highly volatile world market price as are non-ACP countries and even in times of economic downturn or very low world market prices, fluctuations in Fiji's sugar sales are not as apparent as would be in the non-ACP case because of the predetermined demand from the EU. "In the period between 1975 and 1991 sugar prices on the world market varied by about 41 per cent, yet the European Union's prices were subject to a variation of a mere 8.7 per cent (Herrmann and Weiss 1996). The Sugar Protocol

has therefore effectively reduced the instability of export earnings and has been an important source of both price stability and sales security.”⁴⁸

These benefits of the Sugar Protocol become apparent when comparing figures of production and employment before and after the introduction of this beneficial agreement. Production increased as did employment in the farm and milling sectors. Fijian landowners, growers and millers enjoy higher incomes and the effects in the sugar sector create a spill-over effect to other sectors of the economy. One of the most important side effects of the Sugar Protocol is the fact that it makes possible the transfer of much needed foreign exchange from the EU to Fiji. All in all, the benefits of the Sugar Protocol for Fiji have been estimated to be worth 3.72 per cent of GDP over the period 1980-90 (MacDonald 1994). This is a substantial annual transfer.

That the Sugar Protocol is a mutually-beneficial agreement has already been discussed in chapter 2. It may thus be clear that the trade cooperation with Fiji is advantageous to EU sugar refiners as well. Refiners are ensured of a steady supply and are thus capable to bring down unit production costs because capacity utilisation can be maximised. Besides, because of this security that the Sugar Protocol builds in, the risks of capital investment, investments in new technology and in modernisation are reduced.

Although not particularly valuable to this essay, a short note on the social impact of the CAP may be worthwhile. The Sugar Protocol provides remunerative prices to Fijian farmers and has enabled small farmers to make a living. The price the Sugar Protocol may not have been economically competitive but it has acted as a form of social security for Fijian agricultural workers. That is, not only the farmers benefit from guaranteed prices but also the seasonal workers whose wages depend on the sugar price are ensured a reasonable income.

The Sugar Protocol has had many benefits to the Fijian economy, has enabled its sugar farmers to provide for basic and secondary social needs and has done this in a relatively equitable manner, not one group in the countryside benefiting disproportionately. Besides, public services such as health and education have been positively influenced by the sugar proceeds. In an economy with sugar as its main pillar, the Sugar Protocol has caused many direct and multiplier effects outside the sugar region. Income generated in the sugar industry has caused a surge in the effective demand for goods and services produced outside the sugar sector. Another function of the Sugar Protocol for the Fijian economy is that of development aid. The controversy that exists around the question of whether direct aid (funds) or

⁴⁷ EU price is the intervention price, the world market price is the price in dollars converted to Euro using the average yearly exchange rates. These were manually calculated from monthly averages.

⁴⁸ Barrack and May, 1997

encouraging trade is the most effective way of helping a country develop is shortly summarized in box 1.

Box 1 *Fiji: Trade or Aid?*

“If trade or aid to Fiji is designed to enhance investment and growth, then it would be well to look at the impact of each in these fields. Aid flows to Fiji are comparatively low and this serves to discourage already low domestic savings. On the other hand, Fiji's export earnings make a positive contribution to savings rates, particularly in the sugar sector. In other words, trade makes a greater impact on the domestic savings needed to fund long-term investment and growth. At the same time, Fiji's exports can stimulate production and bring dynamic benefits in a way that aid cannot. For example, gains in efficiency resulting from trade include economies of scale made possible as the total market for produce increases - clearly evident in the case of the sugar industry. Economies of scale have also in the past, facilitated investment.”

“Fiji needs to reduce its dependence on sugar by expanding into new sugar by-products, and by diversifying its manufacturing base. To generate the resources to diversify, Fiji's farmers need market access. By warding off third party competition our producers can obtain the funds needed for diversification and efficiency improvements and the time necessary to adjust. This is precisely what the Sugar Protocol currently accomplishes for Fiji. It is a form of trade-based official development assistance linked to a commercial agreement. If it is to continue to perform this role, there is a need to maintain preferential access to the European market for as long as possible.”

Source: Barrack and May (1997).

3.2.3. The future

In their 1997 assessment of the Fijian economy, Barrack and May give two descriptions of possible future scenarios for the Fijian sugar sector. Their medium term prediction held for the year 2000 and prognosticated that the changes in the sugar industry that were to occur between 1997 and 2000 would have as a result a reduction in national welfare. The bulk of this loss would arise because of less income from the Sugar Protocol, which would have to be

adapted in the light of new WTO Rounds. The EU price would drop and so would the guaranteed price for ACP countries. That is, a drop in the price paid for Fiji's quota exports to Europe, which was often estimated to be as much as 15 per cent by the year 2000. The resulting net welfare loss would then amount to around 2.52 per cent of GDP.

However, the authors go on to explain that this scenario is not likely to occur. The internal prices can be sustained whilst meeting the WTO commitments; reducing tariff protection and the volume of export subsidies to European sugar farmers. The internal prices can easily be maintained by reducing the A- and B- production quotas. Their prediction of the medium term was quite favourable for Fiji indeed and time proved them right. The 2000 WTO Round has not caused great shifts in the EU sugar regime and Fiji's sugar quota have not decreased a bit. Table 1 shows the agreed upon export quotas with Fiji and the total sugar export quotas of all ACP countries.

Box 2 <i>Agreed quantities under the ACP-EU Sugar Protocol</i>			
	1997	-	2002
	EU-15		EU-15
Fiji	165 348.3		165 348.3
Total	1 304 700		1 304 700

*Source: COMTRADE Database,
United Nations Statistics Division*

The other scenario concerns the long term, in which the authors find it more likely that the EU will have to further adapt its regime to the Uruguay Round commitments. One important factor in predicting the future of Fiji's sugar industry is the ACP-EU agreement. The Lomé Convention expired in 2000 but was succeeded by the new ACP-EU Agreement, the Cotonou Convention. Although the Sugar Protocol was formally independent of the Lomé Convention, the succession of official preferential agreements is very important for Fiji because it affects the sugar industry to a large extent. Another important factor to consider is that agriculture falls under WTO regulations, as agreed upon in the Uruguay Agreement. The debate on the sugar regime has flamed up recently with European Commissioner Frans Fischler criticizing the protectionist nature of the policy and the dumping of sugar.

For Fiji this could hamper colourful scenarios for the future. The main benefit for the country lies in the fact that the EU protects its borders and can thus keep prices artificially high. In combination with the preferential market access granted to Fiji, the continuing high price for Fiji's sugar is a powerful trump. But WTO commitments will most probably force

the EU to open its borders, which will have a downward pressure on the internal price. Intuitively, sugar beet production will eventually be replaced by much cheaper sugar cane imports. Trade liberalisation will cause prices to drop to competitive price, and it is this internal price that in the end determines the price received by ACP countries. It may be clear that this price will plunge accordingly.

Because the possibility of losing huge transfers from the EU is quite real, as is the possibility of losing preferential access to the EU market, Fiji's sugar industry faces a major challenge. Fiji will have to adjust to a lower price and a higher degree of competition. On the other hand, world prices will rise when the EU stronghold crumbles down, because dumping practices will no longer exist in such a large scale. Excesses are reduced and the EU will no longer dump its overproduction on the world market because there will simply be no overproduction in the EU. This argument only flies if EU sugar farmers are not competitive on the world market and there seems to be considerable evidence that they are not. The protectionist policy might be seen as the most obvious proof for this argument.

In the following section an attempt is made to give an estimation of the value of the Sugar Protocol in the light of different scenarios. First of all, a section with the latest data will shortly analyse the most important indicators of Fiji at present and the framework in which calculations will be made is set. Then outcomes are discussed.

3.3. Sweet ACP

To calculate the costs of not being an ACP-country, the most obvious way to proceed is to simply assume a country would lose its ACP-status. However, this can be done in the light of different scenarios that will contribute to the value of the estimation. The data used is outlined in the next section whereas the framework and actual calculations follow up from there.

3.3.1. Raw data

When investigating the data on Fiji's sugar sector it is important to distinguish carefully between raw sugar and refined sugar. Databases such as FAO STAT and COMTRADE are very useful indeed but care must be taken when using data from different sources within the same framework.

The data that is analysed for Fiji is that of raw sugar. It turns out that Fiji does export some quantity of refined sugar, but that the trade flows in this commodity to the EU are negligibly small. Raw sugar, however, is exported to the EU in large numbers.

Box 3 *Fiji's Exports to the EU***Raw Sugar, Beet and Cane**

Period	Trade Flow	Trade Value (\$)	Trade Quantity (tonnes)
1977	Export	64 187 356	186 902
1978	Export	63 676 424	159 552
1979	Export	78 335 104	189 759
1980	Export	60 955 516	143 937
1981	Export	65 247 152	182 735
1982	Export	51 986 864	140 560
1983	Export	49 124 780	145 524
1984	Export	56 640 564	176 478
1985	Export	63 332 264	179 224
1986	Export	79 288 456	169 198
1987	Export	95 269,096	169 260
1988	Export	88 691 008	186 084
1989	Export	91 086 512	173 199
1990	Export	92 550 104	153 452
1991	Export	139 331 616	247 112
1992	Export	102 917 328	171 529*
1993	Export	77 340 968	135 250
1994	Export	102 316 072	175 752

*For this variable, data was not available: this is an estimation

*Source: COMTRADE Database,
United Nations Statistics Division*

All of the exported raw sugar is bound for the United Kingdom, which can intuitively be explained by the colonial influence of the past. Until 2001, no other EU country imported any raw sugar from the Fiji Islands than the UK, but in 2002, Portugal imported 17 500 tonnes. Box 3 shows the export figures of raw sugar to the EU until 1994⁴⁹, which consist of exports to the UK only. It wasn't until 2002 that Fiji started exporting to other EU member countries.

The price Fiji is guaranteed is annually determined through negotiation on the basis of the UK intervention price. Even though small differences may exist, it may be clear that the negotiated price is highly dependent on and directly determined from the UK intervention price. Two assumptions are made at this point. The first is that the UK intervention price is the same as the EU intervention price, which was 439.40 Euro per tonne of raw sugar up until 1995, but has been 523.70 Euro per tonne since then. This assumption is quite reasonable

indeed because the only difference between these two prices is due to exchange rate fluctuations between the Pound Sterling and the Euro. The second assumption is that Fiji is offered the EU intervention price for its sugar exports. Although the EU internal price need not equal the intervention price, the intervention price is the price ACP-countries receive for their sugar. The internal price is highly dependent on the world price. If world prices are high, EU farmers will be motivated to produce more and export C-sugar. This can result in one or two years of higher production. But by then the world price might have dropped again, since it is highly volatile. This results in excess supply on the EU market and will put downward pressure on the EU internal price. The European Commission then steps in to prevent prices falling below the intervention price.

Below in box 4, Fiji's production and consumption of raw sugar are shown. Fluctuations in production are apparent but can be understood better in the light of world price fluctuations. Consumption of sugar in Fiji has increased in this decade, albeit very slowly indeed. Consumption per capita has also experienced an upward trend which can partly be explained by an increase in population and partly by the increase of per capita GDP. The latter went up from around US\$ 2,330 in 1995 to \$5,500 in 2002. However, the increase is not spectacular and figures sketch a fairly unwavering situation.

Box 4 <i>Fiji's production and consumption of raw sugar</i>											
Fiji: Raw Sugar	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Production (000 m³)	378	456	451	451	453	458	474	369	278	377	353
Consumption (000 m³)	40	44	45	46	43	48	48	51	44	38	41
Consumption per head (kg)	54	59	60	59	56	63	62	66	56	50	54

Source: FAO STAT

In the next box, the world price is shown. The first column shows the world price in US dollars. The second column depicts the EU intervention price (the price that the ACP countries receive according to the Sugar Protocol) in Euro per tonne. Converting at an exchange rate of US\$ 1.00 per Euro, which is the exchange rate in December 2002⁵⁰, gives the

⁴⁹ For up until 1994 consistent data was available in one database: Comtrade, Unstats. Data is missing for 1995-1999. For the years thereafter, data is reported at a later stage because that data will be worked with.

⁵⁰ The 1:1 exchange rate of December 2002 facilitates the estimation procedure extensively and is therefore taken as base exchange rate.

third column. Especially in times of low world prices, the advantages of being an ACP-member become apparent.

Box 5 Raw Sugar: EU price vs. world price			
Year	World Price	Intervention Price	World Price
	\$ per Tonne	Euro per Tonne	Euro per Tonne (Dec e-rate)
1991	180.8	439.4	180.8
1992	181.8	439.4	181.8
1993	200.7	439.4	200.7
1994	242.5	433.7	242.5
1995	268.7	523.7	268.7
1996	244.8	523.7	244.8
1997	241.2	523.7	241.2
1998	193.6	523.7	193.6
1999	130.7	523.7	130.7
2000	170.2	523.7	170.2
2001	182.3	523.7	182.3
2002	157.5	523.7	157.5

The price Fiji receives for its export quota sugar is up to three times as high as the world price. In 1999, the world price for sugar nose-dived to an all time low and it has only slowly recovered since. This extremely low price was caused by dumping after an overproduction crisis, due to relatively high world prices in the period 1994 to 1997, from which the world market is yet to recover. It may be clear that Fiji is one of the privileged countries that receive the EU intervention price even in times of economic hardship on the sugar market. What if Fiji would not be guaranteed this minimum price?

3.3.2. Frame the work

There are two scenarios of interest for this essay. The first thing that comes to mind when estimating the benefits of the ACP for the Fijian economy is to estimate the costs of losing that membership⁵¹. But when doing so, it must not be forgotten that reality is not as simple as that. Therefore, two scenarios are discussed in this section. The first is a situation in which Fiji is no longer a member of the ACP but is competitive and can sell the loss in quantity normally sold to the EU on the world market. The second is that Fiji does no longer

⁵¹ Caution with this assumption is asked for. Please refer to the section 3.4. Estimates and limitations.

have a preferential agreement with the EU and is not competitive on the world market. That means that the country will not be able to sell the loss in quantity normally sold to the EU.

Box 6 The Framework- Short Run

- Assumptions:
- 1. World prices are fixed,*
 - 2. World demand does not change, i.e price elasticity of demand is 0*
 - 3. ACP countries obtain the EU intervention price*
 - 4. Production processes are fixed*
 - 5. Only direct costs and benefits are calculated*
 - 6. EU does not reform its agricultural policy*
 - 7. In 2000, Fiji loses its ACP status*
- Scenarios:
- 1. Fiji is competitive; marginal costs are lower than world price*
 - 2. Fiji is not competitive; marginal costs are higher than world price*

To analyze these scenarios a couple of notes and assumptions must be made. The first is that only the direct costs are estimated. Any indirect benefits or costs are beyond the scope of this essay, but it is worth a note of interest. Any multiplier effects may enlarge effects; any economic adjustments could dampen effects in the medium or long run. This brings us to another assumption. In the following section, the costs are analyzed for the short run only. This means that the world price and exchange rates are assumed fixed and that the Fijian sugar industry cannot adjust its production processes, its efficiency or competitiveness. Another assumption in this section is that the EU does not reform its agricultural policy and the Sugar Protocol remains in existence. This is an extremely important assumption because if the EU should reform its policy, the world price would be affected. This will be introduced to the estimations at a later stage.

3.3.3. Fiji flies

This section covers the first scenario: Fiji is competitive. In 2001, the world price of raw sugar equalled 182.3 Euro per metric tonne. In 2002, this price had dropped to 157.5 Euro per metric tonne. But Fiji was sure to sell at least 165 348.3 metric tonnes of raw sugar to the EU in both years at the guaranteed price of 523.7 Euro per tonne. Fiji's total exports of raw sugar

in 2000 was 314 414 tonnes, of which 180 600 tonnes went to the EU. In 2001, exports totalled 275 702 and 211 350 tonnes were sold to the EU. And in the next year the quota was exactly filled.

Box 7 *Fiji's exports to the EU*

Year	Trade flow	Trade Value	Trade Quantity	% of GDP
2000	Export	94 580 220	180 600	2.36
2001	Export	110 683 995	211 350	2.52
2002	Export	86 592 748	165 348	1.84

Source: COMTRADE Database, United Nations Statistics Division (slightly adapted)

At the intervention price, Fiji's revenues that accrue directly from the ACP Sugar Protocol are simply the quantities exported to the EU multiplied by the EU intervention price. In 2000, 180 600 tonnes of raw sugar were sold at 523.7 Euro per tonne which is equivalent to a revenue of 94 580 220 Euro. The revenue figures for the years 2001 and 2002 were 110 683 995 Euro and 86 592 748 Euro, respectively. In 2002, Fiji's GDP was equal to US\$ 4.7 billion⁵², purchasing power parity, which means that this year the exports of raw sugar to the EU alone accounted for 1.84 per cent of GDP.⁵³

Now assume Fiji loses its ACP status in 2000. Thus for three years, Fiji is not guaranteed the 523.7 Euro per tonne of raw sugar. However, the assumption in this scenario is that Fiji's marginal costs for sugar are below the world price in each of the years, which means that Fiji is a competitive player on the world market for sugar. Following from this, it can be concluded that the quantities that would normally flow to the EU under the Sugar Protocol can now be sold on the world market at the world price. In the years 2000, 2001 and 2002 the world price of raw sugar was 170.2, 182.3 and 157.5 respectively, again at December 2002 exchange rates. Fiji would by assumption sell the quantities it sold to the EU on the world market at these prices.

The calculations take the following form. Suppose that the world price is called P_w and the intervention price the ACP countries are guaranteed is called P_{EU} . The quota of raw sugar from Fiji to the EU is Q_{EU} . Normally, in the case of Fiji having the ACP status, Fiji's revenues

⁵² (2002 est.) From CIA Website: www.cia.gov/cia/publications/factbook

⁵³ The Economic Outlook of December 2002 states an exchange rate of the US Dollar to the Euro of exactly 1.00. Bond Markets, www.bondmarkets.com/research/Economic_Outlook_1202.pdf

that arise directly from the Sugar Protocol are simply the price of raw sugar on the EU market, P_{EU} , multiplied by the quantity sold on this market, Q_{EU} . The assumption is that Fiji loses its ACP status, but is competitive. Thus it can no longer sell Q_{EU} at P_{EU} but will be able to sell Q_{EU} at P_W . The direct cost of losing the ACP status is simply the difference in revenues.

Box 8 *Direct costs of losing ACP status:*

$$\text{Costs} = (Q_{EU} * P_{EU}) - (Q_{EU} * P_W)$$

Note that the assumption that the EU will not reform agricultural policy is quite important here, because it implies that world prices are kept relatively low. There are estimates of how the world price is affected should trade liberalisation set foot on the EU sugar market but these will be introduced later on.

Box 9 *Scenario 1 calculations*

Year	Q_{EU}	P_{EU}	P_W	$(Q_{EU} * P_{EU})$	$(Q_{EU} * P_W)$	Cost
2000	180 600	523.7	170.2	94 580 220	30 738 120	63 842 100
2001	211 350	523.7	182.3	110 684 000	38 529 105	72 154 895
2002	165 348	523.7	157.5	86 592 748	26 042 310	60 551 438

Quantities are in metric tonnes, prices are in Euro as are revenues.

Under the assumptions made, the costs of not having the ACP status are estimated between 60 million Euros and 70 million Euros annually. To place these figures into perspective it is essential to compare them to gross domestic product. The 2001 and 2002 GDP figures at purchasing power parity were US\$ 4.4 billion and US\$ 4.7 billion⁵⁴, respectively. At the December 2002 unity exchange rate of the Dollar to the Euro, this means that the costs of losing the ACP status are as high as 1.6 per cent of GDP in 2001 and 1.3 per cent in 2002. This is quite substantial indeed. Of course, these estimates depend crucially on world prices. Because the assumption is made that Fiji is competitive, high world prices can

⁵⁴ Nation Master, www.nationmaster.com.

strongly reduce the costs of the lack of ACP status whereas years of low world price could be an extra burden for Fiji's economy.

3.3.4. Fiji fails

The costs estimated so far are quite substantial indeed. However, the previous scenario was relatively optimistic with its assumption that Fiji is a competitive player on the world market for raw sugar. The following question arises: what if Fiji is not competitive? What if the marginal costs for Fiji's raw sugar are above world price? In the scenario that Fiji fails to compete on the world market, it cannot sell the EU quota to other buyers and the whole EU quota will be counted as a loss.

The loss of preferential agreements has a devastating effect on Fijian sugar and the economy as a whole and the estimates of the costs are obviously much higher than in the case of a competitive Fiji. The costs in this case are simply found by looking at the EU quota at EU intervention prices since this is the value that Fiji loses and of which it cannot recover a single Euro due to the lack of competitiveness. Using the same setting as in the previous case, the scenario is sketched in box 10.

Box 10 Scenario 2 calculations				
Year	Q_{EU}	P_{EU}	Cost (Q_{EU}*P_{EU})	As % of GDP
2000	180 600	523.7	94 580 220	2.36
2001	211 350	523.7	110 684 000	2.52
2002	165 348	523.7	86 592 748	1.84

Now the costs rise up to 110 million Euros and account for 1.84 to 2.52 per cent of GDP. This scenario is a doom scenario for the Fijian sugar industry. The ACP status is lost and Fiji is no longer guaranteed the EU intervention price and quota. Reasons for Fiji's lack of competitiveness could be found in efficiency problems, relatively high wages or the impossibility to profit from returns to scale. In a following section, a consideration will be made as to decide whether the first or second scenario is the more realistic description of the Fijian economy and its competitiveness, and why this should be the case. But first, the analysis is made more dynamic.

3.3.5. Time heals the wounds?

The estimations thus far only concern the short run, for it assumes prices do not adjust and the price elasticity of demand for raw sugar from the world has no influence on Fiji's raw sugar production. These assumptions do not seem realistic in the longer run. Should Fiji lose its ACP-status, the Fiji price for sugar is certain to drop. Consider the quota that Fiji can no longer sell on the EU market. This quantity will now have to be sold on the world market at a lower price. Again assuming Fiji is competitive and can indeed sell this quantity internationally, it would not be very appropriate to assume that Fiji couldn't sell more on the world market. In other words, the assumption that buyers on the world market would not react to the lower price for Fiji's sugar is questionable. Intuitively, demand for Fijian sugar will go up once Fiji offers the sugar on the world market at a price lower than the world price. The assumption in the previous section, that the price elasticity of demand for raw sugar on the world market is equal to unity, can be dropped. The reasoning is repeated in box 12. In addition, the assumption must now be made that the Fijian sugar farms and refineries can adjust their production processes to fluctuations in demand. However, an estimate of the true price elasticity is needed to perform the calculations in the light of these new assumptions.

Tyers and Anderson (1992) give exactly these estimates on price elasticities of demand for sugar. In table 5⁵⁵ the reported elasticities are the estimates that these authors came up with. The percentages of consumption are based on data from USDA ERS Sugar and Sweetener of 2000. The figures do not include the United States which sketches a slightly distorted picture for Fiji. Lopez (1990) reports long run price elasticities of between -0.412 and -0.597 for the U.S. Therefore, although the U.S.A. do have a considerable effect on the world price elasticity of sugar demand, the figure would not alter so much as to hamper the analysis to come and it is the figure reported in box 11 that is worked with henceforth.

Box 11 Price Elasticity of world demand for sugar

FY 1999		ROW Cane Sugar Production and Weighted Own Price Elasticities, 1000 MTRV	
Country/Region	Consumption as % of ROW total	Price Elasticities of Demand	
		Reported	Weighted
Canada	1.13%	-0.08	-0.0009
Argentina	1.38%	-0.6	-0.0083
Brazil	8.26%	-0.6	-0.0496
Other Latin America	5.93%	-0.6	-0.0356
<i>Caribbean</i>		<i>0.61%</i>	
<i>Central America</i>		<i>1.28%</i>	
<i>Other South America</i>		<i>4.04%</i>	
EU*	11.48%	-0.12	-0.0138
<i>Spain and Portugal</i>		<i>1.53%</i>	<i>-0.23</i>
Other W.Europe	0.49%	-0.12	-0.0006
Eastern Europe	3.98%	-0.8	-0.0318
Former Soviet Union	8.68%	-0.1	-0.0087
Egypt	1.77%	-0.8	-0.0142
Nigeria	0.61%	-0.8	-0.0049
N.Africa and Middle East	9.44%	-0.5	-0.0472
<i>N. Africa</i>		<i>2.68%</i>	
<i>Middle East</i>		<i>6.76%</i>	
S.Africa, Republic of	1.25%	-0.6	-0.0075
Sub-Saharan Africa	3.68%	-0.8	-0.0294
Bangladesh	0.42%	-1	-0.0042
China	8.17%	-1.5	-0.1226
India	15.41%	-0.8	-0.1233
Indonesia	2.54%	-1.2	-0.0305
Japan	2.10%	-0.05	-0.001
Korea	1.02%	-0.8	-0.0081
Pakistan	2.91%	-1	-0.0291
Philippines	1.73%	-1.4	-0.0241
Taiwan	0.45%	-0.8	-0.0036
Thailand	1.66%	-0.7	-0.0116
Other Asia	2.78%	-1	-0.0278
Australia and Oceania	1.20%	-0.18	-0.0022
Total	100.00%		-0.6440

⁵⁵ The table in box 11 is Table 4.10 in 'Havana Daydreaming: A partial equilibrium simulation of increasing the U.S

Put boldly, a one per cent price increase causes a 0.6440 % decrease in demand. Again, several possibilities are possible. Assume the world price is given, but Fiji's production and refining processes can be adjusted. Let's assume that Fiji is competitive and that it can be highly competitive, reasonably competitive or marginally competitive. Highly competitive Fiji can offer the world a price 10 per cent lower than world price. Reasonably competitive Fiji can cut the world price by 5 per cent and marginally competitive Fiji can only offer a 1 per cent lower price. Shortly summarized below, the assumptions for the medium run situation are given.

Box 12 The Framework- Medium Run

Assumptions: 1. *World prices are fixed.*

2. *World demand can change at price elasticity of -0,644*

3. *ACP countries obtain the EU intervention price*

4. *Production processes are flexible*

5. *Only direct costs and benefits are calculated*

6. *EU does not reform its agricultural policy*

7. *In 2000, Fiji loses its ACP status*

Scenarios: 1. *Fiji is highly competitive, 10% below P_w .*

2. *Fiji is reasonably competitive; 5% below P_w .*

3. *Fiji is marginally competitive, 1% below P_w .*

In the first scenario, Fiji is kicked out of the ACP group but is highly competitive. This means it is not guaranteed the 165 348 trade quota, but is able to sell this quantity at a 10 per cent lower price than the world price. In 2000, Fiji sold 180 600 tonnes of raw sugar to the EU. Now it will not only be able to sell this to other buyers, but also the extra demanded quantity that can be computed with the price elasticities. Fiji offers the world a 10 per cent lower price, which means that the world will demand 6.44 per cent more from Fiji. Fiji now sells 192 231 tonnes of raw sugar at 153.18 Euro per tonne. Calculating the costs is performed similarly to box 8, but in a slightly different form:

Box 13 *Direct costs of losing ACP status, with competitive price:*

$$\text{Costs} = (Q_{\text{EU}} * P_{\text{EU}}) - (Q_{[1+(0.00644*100\chi)]\text{EU}} * P_{(1-\chi) \text{W}}),$$

With χ as the percentage cut in price, either 0.10, 0.05 or 0.01.

Box 13 shows that the demand from the world market changes as Fiji offers a lower price. For 2000, this would imply that a highly competitive Fiji offers the world a 10 per cent lower price, which means that the world will demand 6.44 per cent more from Fiji. Fiji now sells 192 231 tonnes of raw sugar at 153.18 Euro per tonne. So the costs are now 65 134 331 Euro. This is higher than the previously calculated cost (63 842 100 Euro), which shows that in the highly competitive scenario the fall in price of 10 per cent is not compensated by the increase in demand of 6.44 per cent. Similarly, if Fiji can set its price 5 per cent below world prices, the costs are still 64 438 727, which shows that the price drop is too large to be offset by the increase in quantity. For these three years, the medium run does not provide a better scope for Fiji, under the given assumptions. The price elasticity has proven to be too small for Fiji's sugar industry to be able to benefit from their competitive position. Below in box 14, outcomes in percentages to GDP are compared to the initial cost estimates.

Box 14 *Cost as percentage of GDP: Medium Run compared to Short Run*

Year	S-R Competitive	Competitiveness		
		High	Reasonable	Marginal
2000	1.596	1.628	1.611	1.599
2001	1.639	1.677	1.657	1.643
2002	1.288	1.312	1.299	1.290

It is clear that the price elasticity of demand for sugar is too small to offset the fall in price for sugar. In the medium run this means that even though Fiji is competitive and world demand for Fijian sugar is allowed to adjust to price changes, the costs of losing ACP-membership still lie between 1.29 and 1.68 per cent.

3.3.6. Fly or fail?

Which of these scenarios is the more likely? To answer this question, several factors must be taken into account. First and foremost, the productivity of the sugar industry is extremely important. Additionally, factor costs are decisive in determining competitiveness. Therefore, in this section, Fijian labour costs and rental rates are compared to those of Australia, Brazil and India, three major players on the world sugar market. And last, the possibility of returns to scale can be very important in assessing competitiveness.

As early as 1992, the Fijian government recognised that there was a need for restructuring the sugar industry in order to boost productivity. It was understood that the benefits of the Sugar Protocol would not be present eternally and especially in the last years of the 1990s, policy makers realised that only competitiveness on the world market could ensure a happy future for Fiji's sugar sector. The biggest obstacle for this restructuring is the fact that so many other problems challenge the economy. Amongst these are the threatening cessation of preferential access and markets for its other manufacturing sectors, i.e. non-sugar sectors.

Fiji's sugar market is not internationally competitive at present, but the last decade many attempts have been made to change this situation. In 1992, productivity was enhanced by the establishment of a fertilizer-blending factory. In the late 1990s, mechanization has claimed its share in the attempts to boost productivity. However, escalating freight and insurance costs and a complex system of land distribution and land ownership have stood large scale restructuring in the way.

It is important for Fiji to use the last years of the Sugar Protocol's existence to create a competitive sugar industry and to prepare the economy for bitter competition on world markets. Barrack and May estimate that "the farming and milling sectors must try to boost productivity by at least 25 per cent". Besides the productivity gains aimed for, it is important for Fiji "to start developing a range of locally-produced sugar by-products with a higher value added component. A start must be made on developing niche export markets for these products. This innovation will be very useful in helping the economy to deal with employment issues created by the transition to a more open sugar trade environment."⁵⁶

Factor costs are another important determinant of competitiveness. Fiji's wage rates are considered low from a developed country's point of view like Australia's, but relative to India and Brazil wage rates are quite high. Box 15 shows the hourly wage rates in Euro for the four countries over the period 1995-1997. For this period coherent data was available; exchange rates are converted using the November 2003 exchange rates. Although not very accurate, it

⁵⁶ Barrack and May, 1997.

gives a clear picture of how labour market costs can determine competitiveness. It is clear that Fiji is not particularly competitive as compared to India and Brazil.

Year	Australia	Brazil	Fiji	India
1995	9.52	0.61	0.87	0.09
1996	10.00	0.72	0.98	0.09
1997	10.31	0.77	0.91	0.09

Adapted from Statistical Yearbook, 2001

Another important fact of consideration is the rate at which investors can borrow money. Comparing national interest rates between the countries shows that Fiji is relatively competitive when it comes to attracting investors. In 2002, money could be borrowed at an interest rate of 8.05 per cent in Fiji, whereas India and Brazil have much higher interest rates with 11.92 per cent and 62.88 per cent respectively.⁵⁷

Last, the possibility to farm and refine sugar on a large scale brings down marginal costs. Positive returns to scale make a larger farm with the same relative capital intensity more efficient than a smaller farm. In this aspect, Fiji has a disadvantage vis-à-vis Brazil and India, because of its much smaller arable land. Brazil has 26 560 km² of irrigated land, India has 590 000 km² and Fiji only 30 km². The mere difference in size of these countries gives them a privileged position with respect to agricultural produce.

All in all, Fiji does not seem to be competitive on the world market as yet. But the introduction of large scale mechanisation could foster efficiency, and with their relatively low wage rate, Fiji could diversify its sugar industry into sugar by-products for which they could become competitive. Hopeful is the fact that the government has underlined the need to increase productivity but the economic instability and problems in other sectors make it a difficult task to direct a lot of resources to the restructuring of the Fijian sugar industry. It can be concluded that the ACP-EU Sugar Protocol arrangement as it stands today is a bliss for the Islands of Fiji but that the dark clouds of reform show up on the horizon of Fiji's sugar sector.

⁵⁷ Rates are Lending Rates, period averages in per cent per annum, from International Financial Statistics Yearbook, published by the IMF in 2003.

3.4. Cuba

In December 2000, Cuba was assigned the status of ACP, becoming the 79th member. However, Cuba does not benefit from the new partnership agreement yet. In the following sections, Cuba is analysed and compared to Fiji. The countries are quite similar in demographic indicators and economic statistics but different in the fact that Cuba is not an ACP member and Fiji is. This makes the Cuban sugar sector interesting to explore and examine how EU's policy affects this Caribbean country.

3.4.1. Vs. Fiji

The largest island in the Caribbean, Cuban territory covers 110 860 square kilometres. In July 2003, the population was estimated at 11.2 million and growing at about 1 per cent annually. Life expectancy is 76.8 years in 2003. Looking at several demographic and economic indicators, Cuba seems to be a fairly well-doing country, yet it is classified as a lower middle-income country. GDP was US\$ 30.69 billion in 2002 (purchasing power parity) and per capita GDP was US\$ 2 700. Services accounted for over 57 per cent of GDP, which can for a large part be explained by the growing tourism sector. Yet, 7.6 per cent is accounted for by agriculture. Compared to Fiji one can say that the two islands are quite similar with respect to several characteristics. Although Cuba is almost ten times larger than Fiji and accrues far more revenue from tourism, both countries are highly dependent on agriculture and sugar in particular. On a global level, both countries are considered relatively small players on the sugar market as compared to the EU, India and Australia, although for Cuba this situation was once different. However, mention should be made of the fact that Cuba differs from Fiji in numerous aspects, a higher diversity in export products being a significant one. Also, Cuba produces and exports far more raw sugar than Fiji but for the sake of this essay, the two are considered sufficiently comparable.⁵⁸

3.4.2. Cuban Cane

In the early 1990s, the Cuban economy was severely hit. The depression of Cuba's economy was a result of the fall of the Soviet Union that lost all its interest in Cuba. Aid flows were stopped and especially the loss of the trade agreements for sugar hit the sugar-dependent economy hard. Even in 2002, "the average Cuban's standard of living remains at a lower level than before this severe economic depression. High oil import prices, recessions in key export markets, damage from Hurricanes Isidore and Lili, and the tourist slump after 11 September

2001 hampered growth in 2002. These factors caused the agricultural sector to decline rapidly in the last decade, as did the sugar sector.”⁵⁹ In 1990, the earnings from sugar export made up for 80 per cent of total export earnings but in 1996 this had fallen to just 52 per cent. Cuba went from one of the major players on the world sugar market to the fifteenth place in 1997. The low preferential price it got under the MFN agreement was one of the causes of this drop. However, Cuban agriculture in 1997 still accounted for over 60 per cent of total exports, the largest export partner being the EU (30 per cent). It can be noted that the value of a quota under the Protocol would have been very welcome to the Cuban sugar industry in these years of decline.

Box 16 Cuba's raw sugar production	
Year	Million Tonnes
1995	3.3
1996	4.5
1997	4.3
1998	3.3
1999	3.9
2000	4.1
2001	3.6
2002	3.8

Source: FAOSTAT (Rounded figures)

The price Cuba gets for its sugar today is the world price, save for the quantities it exports to the EU as a Most Favoured Nation (MFN), and is lower than what it used to receive from the Eastern block. Although fisheries and tourism are two growing sectors, sugar continues to dominate Cuba's economic landscape. Cuba's sugar production is illustrated in box 16.

The EU has developed from a small partner to the main trading partner of the island.

It is important to see the difference between the Sugar Protocol and the MFN clause for the sake of this paper. In 1995, the idea of the MFN was born and the two major beneficiaries are Cuba and Brazil. When Portugal and Spain joined the EU, there was a Portuguese raw sugar deficit. In a paper, known as the 'non-paper', the 'hierarchy of preference' was introduced. Highest in rank were domestic (DOM and EU Beet- raw) suppliers. Then the ACP-countries under the Sugar Protocol and then the MFN countries. Any additional sugar then comes from the ACP countries.

“Under the MFN sugar arrangements, the European Community must open an annual tariff quota for 85,463 metric tonnes tel quel (mttq) or (82,000 metric tonnes of white sugar equivalent) of raw sugar for

⁵⁸ Comparison on the basis of CIA World Factbook, <http://www.cia.gov>, and BBC NEWS, country profiles, http://news.bbc.co.uk/2/hi/country_profiles/default.stm.

⁵⁹ CIA World Factbook, <http://www.cia.gov>, 2002.

refining at a duty of 98 European Currency Units (Euros) per tonne at 96 degrees polarization. This quota provides for an MFN price equivalent to roughly 80% of the ACP guaranteed price.”⁶⁰

Cuba does not profit from the Protocol and it would be interesting to determine the value of this preferential trade agreement for Cuba, a developing country, highly dependent on sugar revenues. In the following section data is gathered in order to understand the Cuban situation better. This could give some interesting insights in the benefits of preferential sugar trading agreements.

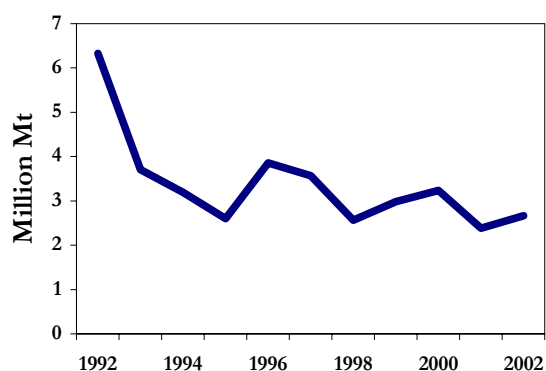
3.4.3. Data

The International Monetary Fund has not officially certified the statistics on the Republic of Cuba, but they are considered to be good by the United Nations Commission for Latin America and the Caribbean. Although statistical problems still remain, there are improvements of which the introduction of several new series by Cuba’s statistical bureau is proof. Since 1995, new series are introduced to conform to the United Nations macro-economic standards of national accounting. Data on Cuba’s sugar is easily found on FAOSTAT or the United Nations statistical division but finding compatible data is much harder. The data used as of this point is the data for ‘raw sugar, beet and cane’ (commodity code 1611) from the COMTRADE database.

Box 17 Cuba’s sugar exports

Year	Sugar, Total (Raw Equiv.) Exports - Qty (Mt)
1992	6 326 607
1993	3 704 675
1994	3 192 229
1995	2 600 102
1996	3 860 066
1997	3 570 563
1998	2 565 950
1999	2 984 182
2000	3 237 051
2001	2 382 098
2002	2 663 333

Exports of Raw Sugar



Source: COMTRADE & FAOSTAT

⁶⁰Guyana Sugar Corporation Inc, http://www.guysuco.com/about_gsc/gscoday/sugar_agreements/glossary/default.asp, 2004.

The graph and figure clearly show a declining Cuban sugar sector. Despite Cuba's former high ranking among sugar-exporting countries, in just a decade sugar exports fell from over 6 million metric tonnes to a fair 2.5 million tonnes. Government officials blame the change on low prices. The drop in world prices is obviously an important explanation for the fact that Cuba's outdated and inefficient industry can't compete. CNN.com reports that “Cuba kisses sugar goodbye as a main export”⁶¹, making way for tourism and livestock. The data, however, show that the sugar exports are quite important indeed. Box 18 shows the exports of sugar that flow into the EU. France, Portugal, the UK and Germany turn out to be large customers of Cuban sugar.

Box 18: Cuba's export to the EU.

Period	Trade Flow	Reporter	Partner	Trade Value \$	Trade Quantity
1999	Export	Cuba	EU	26,015,000	71,300,000
2000	Export	Cuba	EU	23,732,262	98,651,765
2001	Export	Cuba	EU	19,116,524	59,693,398

*Source: COMTRADE Database,
United Nations Statistics Division*

3.4.4. Cuba's Quota

The idea of the analysis is to assign Cuba a quota. The problem of analysing the effect of a hypothetical quota for Cuba is that there is no quota to be analysed. To solve this problem it is important to make an estimate of how high the quota would be should Cuba be part of the Sugar Protocol. An estimate can be made on the basis of figures of countries that do enjoy the privilege of a quota.

Box 19 Share of quota in total exports:

$$\frac{\text{Quota of raw sugar, in metric tonnes}}{\text{Total exports of raw sugar, in metric tonnes}}$$

If one divides the number of tonnes of raw sugar exported to the EU under the banner of the quota by the total number of tonnes the country exports, the resulting percentage can serve as an estimate for Cuba's hypothetical quota. However, for Fiji the share of the quota in total sugar exports would be almost 100%. This does not seem a realistic assumption, so by including other countries that are part of the Sugar Protocol we can make a better estimate. Guyana, which is a very similar country in size and is also quite dependent on the sugar

⁶¹ CNN, <http://www.cnn.com/2002/WORLD/americas/08/10/cuba.sugar/>

industry, seems to provide a good reference point. Guyana has produced around 3 million tonnes of raw sugar annually in the past eight years, of which between 240.000 and 300.000 tonnes are exported. The quota assigned to Guyana by the Sugar Protocol is 167,000 metric tonnes per year⁶² which we can now use to estimate the share of the quota in the total exports of sugar.

Box 20 Guyana's sugar

	1998	1999	2000	2001	2002
Quota exports	167,000	167,000	167,000	167,000	167,000
Total exports	236,922	275,267	277,405	262,201	293,618
Share	0.70	0.61	0.60	0.64	0.57

Sources: COMTRADE Database, United Nations Statistics Division & FAOSTAT

As can be seen in the sections above, this figure would be very close to 1 for Fiji. If we do the same thing for some other countries in the Sugar Protocol for the year 2002, several percentages turn up. The calculations in box 21 show that for Jamaica, Malawi and Tanzania the share of quota sugar in the total export of sugar is 0.86, 0.25 and 0.41, respectively.

Box 21 Other ACP Countries

	Quota/Total Exports	Share
Jamaica	118,696/138,410	0.86
Malawi:	20,824/83,413	0.25
Tanzania:	10,186/24,673	0.41

Source: FAOSTAT

To estimate what an ACP-membership could have meant for Cuba annually in the last decade or two, it seems appropriate to make large quota predictions and smaller quota predictions. In the 'large quota' case, which will be called LQ and is based on the results found for Jamaica, Cuba will be assigned a quota of 86% of its exports of raw sugar. In the 'small quota' case (SQ, based on Malawi) Cuba is assigned a quota of 25% of its exports of raw sugar. Guyana's 60 % serves as reference for the first 'middle quota' scenario (MQ1) and Tanzania's 40% for the second 'middle quota' scenario (MQ2). For these quotas Cuba would have received the intervention price which is so much higher than the world price for raw

⁶² About ACP Sugar, www.acpsugar.org.

sugar. By taking the percentage of exports that would, under the hypothetical quota, be remunerated the intervention price and analysing the difference in revenue, the value of the Protocol becomes apparent. This value is then set against the gross domestic product of Cuba of 2003. For reasons of simplicity Cuba's GDP at purchasing power parity of 2003 is taken as a benchmark - \$32.13 billion (2003 est.)^{63,64} In box 21 these calculations are performed for the LQ scenario.

Box 22 Calculations for LQ-scenario.

	Quota LQ	World Price	EU Price	Difference	GDP	Share of GDP
	Tonnes	Euro	Euro	Euro	Billions of Euro	%
1992	5 124 552	181.8	439.4	1 223 332 974	24.05	5.09
1993	3 000 787	200.7	439.4	590 764 887	24.69	2.32
1994	2 585 705	242.5	523.7	659 354 899	25.34	2.60
1995	2 106 083	268.7	523.7	587 428 564	26.02	2.26
1996	3 126 653	244.8	523.7	883 435 935	26.72	3.31
1997	2 892 156	241.2	523.7	954 642 862	27.43	3.48
1998	2 078 420	193.6	523.7	816 818 863	28.16	2.90
1999	2 417 187	130.7	523.7	854 548 268	28.92	2.96
2000	2 622 011	170.2	523.7	895 154 661	29.69	3.02
2001	1 929 499	182.3	523.7	706 582 672	30.49	2.32
2002	2 157 300	157.5	523.7	790 003 161	31.29	2.52

Based on data from COMTRADE Database, United Nations Statistics Division & FAOSTAT.

In box 23, the results for the other scenarios are shown. The calculations are performed in exactly the same way as for the LQ scenario. It is striking to see that the hypothetical quota, be it large or small has a considerable impact on the economy over the last decade.

Box 23 The other scenarios

	MQ1	MQ2	SQ
	% of GDP	% of GDP	% of GDP
1992	4.08	2.79	1.70
1993	2.32	1.58	0.97
1994	1.80	1.23	0.75
1995	1.69	1.15	0.70
1996	2.21	1.51	0.92
1997	2.18	1.49	0.91
1998	1.54	1.06	0.64
1999	2.04	1.40	0.85
2000	2.57	1.76	1.07
2001	1.66	1.13	0.69
2002	1.74	1.19	0.73

⁶³ CIA World Factbook, <http://www.cia.gov>.

⁶⁴ Since data on the Cuban economy is not readily available, estimates of GDP are the only source to be worked with. The CIA World Factbook's estimate provides a useful tool. Other estimates turn out (slightly) lower and would only result in a higher share of the quota in national income. Because the 2003 estimate of GDP does not seem accurate for previous years (for example 1995), the growth rate of GDP (the 2003 est. of 2.6%) is used to estimate the GDP of former years.

The large quota would have contributed up to an astonishing 5 % of GDP, but over the decade around and about 3 %. The middle quota scenarios sketch a similar picture of a very important quota for the Cuban economy. For the MQ1 scenario, the share of the quota would lie between 1.5% and 2.5%. The MQ2 scenario falls between 1% and 1.5% and for the smallest quota the share in GDP would lay around 1%. The Cuban economy, in which sugar has played a predominant role in the last decade and despite the sector's decline, continues to do so, would have profited enormously from being a member of the Sugar Protocol. Depending on the size of the quota the country would have been assigned, exports to the EU under the banner ACP-sugar would have boosted the economy. Should Cuba be 'given' a small quota, the Sugar Protocol would have contributed up to 1.7%.

3.4.5. Cuba's scenario

Having analysed different hypothetical quotas it seems fair to ask whether being part of the Sugar Protocol would have had such an astonishing impact as in the LQ scenario or would more likely have fallen in the range of the SQ scenario. In other words, would the higher guaranteed price for a share of its exports really have had such an impact? To answer this question, it is important to analyse the trend in Cuba's raw sugar exports and the diversity of export products. As explained above, the Soviet Union lost interest in Cuba in the early 1990s which had a devastating blow to the economy as an effect. Barkley Rosser adequately explains this development:

*"The collapse in GDP was a result of the collapse of trade relations with countries of the Soviet bloc. In response to the U.S. trade embargo, Cuba joined the Soviet bloc's international trade alliance. That integration had two consequences. First, Cuba chose to remain a predominantly agricultural economy, relying on imports to meet its requirements of manufactured goods. Second, agriculture reflected a tendency towards monocrop production, with a heavy dependence on sugar as an export crop. According to Peter Rosset, executive director of Food First, in 1989 land under sugar cultivation was three times as much as that under food crops, and sugarcane accounted for 20 per cent of agricultural production. This was not merely the result of the structure of production under colonialism, but also the consequence of the large market offered by the Soviet bloc for Cuba's sugar exports at prices which, during the 1980s, were on average 5.4 times higher than world prices"*⁶⁵

⁶⁵ Barkley Rosser, on a discussion forum on <http://archives.econ.utah.edu/archives/pen-1/2000m11.3/msg00245.htm>, 14-10-2004.

P. Rosset (1997) goes on to explain that before the Soviet Union's withdrawal from Cuba, agriculture was capital intensive and large scale. The government focused on the production of export crops, of which sugar was the most important. Benjamin et al. (1984) show that the result was an extensive monocrop production of exports, which led to a strong dominance of these crops. Thus, until the mid 90s, sugar was Cuba's main export product. This leads to the belief that a quota would indeed have had a major influence on the Cuban economy and would have triggered great revenue. Looking at the data of raw sugar exports before 1993, it is clear that sugar ruled the Cuban economy (alongside cattle) and based on the low diversity in export products, the estimate of 5% (LQ-scenario) for the year 1992 seems an appropriate estimate for the hypothetical direct contribution of the quota to GDP. It seems likely that even smaller quotas assigned to Cuba would have had a large impact on its economy.

However, from the mid 90s onwards, this effect would likely have been much smaller⁶⁶. Because the sugar sector had to deal with serious problems after the Soviet Union's collapse, the economy had to diversify. Especially the tourism-sector was well developed and thus dependency on sugar declined. With a lower dependency on sugar, a quota (be it large or small) would still have a considerable impact on Cuba's economy, but merely not as large as would it in the 1980s and beginning 1990s. An estimate of between 1% and 2% seems more realistic for the years 1993-2002, which is still considerable, I might add.

3.5 Estimates and limitations

The analyses above have shown that the profits of the Sugar Protocol are manifold. Besides the direct income transfer from the EU to the ACP country there are indirect effects to the national economy. For Fiji the direct benefits of the Sugar Protocol were estimated to lay around 1.3 per cent of GDP in 2002 in the case that Fiji could compete on the world market. However, the estimated benefits of the ACP status rose to 2.5 per cent of GDP in other scenarios. Also, changing the scope of time did not seem to alter the estimates all that much, which gave rise to the belief that Fiji's economy was not flexible and not competitive. Comparing factor costs with other sugar producing countries and the cumulative size of arable land confirms the idea that Fiji is not likely to be a competitive player on the world market for raw sugar. The Sugar Protocol has protected Fiji's sugar industry and has furthermore created a mono-culture in exports. This has led to an extreme specialisation in sugar that will cause many problems when the CAP should disappear. For Cuba, estimates depend on the period

that is addressed. Before 1993, the Sugar Protocol could have profited the island up to 5 per cent of GDP whereas in the period after the fall of the Soviet Union, a quota could have triggered a 1-2 per cent of GDP profit. The size of the quota would have been crucial in calculating the hypothetical benefits.

Of course, the estimations are to be treated with utmost care. First of all, they depend heavily on the availability of data and especially for Cuba it proves difficult to find sufficient, consistent and compatible data. This is a severe limitation of the analysis. Even data on Cuba's GDP is hard to find and is often contradictory to other findings. The data used in this paper has been partly estimated on the basis of growth figures. This has not been appreciative to the accuracy of the analysis. Second, it does not seem realistic to assume that the sugar sector would have lost importance in Cuba should the country have been assigned a quota by the EU. Namely, this would have encouraged sugar producers to continue their production. Now, many sugar farmers were forced to leave their sugar and produce another crop or find other solutions in tourism. However, the estimate of quota benefits to Cuba would only have turned up higher without this assumption. The country would have been much more dependent on sugar and, logically so, more dependent on a quota.

Also, the paper speaks of 'losing the ACP status', which would entail more than just the loss of revenues harvested in the sugar sector of the countries under consideration. What is meant with the ACP status clearly is the agreements signed under the Sugar Protocol. Agreements in other sectors are not considered and for reasons of simplicity the 'Sugar Protocol' is replaced with the 'ACP'.

Furthermore, exchange rate fluctuations between the U.S. dollar and the Euro influence the estimates. The exchange rate 1:1 does not seem all that realistic but does not interfere with the analysis. For Cuba, the fact that they have a MFN agreement with the EU is not taken into account at all. This is realistic for the 1990s, but as of 2000 Cuba was assigned a quota under the Most Favoured Nations clause. Another criticism is the fact that the analysis can hardly be extended to other countries that are characterised by completely different features. The analyses are those of a small country that is very much dependent on the sugar industry. For a large country, less dependent on sugar, the estimates would turn out to be completely different. Other features, like those of factor costs, arable land and technological efficiency also stand in the way of a generalisation of the analysis.

Besides these arguments, the analysis can be made subject to many other criticisms as to the validity of data and the correctness of the estimates. However, the data do show that the

⁶⁶ This is based on the not so realistic assumption that even despite a quota from the EU, Cuba's economy would

Sugar Protocol has a very important influence on the income (of at least 1 per cent of GDP) of a country the size of Fiji, or even Cuba, if this country has an ACP status. Furthermore, the paper shows the great danger of a high guaranteed price for sugar, which triggers motives to specialize almost completely in the production of sugar and thus creates a monoculture in a country's exports. A liberalisation of the common agricultural policy will bring many of the problems that are entangled with this specialisation to the light.

In the next chapter, the walls of the sweet stronghold are taken down (to various extents) and the effects of liberalisation are treated, first in a broad perspective, then more specific to the countries Fiji and Cuba.

3.6. Conclusions

To estimate the value of the Protocol, this chapter looks at two countries. Fiji, that benefits from preferential trade agreements with the EU, and Cuba, that does have the ACP status, but does not benefit from the Protocol.

Fiji is a small developing country in the Pacific. Sugar is its most important export commodity and the Protocol is of great value to this island. Sugarcane farming and processing were introduced in the 1980s when the world price surged and the Lomé Convention (1975) was established. Fiji has always had tight economic bonds with its former colonial power, the UK. The Commonwealth Sugar Agreement of 1950 was replaced by the Sugar Protocol in 1975 and so Fiji continued to be ensured a higher than world price for its sugar.

The first benefit the Protocol brings is that Fiji receives a higher price than the world price for the quota exported to the EU. The second benefit is that the island's sugar industry is not dependent on the highly volatile world prices. This price stability is seen as a major advantage. In the medium term, Fiji is not troubled by any reforms. The 2000 WTO Round has not implied any changes for Fiji's quota or the guaranteed price. However, in the longer term, it is clear that reforms will take place, the impact of which will depend on to what extent the EU makes its policy compatible with WTO rules. But Fiji will most probably have to become more efficient and competitive to overcome the eventual loss of the Protocol.

The fluctuations of Fiji's sugar production over the last decade can be explained by the volatile world price. The small but steady increase in consumption is explained by the increase in population and a higher per capita GDP. However, the situation seems quite stable. The price Fiji receives for its exports of sugar to the EU is up to three times as high as the world

still have experienced the diversification of export products.

price and is stable. Especially in times of low world prices, the advantages of being an ACP member become apparent.

Now the assumption is that Fiji loses that status. The analysis starts with a framework. World prices, demand and production processes are fixed. Only direct costs are estimated and Fiji receives the EU intervention price. The CAP does not change, but in 2000 Fiji loses its ACP status. In this short run framework, two scenarios are discussed: a competitive Fiji versus a non-competitive Fiji. When Fiji flies, it can sell the quantity of sugar exported to the EU under the Protocol on the world market. In that case, the value of the Protocol is estimated to lie between 1.29 and 1.64 per cent of GDP. A non-competitive Fiji values the Protocol at 1.84 to 2.52 per cent.

Changing the assumptions slightly incorporates medium run scenarios. The world demand for Fiji's sugar is allowed to change at the price elasticity of world demand for sugar of -0.644. (Tyers and Anderson, 1992). Now Fiji can be 'highly', 'reasonably' or 'marginally' competitive in that it can undercut the world price by 10, 5 or 1 per cent, respectively. World demand adjusts accordingly. The outcomes show that the value of the Protocol has increased over time comparing to the 'short-run competitive' scenario. In the 'highly competitive' case, the value lies between 1.31 and 1.68 per cent, in the 'reasonably competitive' case it lies between 1.30 and 1.66 and in the 'marginally competitive' case between 1.29 and 1.64 per cent of GDP. The results under these assumptions show that the price elasticity of world demand is not high enough for Fiji: the lower price is not offset by the higher demand.

As yet, Fiji does not seem to be very competitive. The island does not have a large arable surface, its wage rates are not as low as some of its competitors and especially it is not productive enough to be able to compete on the world market. However, government initiatives to foster productivity and to ensure diversification are hopeful.

Cuba is a lower middle-income country, to some extent comparable to Fiji. Both are islands that are very dependent on the sugar industry. Cuba enjoyed preferential trade agreements for a long time with the Soviet Union but lost these preferential rights with the fall of the Union. This caused a major fall in sugar production and exports but even now sugar plays a large role in the Cuban economy. A quota could and would have been very important to this economy.

Because Cuba is not assigned a quota under the Protocol, in this paper the island is assigned a hypothetical quota. This is done on the basis of the share of the quota in total exports from other ACP countries. Cuba is assigned a Large Quota (LQ of 86 per cent) based on data from Jamaica, two Middle Quotas (MQ1 of 60 and MQ2 of 40 per cent) based on

data from Tanzania and Guyana and a Small Quota (SQ of 25 per cent) based on Malawi's data.

In the LQ-scenario the value of the Protocol tops 5 per cent in 1992 and 3 per cent in the next three years. However, data is more readily available and thus more accurate in the 2000-2002 period. Also, this period is better comparable with Fiji. In this period the value of a LQ lies between 2.32 and 3.02 per cent of GDP. This value obviously decreases with the size of the quota, but the following figures show that the value of the Protocol is still quite considerable. The MQ1 scenario displays values of between 1.66 and 1.76 per cent of GDP over the same period, whereas the MQ2-scenario's values are slightly lower, between 1.13 and 1.76 per cent. For the SQ-scenario these values are to be found between 0.69 and 1.07 per cent.

The likelihood of Cuba being assigned a quota of 86 per cent of its exports is not very high. However, even a 'small quota' of 25 per cent contributes by over one per cent of GDP. This is very considerable. Also, should the quota have been assigned shortly after the Soviet Union's fall, the value is expected to have been much higher since the decline of the sugar industry would most probably have been prevented. Although data is not readily available, the estimates for the decade 1992-2002 of between 1 and 2 per cent seem accurate for a small quota.

Chapter 4:
Breaking the Sweet Stronghold

4.1. Introduction

The first estimates have shown that the value of the Protocol is considerable for small sugar dependent countries. However, the calculations were performed under the assumption that the sweet stronghold still stands. It seems more realistic to account for the reforms that are underway. In this section the assumption is made that the EU is reformed and consequently the value of the Protocol is analysed. As it turns out, in the light of reforms, the value of the Protocol decreases.

The first part shows why the CMO Sugar can no longer stand up to pressures to reform. These pressures come from outside, but also from within the EU. Then four scenarios of reform are listed. The 'status quo', the 'fixed quota', the 'fall in prices' and 'liberalisation'. Each of these is shortly discussed, trying to identify winners and losers of the options and consequently what the likelihood of the scenarios is. Then, the current proposal drawn by the Commission is explained.

Coming back to our two countries, new assumptions are made to account for the reforms. Although not that realistic in the short run, an eventual liberalisation is a real option. What this has for an effect on the world price for sugar and the world price elasticity of demand is then highlighted. Borell and Hubbard (2000) come in very handy in showing that the world price will rise considerably and the analysis shows that the value of the Protocol decreases, although under some assumptions still quite large. However, the sections show that it is of utmost importance to Fiji and Cuba that world prices increase once the CMO Sugar disappears. In the ACP country's case: The higher the increase in world price, the less the sugar dependent economy is hit.

The next section shows the drawbacks of the Protocol. Until now, only arguments for the policy could be found, but now the inequality between ACP countries is shown, as is the unfair access policy to preferential trade agreements. Then another serious drawback of the Protocol, monocropping, is treated. The Protocol raises a country's dependency on one (or just a few) export product(s). This phenomenon is very dangerous to a country's economy in the long run and especially so with the prospect of liberalisation.

The chapter ends with a note on the importance of export diversification and the expectation that the road to a liberal agricultural policy shall most probably be a gradual one. That way EU farmers and ACP countries have time to adjust to the coming changes.

4.2. Reform

“In essence, the sugar CMO was left out of the CAP reform process which started in 1992 and has continued since then, and was only slightly affected by the Uruguay Round of trade negotiations. Its relative longevity bears witness to a certain degree of success, although at a high cost with regard to the achievement of the initial objectives assigned to it. Today it is experiencing pressure which is profoundly changing the prospects for the sector and is also being subjected to criticism, sometimes years-old, from numerous and varied sources.”⁶⁷

Many attempts have been undertaken to reform the common agricultural policy. The Sugar Protocol has until now gotten off scot-free but it seems that we stand at the turn of the tide. This paper will not investigate in detail the effects reforms might have on the EU market, although it will make mention of several scenarios and their consequences. This chapter, however, will try to identify the impacts on ACP countries and non-ACP developing countries. In identifying these impacts, a clear distinction must be made between long term and short-term conclusions.

4.2.1. Escape reform?

The Sugar Protocol has long escaped reforms, because of the self-financing nature of the policy. In addition, the strong lobby of privileged ACP states and EU farmers has kept reform at a safe distance the last decades. However, it seems that the CMO Sugar can no longer stand up against reforms. In August of 2004, the WTO decided that a large share of the EU sugar exports is illegal. *De Volkskrant*⁶⁸ mentions that the WTO acknowledged⁶⁹ the complaint made by Brazil (backed by Australia and Thailand) against the CMO Sugar. Brazilian farmers are supposedly aggrieved by the export subsidies the EU offers her sugar producers. The plaintiff claims that EU producers cannot produce at the world price. Nevertheless, they are able to export their sugar because of these exports subsidies. This is extremely injurious, not only to Brazilian farmers but also to African farmers. A month before, the EU already announced to reform the CMO Sugar. The Sugar Regime can no longer escape reforms, but why is this so?

First, there is great external pressure to pass through reforms. The WTO acknowledged the complaint made by Brazil, Australia and Thailand. These countries ask for “[t]he refund reduction obligations [to] include the re-export of sugar from India and the ACP countries,

⁶⁷ European Commission, *Reforming the European Union's Sugar Policy, summary of impact assessment work*, Commission of the European Communities, Brussels, 2003.

⁶⁸ De Volkskrant, Suikerexport EU volgens WTO illegaal, 05-08-04.

the Community not having entered into a reduction obligation for this”⁷⁰. In simpler terms, this would abolish re-export of sugar and “exports of C-sugar exported without refund”, because these can be “exported at lower than production cost thanks to the high level of support for A and B quota sugar”.⁷¹ Besides this complaint, many NGO’s and development organisations complain about the unfairness of the sector. The subsidies undermine income of sugar farmers in developing countries and are a great strain on development. The system of preferences and the selection criteria as well as its effectiveness are severely criticised by NGO’s. “[I]t is helping to bias the allocation of resources, persuading some countries towards monocropping and activities that end up aggravating their dependence on unsustainable trade patterns without succeeding in putting them on the path to development.” R.B.M Grotenhuis, CEO of Cordaid, reminds us in *De Volkskrant*⁷² that liberalisation does not mean fair trade but is a prerequisite for the development of national economies of Third World countries.

Second, there are many internal pressures. The European Commission reports that “[s]ince 1975 the Court of Justice has been pronouncing strong reservations on the CMO and its impact on competition”⁷³. The lack of competition the system imposes on the European market is possibly criticised most heavily of all features of the CMO. The advantages of the system become apparent through the stability and quality of supply. Also, farmer’s income is guaranteed but income levels remain higher than those of farmers in other sectors. The benefits arise only to a handful of farmers, which isn’t fair and distorts competition. This lack of competition and the internal price, which is so much higher than the world price, are severely criticised by consumer bodies and competition authorities. Specifically, the system is criticised for “vastly surplus sugar production which is disposed of on the world market to the detriment of more competitive producers with the aid of refunds the cost of which is ultimately born by taxpayers and consumers.”⁷⁴

*“If unchanged, the EU sugar policy will become an anomaly deviating from the fundamental principles of the new Common Agricultural Policy (CAP) – market orientation, decoupled farm income support, and a better balance between the two pillars of the CAP via the strengthening of rural development.”*⁷⁵

⁶⁹ Even though the official ruling did not take place until September.

⁷⁰ European Commission, *Reforming the European Union’s Sugar Policy, summary of impact assessment work*, Commission of the European Communities, Brussels, 2003.

⁷¹ Idem.

⁷² De Volkskrant, *Vrijhandel is nog geen eerlijke handel*, 03-08-04.

⁷³ European Commission, *Reforming the European Union’s Sugar Policy, summary of impact assessment work*, Commission of the European Communities, Brussels, 2003.

⁷⁴ Idem

⁷⁵ European Commission, *Accomplishing a sustainable agricultural model for Europe through the reformed CAP – sugar sector reform*, Commission of the European Communities, Brussels Brussels, 2004.

4.2.2. Bitter scenarios

Criticism from outside and inside has intensified and the need to reform has been recognized. There are several possibilities to reform and these possibilities will be directed appropriate attention in the sections below. However, it should be noted that the reforms come with several objectives, which are listed by the European Commission. Amongst these objectives, the reform is to ensure supply for sugar and prohibit price fluctuations, to increase competitiveness and to limit the cost to the budget.

Below, four different scenarios are analysed. This is based on the Commission Staff Working Paper of 2003 supplemented by outcomes of the working paper by Frandsen et al. (2001). The four scenarios are ‘status quo’, ‘fixed quotas’, ‘fall in prices’ and ‘liberalisation’. Without investigating in detail the effects of the reforms on the EU market, each scenario is shortly addressed.

4.2.2.1. Status quo

The first scenario is to change little and to extend the Regime as it stands. However, several changes will take place. The WTO has accredited the claim by Brazil, Thailand and Australia, which will force the highly subsidised re-export of sugar to cease. The WTO commitments will bring prices down, but the system of quotas would still guarantee a price two to three times higher than world price. However, the status quo option will have to comply with WTO rules. That means that a reduction in support for exports will lead “to a drastic reduction in the production of sugar in Europe”. From 2009 onwards, the Least Developed Countries (LDCs) have free access to the EU market under the EBA (Everything But Arms) initiative. This will probably act as a “suction pump” to supply the European market, as the Commission so adequately calls it. In addition, the last couple of years have shown that trade flows from the western Balkans have increased, allegedly due to abuse of the origin rules. All in all, the sugar sector would not become more competitive and competition is not at all increased.

The winners of keeping the system intact as it is are Brazil, as the subsidised re-export is banned and Brazil, the largest player on the world sugar market and by far the country with the lowest production costs, will be able to sell more of its sugar. Other winners are the Commission’s budget, as the self-financing system isn’t harmed, the EBA countries and Balkans, the refineries, as supplies are guaranteed, and to a certain extent the farmers, who will have to face lower quotas but are still guaranteed an income.

The losers of the status quo scenario are the consumers, which continue to pay a high price for sugar, as are the ACP countries, which will feel the results of the lower quotas and the eventual free access of the LDCs. Besides, many sugar mills will have to be closed down, because of the lower quotas in the EU. But most of all, the desired increase in competition will not take place.

4.2.2.2. Fixed quotas

The second scenario is that of fixed quotas. The internal market price would remain relatively high because of tariff protection. Each EU country would be assigned a fixed quota and preferential imports will be subject to quotas as well. This option is attractive because it provides a relatively stable and predictable supply situation whilst protecting the EU market from world price fluctuation. The ban on subsidised re-exports can be incorporated and at the same time the road can be cleared for sweeteners, in the form of quotas. The budget costs are reduced since there is no need to subsidise re-exports. Unless quotas are transferred, fixed quotas have beneficial effects for rural communities. What's more, the visibility of the sector is hoisted which will smooth the progress of investment in the sector.

A major drawback is the withdrawal of the EU out of the EBA initiative. The LDCs will not be granted free access to the EU market and this will ruthlessly damage the EU's credibility. Moreover, the goal of increased competition is not achieved unless quotas were to be transferred, the highest quotas being allocated to the most efficient producers. Neither transparency nor inequality amongst farmers will be improved and the WTO will not be happy with this option because of the poor adjustments with respect to competition (tariff protection is a necessity) and transparency.

ACP countries support the idea of fixed quotas and tariff protection because it would ensure them of a high guaranteed price as well as a guaranteed quantity of sugar that they can export to the EU. Producers of sweeteners would also gain with the introduction of fixed quotas because they would be appointed a quota as well. The EU's budget is not burdened because there is no need for direct income payments to farmers and there is no problem of subsidies since the (smaller) quotas are fixed so that there would be no need for re-exports.

The LDCs and the Balkans, which were to be the major exporter to the EU, would be the primary losers of this option. Other major exporters of sugar, like Brazil, Thailand and Cuba, will not be happy either because they have no access to the EU market and the price they receive for their sugar, the world price, is still so much lower and so much more volatile.

4.2.2.3. Fall in Prices

The third option is a price reduction. It “presupposes that prices in the domestic market are supported by setting an adequate level of tariff protection. Quantitative market balance would thus be achieved by adjusting supply (Community and preferential) to prices free, at least in the long term, from production quotas.”⁷⁶

The internal price would have to be reduced because of external constraints, the EU market becoming less attractive for exporters with high production costs (many ACP states). Also, a lower price would exert less pressure on the production level. A system of direct income support would back farmer’s income which could be more conform the lines set out in other sectors of the CAP.

Once imports and production have stabilised, an end would be put to production quotas. This would strengthen competition and intra-EU trade to the profit of the most competitive producers. This means, of course, that the negative effects come upon the least efficient regions, the regions without comparative advantages. To compensate these areas and to compensate the other losers, the ACP-countries that have proven not to be able to compete, would mean a tremendous bearing on the budget, although the direct costs would have lessened. This is treated in more detail by Frandsen et al. in their working paper of 2001, in which they show that at a 25 per cent cutback in border protection “ [t]he production would fall most in high cost areas notably in Greece, Finland and Italy where the production of sugar beet would more or less cease. The production would also be reduced in Ireland, the Netherlands and Sweden [...]. Belgium and Denmark would maintain their present levels of production [...] explained by a buffer effect of the quota rents”⁷⁷. They go on to show that Germany, France, Austria and the United Kingdom would not alter production, since it is determined “at the margin by the world price”. Also, trade with third countries will increase impressively as long as the internal price is far above the world price.

The same working paper does not investigate the effects of a full scale liberalisation, but the European Commission shows⁷⁸ that should the EU market price fall under 475 Euro per tonne of white sugar (or 326 Euro per tonne of raw sugar, equivalent to a 34 per cent price decrease) all Member States are likely to have ceased production, except France.

The advantages are that the WTO negotiations are facilitated and that the cost to consumers and users is reduced. Distortions to competition are diminished, as are inequalities

⁷⁶ European Commission, *Reforming the European Union’s Sugar Policy, summary of impact assessment work*, Commission of the European Communities, Brussels, 2003.

⁷⁷ Frandsen, S.E., Jensen, H.G., Yu, W., Walter-Jørgensen, A., *Modelling the EU sugar policy-A preliminary study of policy reform scenarios*, Danish Institute of Agricultural and Fisheries Economics, Helsinki, 2001.

⁷⁸ This study is based on the EU 25.

amongst producers. Also, the road is made free for substitute products, like sweeteners. The budget is not put under direct pressure, but if the Commission is to compensate farmers it is ambiguous whether this will hold true for the longer run.

The losers are the whole of the production side of the EU sugar market, as guaranteed prices fall. The areas that do not have a comparative advantage will be struck first and will be struck hardest. The same holds true for the ACP states. The lower the price falls, the higher the pressure on their competitiveness.

4.2.2.4. Liberalisation

The last option is that of complete liberalisation. Domestic price support, the Sugar Protocol and its preferential imports, the intervention price, quantitative and tariff restrictions on trade and the production quotas. All of it down the drain. The logic result is that domestic sugar prices will draw level with the world market prices and most, if not all⁷⁹, Member States would cease production. “Despite the efficiency of their industrial plant, European manufacturers would find their profitability severely jeopardised and could have difficulty in remaining competitive. The short beet season (three months at the most) compared with the cane sugar season (more than nine months) indeed imposes a structural handicap to deriving maximum benefit from the European sugar industry’s investment.”⁸⁰ The EU market would then be very alluring to the most competitive exporters: Brazil, some Caribbean countries and possibly Thailand. The sugar imports from ACP countries, India and LDCs will come to an end because they have significantly higher production costs and are supposedly not competitive at the world price.

However, a full-scale liberalisation would almost certainly entail a collapse of the EU sugar industry (save France) and implicitly of subsidised re-exports. Demand on the world market would, on the other hand, increase, because it is assumed that the EU can no longer meet its own sugar demand. It seems very unlikely that world prices would soldier on at their low levels. This is treated in more detail in later sections. For now, the medium run is considered and prices are believed to drop to the world price as it stands, three times lower than the EU market price.

The disadvantages of liberalisation? The supply of sugar is not assured to be regular and the EU market will be subject to the brisk volatility of world prices. Obviously, a major drawback is that a large part of the EU’s sugar industry is to disappear, with dramatic effects

⁷⁹ Most probably save France.

⁸⁰ European Commission, *Reforming the European Union’s Sugar Policy, summary of impact assessment work*, Commission of the European Communities, Brussels, 2003

on rural communities. ACP countries are bereft of their guaranteed price and thus lose a significant share of income. And ultimately, this option would have an effect on the budget, if farmers and/or ACP countries were to be compensated. Thus, the farmers and the rest of the sugar industry lose, the budget might lose, LDCs and ACP countries lose and so do substitutes for sugar (because they are outdone by the competition of sugar).

The advantages are inherent to liberalisation. Competitiveness of the sector is improved in the long run and world market distortions are reduced. Competition authorities and the WTO, as well as consumer bodies, will be very happy with the option since their interests are recognized. Also, should the decision be made not to compensate farmers, this would mean an elimination of the budget cost of the regime. Transparency and simplicity of the CMO are enhanced. Besides the WTO, consumers are happy with this option, as are importers of sugar but first and foremost the players on the world market that have a comparative advantage and are able to compete.

4.2.3. Likelihood

Reform is on its way; that is undeniable. But which option is likely to be elected? The first option, preservation of the status quo does not seem a realistic option. Even with the changes it would entail, WTO commitments would compel the EU to comply with the standards of higher transparency and increased competition. The market distortions that would endure are already harshly criticised and cannot be dealt with in the 'status quo' scenario. Besides, the objective of increased competitiveness of the EU sugar industry is hardly addressed.

“On the one hand this debate has highlighted that, despite claims that the fixed nature of the EU sugar policy is proof of its good functioning, the status quo is no more sustainable. The gap between EU and world market prices has grown larger, while the EU undertook new international commitments. In these conditions, the structural surplus of the EU risks widening while the rigidity of the present quota system leaves no incentive for the sector to adjust.”⁸¹

A full-scale liberalisation does not seem very realistic either, in the short to medium run at least. The adjustments to the EU sugar industry and those of ACP countries that would be necessary to meet the terms of a new state of competition, take time. It does not seem very

⁸¹ European Commission, *Accomplishing a sustainable agricultural model for Europe through the reformed CAP – sugar sector reform*, Commission of the European Communities, Brussels, 2004.

realistic to give farmers a guaranteed price the one day and have them compete at the world price the next. The same holds true for the ACP countries and India. It would be a disaster for many of the sugar producing (and highly sugar dependent) countries if the EU draws its hands off them and left them to compete at a price they would probably not be able to compete at. However, in the long run, this option must not be faded out.

In reforming the CMO the EU must take account of many variables. The farmers must be guaranteed an income. A gradual decline of the sugar sector seems to be preferred over a sudden breakdown of the CMO as it stands. One of the objectives is to increase competition and the most logic way to achieve this is to allow for a drop in prices. This would easily be combined with a reduction or a total elimination of quotas. Also, the EU must act in accordance with its international agreements. In the 'fixed quotas' option, the EU backpedals on the EBA initiative and loses credibility. Also, it does not comply with WTO commitments. Therefore, it seems appropriate to chose the 'price fall' option, but it seems clear that the reforms must be introduced gradually, monitoring each interest group intensively, especially ACP countries and producers in the EU.

4.2.4. The current proposal

Recently, the Commission has proposed reforms that are to be applied in 2005. They will be closely monitored and in 2008 the Commission plans to assess the price and quota levels the reforms imply. In the 'Communication from the Commission to the Council and the European Parliament' (2004) the Commission outlines and clarifies her proposals for reform.

First of all, the institutional price for EU sugar is to be reduced considerably. The intervention price is to be abolished and in its stead a reference price is to be introduced. This reference price will be a benchmark for determining the level of protection, in other words, it will determine the minimum price for sugar beet producers. Farmers will then be compensated (partially) in the form of direct income payments. These payments will be integrated in the CAP farm payment scheme, meaning that sugar farmers will not be compensated more than farmers in other sectors.

Additionally, the Commission wishes to simplify the current system of quotas, amalgamating the A and B quotas into one quota, and bringing down the level of this quota. C-sugar regulations will not change, although questions may be raised whether there are many Member States that would be able to produce C-sugar. Also, the import regime will be altered, especially with the Balkans kept in mind. This will prepare the "sector for the adjustments

needed to perform within a realistic and economically sustainable environment.”⁸² Accordingly, quotas are made transferable between Member States, in order to smoothen the impact of adjustments. This will transfer quotas to those areas with a comparative advantage so that they can prepare for a higher degree of competition.

Another important aspect of the proposals is that “it will provide the basis for initiating a structured dialogue with EU partners in the developing world on the sugar sector, in order to consider the manner by which the EU can best contribute to the necessary and inevitable adjustments in sugar production in African, Caribbean and Pacific (ACP) countries and India.”⁸³ For the time being, however, the Sugar Protocol and the agreements with India are not changed. The EU still pledges to buy a certain amount of sugar at a guaranteed price but this price will have to turn out lower to incorporate the changes made to the regime. The LDCs, that will have access to the EU market through the EBA agreement, will receive this price as well.

4.3. The ACP and reform

“[T]he prospect that not just potential winners, but also potential losers from developments in the EU sugar market, with or without reform, are to be found among the developing countries raises serious questions about how to deal with this issue.”⁸⁴

4.3.1. ACP and the Commission proposal

Implementing the reforms proposed by the Commission would mean that the guaranteed price for EU sugar, as well as the price the Sugar Protocol countries receive, would drop. Not only does the price drop, but also are the quota reduced. This would ask of the ACP countries an enormous adjustment, especially in those countries that do not seem to be competitive. Fiji is an illustrative example of how a sugar-dependent but non-competitive country will have to boost productivity in order to be able to live up to the competition on the world market. The extent to which countries will be forced to adapt depends on the amplitude of the price fall and the reduced preferential access to the EU market. The higher the fall of the internal price, the greater the loss for ACP countries; or so it seems.

Therefore, the Commission will start a discussion with the ACP countries and India on appropriate actions to be undertaken. The idea is to integrate the Sugar Protocol “into the

⁸² Idem

⁸³ Idem

⁸⁴ European Commission, *Acomplishing a sustainable agricultural model for Europe through the reformed CAP – sugar sector reform*, Commission of the European Communities, Brussels, 2004

EPAs⁸⁵ in such a way that does not prejudice the EU's commitment to LDCs for full market access for sugar from 2009 and that ensures full compatibility with WTO rules⁸⁶. The EU will dedicate to help the Sugar Protocol countries and India to adapt to the new conditions on the world market. These development assistance measures will concentrate “on improving competitiveness of the sugar sector where economically viable, and on supporting diversification, where improvements in competitiveness in the sugar sector are not sustainable”⁸⁷.

The Commission appears to have chosen a path of (relatively) gradual reform, logically the only path to be taken. The longer the ACP countries enjoy a privileged status, the longer they can adapt to the implementation of reforms. The Commission recognizes the need to monitor the developing countries and provide for aid where necessary. It may be interesting to try and analyse what would happen in ACP countries and the world sugar market in the event of a full scale liberalisation, the effects of which could be a useful guidebook for any supportive measures to reforms.

4.3.2. Liberalisation

Although not very realistic in the short run, a liberalisation of the sugar market is to be seen as a credible option for the future. Indeed, although the farmer’s lobby is strong, to meet with the WTO commitments, eventually all tariff and quota protection should be abolished. The study so far has shown that the effects of liberalisation would be ruinous for the ACP countries. But many development NGOs advocate this option nevertheless. The examination of reforms thus far has been quite static, not taking into account the long run and the effects on the world market. In the coming sections, the effects of a breakdown of the sugar regime on the world price and consequently its effect on the ACP revenues are discussed. As are the negative effects of the Sugar Protocol to ACP countries and third countries.

4.3.2.1. World price

To see the effects of the EU sugar regime on the world market, it is important to establish a relation between the world price and the production of sugar within the EU. Or, more specifically, between the re-exports and the world price. One of the most criticised features of the CMO Sugar is the subsidised (re-) export of sugar on the world market, or dumping. The dumping of sugar has had downward effects on the world price. Surely, when

⁸⁵ Economic Partnership Agreements (Article 36.4)

⁸⁶ European Commission, *Acomplishing a sustainable agricultural model for Europe through the reformed CAP – sugar sector reform*, Commission of the European Communities, Brussels, 2004

the world price is high, EU farmers will produce more so they can export their sugar under the banner of the C quota. However, the adjustments of demand and supply are not instantaneous and simultaneous. The pattern that is likely to turn up will probably show that when world prices are high, EU farmers have incentives to produce more, but once this increase in production reaches the market, prices may have dropped, or if not so, they will drop because of this surge in offer. What happens is that this surplus of EU sugar is dumped on the world market (with high subsidies) and the world price for sugar plunges.

If this relation can be established, there is convincing proof that the world price might be much higher once the CMO Sugar has disappeared. In Figure 1, the EU exports of refined sugar are set off against the world price for refined sugar. The figure is based on data from FAOSTAT and the United States Department of Agriculture. Caution is advised in examining the figure, because scale has been adapted to fit the one graph⁸⁸. However, the trends that are exposed are perfectly functional.

EU exports and the World Price

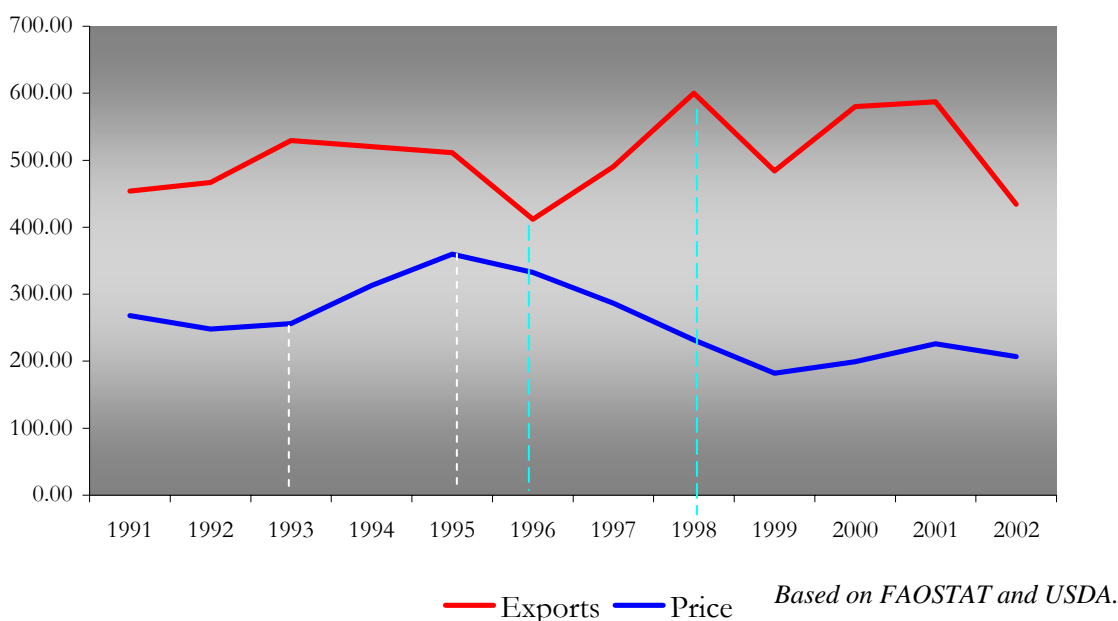


Figure 1: EU refined sugar exports and its effect on the world price

The argument that the EU production is triggered by the world price does seem to fly. In 1993 the world price started increasing from roughly 250 Euros per metric tonne to over 350 Euro per metric tonne in 1995. This brought about an increase in the export of refined sugar out of the EU in the years to follow. In 1996, exports started growing and over the next

⁸⁷ Idem

two years they increased by 45 per cent. Only in 2001 did the European market ‘recover’ from this surge, exports going down so much later than the drop in world prices.

This figure seems to confirm two statements that will be assumed to be true for the remaining of this paper. The first is that the reaction time of the EU farmers, that is, the capability of adapting production levels to changes in world prices adequately, is (too) slow. The second is that when world prices are relatively high, EU farmers react by increasing their production. When this production reaches the world market, the higher world price has often dropped again leaving the farmers with no option but to dump their sugar on the world market. This is achievable because of the subsidies. Often, the world price is even lower than the production costs, thus making the practice, so called dumping, illegal.

Both the USA and the EU practice dumping. Cafod shows that, at present, virtually every agricultural product exported from the USA or the EU entails some level of dumping. Recently in the EU, wheat was put up for sale at 30-35% less than the costs of production, skimmed milk powder at 50% and, at a remarkable first place, sugar at 60-75% less. Dumping causes several problems, the first of which lies in the fact that world prices are depressed. As a result, developing countries are placed in inferior markets or it can even demoralize domestic production of these countries because the imported and subsidised product is cheaper than the local product. Also, “[d]umping can have a devastating impact on developing country farmers, depriving them of their livelihoods and forcing them to leave their lands. In the process it seriously undermines food sovereignty and food security.”⁸⁹ Box 1⁹⁰ gives an example of how harmful dumping can be to a third country.

⁸⁸ Production figures are divided by 10,000.

⁸⁹ Catholic Agency For Overseas Development, <http://www.cafod.org.uk/archive/policy/ngobriefingaoa200308.pdf>, Agriculture Negotiations in the WTO, Six Ways to make a new Agreement on Agriculture Work for Development Working Draft, August 2003

⁹⁰ Box 1 is ‘Box 2’ in the CAFOD Working Draft of 2003, based on ACTSA, 2002. *Taste the Bitterness*, Briefing, Action for Southern Africa (Actsa), January. www.actsa.org/Trade/taste_the_bitterness.htm.

Box 1: Example of dumping from the EU – sugar

Swaziland produces sugar at less than half the cost of the EU, and yet it is unable to compete with EU confectionary imports. These are coming to dominate markets in Swaziland and its neighbours. Sugar production plays an important role in the Swaziland economy. In 1995-6, sugarcane accounted for 53% of agricultural output and 34% of agricultural wage labour, while sugar milling constituted 37% of manufacturing output and 22% of manufacturing wage labour. Swaziland has an annual import quota into the EU of approximately 117,000 tonnes, and relatively little EU sugar is exported to Swaziland. However, export subsidies given to EU confectionary manufacturers to encourage global sales have enabled them to undercut prices and reduce the export market for confectionary manufactured in Swaziland. As southern African outlets have switched to buying cheaper, dumped EU confectionary, Swaziland's Sugar Daddy factory has gone out of business. Already the dumping of EU sugar products has led to the loss of some 16,000 jobs in the Swazi sugar industry and 20,000 jobs indirectly linked to the industry, such as packaging and transport.

A logical consequence of dumping is that the EU is actually causing the world price to drop. In figure 1, it is noticeable that the world price drops as the EU production of refined sugar reaches the world market, between 1996 and 1997. This is a highly unfavourable practice for any other sugar exporting country that receives the world price for its sugar and it is against this practice that Brazil, Thailand and Australia have filed a complaint that has now been acknowledged. It might be very interesting to see what would happen to the world price should the CMO Sugar be liberalised. It is clear that the world price can only go up in that case, but by how much?

There are several studies on how much the world price would increase once the EU sugar regime should be liberalised. According to Borrell and Hubbard⁹¹, who have assessed the external impact of the CMO Sugar, the world prices for sugar would increase by 30 to 38 per cent, should a full scale liberalisation of the sugar industry in the EU take place. In one of the most cited studies on this subject, they figure that the EU would export 5 million tonnes

less and at the same time import demand in Europe would increase by 7 million tonnes. They show that world consumption of sugar is around 130 million tonnes, which puts the 12 million tonnes into perspective. This results in the increase in world prices (up to 38 per cent!), but also in an estimated decline of 40 per cent of the internal EU price. Assuming this estimate is accurate, the ACP revenues are put into another perspective and it seems appropriate to have another look at the Sugar Protocol.

4.3.2.2. Price elasticity of demand

There are three complicating factors when it comes to a forecast of the price elasticity of demand for sugar. The first is that the world price has gone up between 30 and 38 per cent. A 30 per cent higher price would imply a lower demand on the world market at a price elasticity of demand of -0.644 per cent, which is the estimate given by Tyers and Anderson (1992). This would result in a 19.3 per cent lower demand. But changes in demand imply changes in the price elasticity of demand in the longer run as well. Frank (1997) explains that as the quantity offered on a market increases, the price elasticity drops as a consequence of saturation, thus if demand would increase and offer declines an increase of the price elasticity is to be expected.

But there is another important development on the world market. The EU sugar regime has been abolished and that means that the EU internal market is liberalised. The 30 per cent higher world price has its effect in the EU as well, only within the EU the price paid for a tonne of sugar was not the world price but the internal price (for simplicity, the intervention price). The 30 per cent higher world price is still very much lower than this intervention price, in 2002 even 60 per cent lower. But let's go with the estimate given by Borrell and Hubbard (2000), of a 40 per cent decrease. This means, according to economic theory, that EU consumers would consume more. Tyers and Anderson estimate the price elasticity of demand for the EU to be around -0.12 per cent. A 40 per cent drop in prices would thus mean a 4.8 per cent increase in demand from the EU. Note that they also give estimates for the 'consumption as percentage of the ROW total'⁹². For the EU this estimate is 11.48 per cent, which shows us that a 4.8 per cent increase in demand is quite substantial indeed.

The third snag is the EU market itself. Not only does this market open up to the rest of the world, but also are the EU farmers out competed. That means that EU production can be assumed to cease altogether, which has two effects. The first is the decrease in offer of sugar to the world market and the EU market. The second is the increase in demand from the EU

⁹¹ Borrell, B. and Hubbard, L., *Global economic effects of the EU Common Agricultural Policy*, Institute of Economic Affairs, Oxford, 2000.

market to third countries, not only because of the price decrease, but simply because the loss in EU production has to be replaced. Borell and Hubbard show that the increase in world demand for sugar could amount up to 12 million tonnes.

The estimate of -0.644 per cent does not seem very accurate for the new situation on the world market. Giving a new estimate would involve an extensive study, but this paper will suppose that the price elasticity of demand will increase, especially in the years after the liberalisation of the EU sugar market.

4.3.3. ACP revenues

With the estimate of Borell and Hubbard, an increase in the world price of sugar of between 30 and 38 per cent, it is appealing to take a look at what this has for an effect on the potential of ACP countries. First of all, the value of the ACP membership would not be as high with increased world prices. To investigate this, the estimates of the previous chapter are reconsidered. Second, a country's competitiveness is more promising at a higher world price. Let's take a look at the two countries we have become familiar with.

4.3.3.1. Fiji

In chapter 3, the estimations showed that the costs of losing the ACP status for Fiji are as high as 1.6 per cent of GDP in 2001 and 1.3 per cent in 2002. These were estimates subject to the assumption that world price is static and held true only in the case that Fiji should be competitive. The calculation on which this estimate is based is described in box 8 of chapter 3. It took the following form: $\text{Costs} = (Q_{\text{EU}} * P_{\text{EU}}) - (Q_{\text{EU}} * P_{\text{W}})$. Note that now the P_{W} is assumed to rise resulting in smaller costs of losing the ACP status. These were calculations for the scenario in which Fiji is competitive. Of course, it is extremely hard to say whether Fiji will be competitive on the world market once the CMO Sugar disappears because such an analysis cannot be performed in a static manner. However, with the increased price it seems more and more plausible to make the assumption that Fiji is able to stand up to the fierce competition on the sugar market.

⁹² Tyers, R. and Anderson, K., *Disarray in World Food Markets: A Quantitative Assessment*, Cambridge and New York:

Box 2 The Framework- Short Run

- Assumptions:*
1. *World prices are fixed, and 30-38% higher.*
 2. *World demand does not change, i.e price elasticity of demand is 0*
 3. *ACP countries compete on the world market*
 4. *Production processes are fixed*
 5. *Only direct costs and benefits are calculated*
 6. *The CAP is liberalised*
 7. *In 2000, Fiji loses its ACP status*

Scenario 1: Fiji is competitive; marginal costs are lower than world price

Box 2 gives the framework of these calculations and in box 3 the calculations are performed. Note that world prices are fixed, but 30 to 38 per cent higher. Box 3 gives the estimates at a 30 per cent higher price. For the 38 per cent higher price scenario these calculations are performed in exactly the same way but are not reported.

Box 3 Scenario 1 calculations- Price is 30 % higher.

Year	Q_{EU}	P_{EU}	P_W	(Q_{EU}* P_{EU})	(Q_{EU}*P_W)	Cost
2000	180 600	523.7	221.3	94 580 220	39 959 556	54 620 664
2003	211 350	523.7	237.0	110 684 000	50 087 837	60 596 164
2004	165 348	523.7	204.8	86 592 748	33 855 003	52 737 745

Quantities are in metric tonnes, prices are in Euro as are revenues.

*Partly based on data from Comtrade Database,
United Nations Statistics Division*

The differences are substantial indeed. At a 30 per cent lower price, the costs in 2000 were nearly 64 million Euro, up to over 72 million Euros in 2001 and in 2002 nearly 61 million Euros. Above these figures can be related to the costs at the new price. For 2001, the costs decrease to 60.5 million Euros, an impressive decline of 16 per cent. Similarly, the percentage decreases in costs of losing the membership of the Sugar Protocol are reported in box 4, also for the 38 per cent world price increase.

Box 4 Percentage decrease in the costs of losing ACP status.

	$P_w = 1.30$	$P_w = 1.38$
2000	-14.44	-18.30
2001	-16.02	-20.29
2002	-12.90	-16.34

Obviously, when world prices would increase by 38 per cent, the resulting costs would be much lower. In all years, the decrease in costs is higher than 15 per cent and in 2001 even over 20 per cent. It may be clear: the higher the world price, the happier the ACP countries are.

The costs, however, are still very high. To put the decrease into perspective, it is once again related to Fiji's GDP. The 2001 and 2002 GDP figures at purchasing power parity were US\$ 4.4 billion and US\$ 4.7 billion⁹³, respectively. Now this shows that in 2001, at a 30 per cent increased world price for sugar, the cost of losing the revenues derived from the Sugar Protocol make up for roughly 1.38 per cent of GDP. At the old world price, this was 1.6 per cent. Should the world price increase even more, to 38 per cent, another 0.07 per cent would be nibbled off, to come to 1.31 per cent of GDP. Similarly, in 2002, the share of the costs in GDP decline with nearly 0.17 per cent of GDP, subsequently giving a 1.12 per cent of GDP cost. This decrease in costs would, of course, be very important to the island. In other words, one could say, that the island wins back about 0.3 per cent of the loss it incurred when it lost its ACP status, which is around 13 million Euros annually.

As was done in the previous chapter, the analysis is adapted slightly so that it becomes more dynamic. Again, the quantities Fiji chooses to produce are variable. The world price elasticity is estimated by Tyers and Anderson (1992)⁹⁴ to be -0.644. With the three scenarios that have become familiar to us in chapter 3, the situation of Fiji losing its ACP status at the original world price can be compared with a (highly, reasonably or marginally) competitive Fiji at the new world prices.

Fiji offers the world a 10 per cent lower price, which means that the world will demand 6.44 per cent more from Fiji, but Fiji receives a 30 % higher price than in the scenario treated in chapter 3. Fiji now sells 192 231 tonnes of raw sugar at 199.17 Euro per tonne. Exploring the same calculations over and over, might seem a bit tedious, so box 5 only reports the cost as a percentage of GDP and compares them to the 'short-run competitive' case, as was done in box 14 of chapter 3.

⁹³ Nation Master, www.nationmaster.com.

⁹⁴ Tyers, R. and Anderson, K., *Disarray in World Food Markets: A Quantitative Assessment*, Cambridge and New York: Cambridge University Press, 1992

Box 5 Cost as percentage of GDP: Medium Run compared to Short Run in the 30 % higher world price case.

Year	S-R Competitive	Competitiveness		
		High	Reasonable	Marginal
2000	1.365	1.407	1.385	1.369
2001	1.377	1.425	1.399	1.381
2002	1.122	1.152	1.136	1.125

A first observation that is not surprising is the significantly lower costs as percentage of GDP as compared to the situation in which the EU sugar regime is still existent. In that scenario, the costs lay between 1.29 and 1.68 per cent, now they vary between 1.125 and 1.425 per cent. Second, it is once again clear that the price elasticity of demand for sugar is too small to offset the fall in price for sugar. This is not too surprising, since it was the elasticity that had proven to be too small. The price elasticity of demand for raw sugar is not large enough for Fiji, that is, the decrease in price cannot be offset by the increase in sold quantity at this price elasticity. This is irrespective of the level of the world price.

But this does not paint a valid picture, since the assumption was made that the EU sugar regime was put an end to. This means that a large market is opened up; assuming that the EU has to import all its sugar, because a full scale liberalisation of the sugar regime ceases all EU production. Tyers and Anderson estimate that the EU consumption of sugar as percentage of the 'Rest of the World' total is 11.48%. It comes to show that the EU market is a huge market indeed. Once access is granted to all players, not only do world prices go up, but most probably does the world price elasticity change as well.

Not taking into account these difficulties of estimating an elasticity, as it turns out, for Fiji, the price elasticity should lie slightly above -1.12 per cent⁹⁵: Then the lower price a competitive Fiji offers is compensated by the increased demand from the world market. If it can be shown that the price elasticity of demand would lie above -1.12 per cent, once the EU market has opened and the EU's internal production has ceased, it can be established that Fiji will be able to compete on the world market under the new condition, *ceteris paribus*⁹⁶. These are very difficult predictions and estimates to make, because it is not quite clear what would

⁹⁵ This price elasticity of demand was estimated for the 'highly competitive' case using the same data used for box 5. For the other scenarios, this figure will not be as precise, but it is worked with anyway since the accurateness is not hindered significantly.

happen to the world price elasticity of demand for sugar once all the effects would have taken place. But, of course, Fiji's own productivity is extremely important to be able to compete. Barrack and May⁹⁷ have shown that Fiji will have to boost its productivity by at least 25 per cent to become competitive. Whether Fiji will be able to stand its ground once the 'sweet stronghold' breaks down depends on its own ability to boost efficiency, the extent to which the world price increases and the world price elasticity of demand for sugar.

4.3.3.2. Cuba

First of all, Cuba has had to compete on the world market since 1992, at the world price instead of a guaranteed price. From this it can be concluded that Cuba is competitive on the world market to a certain extent, even though sugar production and export fell after the Soviet Union's fall. The fact that sugar is still produced in relatively large numbers hints at Cuba's competitiveness. An increased world price is bliss for the island because it simply means more revenue. To start off, Cuba is examined in a framework of world competition, assuming no preferential agreements.⁹⁸ To compare the situation before and after the increase of 30-38 per cent, simple calculations are performed of which box 6 reports the outcomes.

Box 6 Revenues with a higher world price			
	Revenues		
	$P_w * Q$	$P_{w1.30} * Q$	$P_{w1.38} * Q$
1992	1 150 303 684	1 495 394 790	1 587 419 084
1993	743 454 179	966 490 432	1 025 966 767
1994	774 211 299	1 006 474 689	1 068 411 593
1995	698 647 407	908 241 629	964 133 422
1996	944 866 955	1 228 327 042	1 303 916 398
1997	861 041 267	1 119 353 647	1 188 236 949
1998	496 819 239	645 865 010	685 610 549
1999	390 032 587	507 042 363	538 244 970
2000	550 848 968	716 103 659	760 171 576
2001	434 256 465	564 533 405	599 273 922
2002	419 474 947	545 317 431	578 875 427

Based on data from FAOSTAT

⁹⁶ This might be a very interesting problem for another study, it is beyond the scope of this paper.

⁹⁷ Barrack, G.S.W., and May, J., *Fiji and the Sugar Protocol*, ECDPM Working Paper No. 17, ECDPM, Maastricht, 1997.

⁹⁸ Up until 2000 Cuba does not have preferential access to the EU market under the Sugar Protocol and as of 2000 the assumption is made that it didn't. In December 2000 Cuba was made member of the ACP, but still doesn't benefit from preferential agreements. The MFN clausal is neglected for reasons of simplicity.

The quantity of raw sugar exported has been multiplied with the world price, P_w . Then the same has been done with the higher world prices, $P_{w1.3}$ and $P_{w1.38}$ respectively. The difference in revenue is considerable and not surprisingly 30 and 38 per cent respectively. Quite simply, an χ per cent increase in world price would entail a χ per cent increase in revenue, *ceteris paribus*. Related to GDP, these figures are placed into a better perspective. Before the change in world price, sugar export's revenues accounted for between 1.3 and 4.7 per cent of GDP. At the 30 per cent increase of world prices for raw sugar the revenues comprise between 1.7 and 6.2 per cent. At the 38 per cent increase the revenues make up for between 1.85 and 6.6 per cent. Below in figure 2, the shares are compared.

Share of revenues in GDP

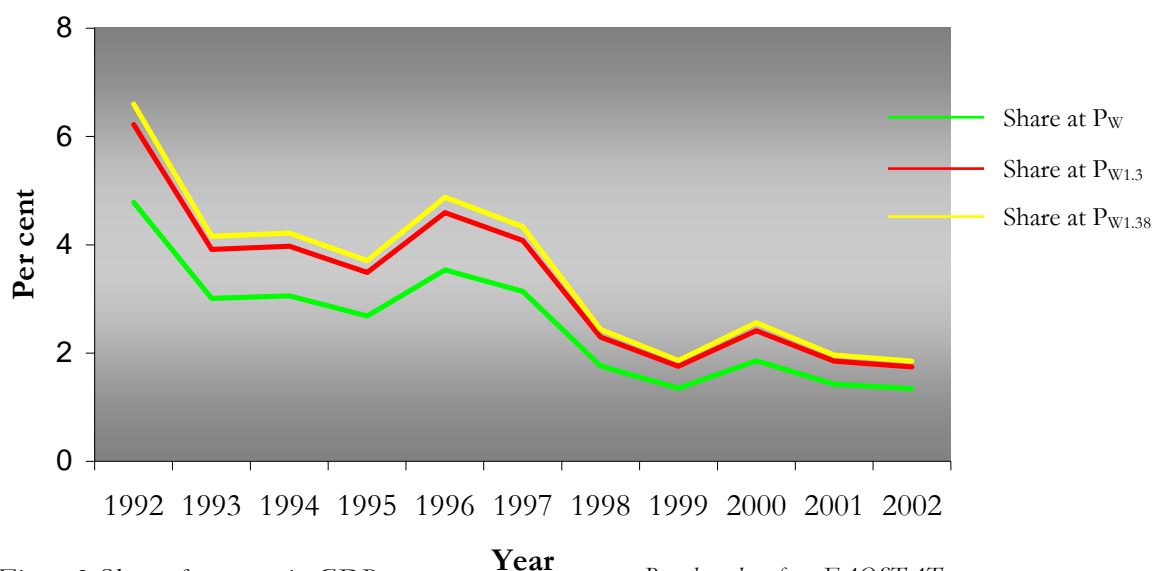


Figure 2 Share of revenues in GDP

Based on data from FAOSTAT

The overall trend is very clear. The importance of the sugar sector in Cuba has declined. However, it still makes up for about 1.5 to 2 per cent of GDP and is thus still important. The increase in 1996-1997 might be contributed to the relatively high world price between 1994 and 1996. The decrease as of 1997 is surely a result of depressed world prices. It may also be clear that a higher world price contributes enormously to the sugar sector's share in GDP and it is thus in Cuba's interest, in the absence of any preferential agreements, that the EU common agricultural policy be liberalised.

Cuba would have been very happy with a quota. The study has estimated that a hypothetical quota, be it large or smaller, could have contributed to GDP by around 3%. If we assume the EU intervention price to persist alongside the higher world price, the value of the hypothetical quota has reduced. Although this assumption does not reflect what would

happen in reality (since the intervention price would not exist when the Regime is abandoned), it is interesting to see the direct effect of a world price increase on the value of the Protocol. So the world price has increased between 30 and 38 per cent. And should Cuba be given a quota, it would receive the EU intervention price.

In 2000, in the 'large quota' case, the value of the quota diminishes from 3.02 per cent to 2.11 per cent when the world price increases 30 per cent. In 2001, the decrease is 0.7 per cent and in 2002 even 0.75 per cent. By contrast, the decrease of the Protocol's value in case the world price increases by 38 per cent is between 0.88 and 1.15 per cent. For the MQ-scenarios, the decrease in value is not as spectacular. The 'MQ1'-scenario shows an average decrease of 0.60 per cent over the three years when world prices rise 30 per cent. When prices rise 38 per cent, obviously the decrease in value is larger, at 0.75 per cent of GDP. For the 'MQ2'-scenario, these figures are 0.41 and 0.52 per cent, respectively. Finally, for the 'small quota'-scenario, the decrease of the value of the quota is on average 0.25 per cent at 30 per cent higher world prices. Should the price increase even more, the value decreases further down to 0.43 per cent of GDP in 2001.

Two observations are obvious but no less valuable. The first is that the value of the quota depends on the size of the quota. The larger the quota, the higher value of the quota. The second observation is that the decrease in value is largest in the 'LQ'-scenario. Thus, the larger the quota, the larger the value decrease when the world price increases.

Now, the assumption that the EU intervention price still exists as it was, is dropped. The following analysis shows that the value of a hypothetical quota drops as world prices increase and simultaneously the EU intervention price drops (or vanishes completely). The value of an ACP membership has gone down considerably for Cuba. In box 22 and box 23 of chapter 3, the value of a hypothetical quota is estimated on the basis of the world price and the EU intervention price. The difference between the resulting revenues is then judged against GDP. Now, assume the EU tears down some of its trade barriers, but a level of protection still persists. The world price will rise for reasons already discussed. The EU intervention price will have to go down, because the level of protection has gone down. That means, by definition, that the value of a quota has diminished. To estimate by how much, two assumptions are made. The first is that the world price rises with 30 per cent⁹⁹, the second is that the EU intervention price is to fall by 40 per cent, as estimated by Borrell and Hubbard.¹⁰⁰

⁹⁹ Taking into account the fact that not all trade barriers are torn down, the lower end of the estimation on the increase in world price by Borrell and Hubbard seems the more appropriate.

¹⁰⁰ Borrell, B. and Hubbard, L., *Global economic effects of the EU Common Agricultural Policy*, Institute of Economic Affairs, Oxford, 2000.

Box 7 performs the results of the same calculations as in chapter 3, yet the two assumptions are accounted for. Once again, Cuba is assigned a hypothetical quota. It is given a large quota (86 per cent of its exports), but the intervention price is 40 per cent lower, whereas the world price has increased by 30 per cent. As it comes to show, the value of the quota has declined enormously. Before, the share of a large quota in GDP was between 2.3 and 5 per cent, but now it only just reaches 1.2 per cent. As a matter of fact, in 1994 through 1996 the estimates turn out negative. In these years, the world price is actually higher than the intervention price and it would thus not be wise for Cuba to sell at the intervention price.

	Share of GDP %
1992	0.58
1993	0.03
1994	-0.01
1995	-0.28
1996	-0.05
1997	0.01
1998	0.46
1999	1.21
2000	0.82
2001	0.49
2002	0.75

However, the most attractive feature of the Sugar Protocol becomes apparent as well. The value of a quota is highest when world prices are lowest. It serves as a safety net in times the world price drops and shields a country from its volatile character. The results are hopeful for a country that can compete on the world market. It is the world price that rises and that is exactly the price a competitive player receives for its sugar. The value of a quota wanes to a large extent in the cases that trade barriers, be it to a smaller extent, may yet persist.

4.3.4. Bitter protocol

Until now the study has shown that the benefits of the Sugar Protocol have been enormous for Fiji and would have been quite important for Cuba, should it have been assigned a quota. Also, a full scale liberalisation will be disastrous to ACP countries that are highly dependent on sugar. Amongst the countries that would be hit hardest would be Fiji, Guyana and Mauritius, three countries highly dependent on cane sugar. However, the EU sugar regime and the Sugar Protocol itself are severely criticised, also by developing NGOs. The Sugar Protocol as it stands will be ended in 2006, because “its impact on developing countries is under debate. In 2006, it will need either a new WTO waiver – or to be made compatible with WTO rules”¹⁰¹. Why should this be the case?

¹⁰¹ Grimm, S., *European Development Cooperation to 2010, What scenario's for the future?*, in an ODI EDC Briefing, Overseas Development Institute (ODI), London, 2004

4.3.4.1. Sharing

The first concern raised by critics is that the revenues do not reach the recipients in an evenly fashion. Often the income transfers that arise because of the Sugar Protocol are applauded and are the main justification of the system. Indeed, as was shown in the previous sections, the income transfers are grand and especially for those countries that depend heavily on the exports of sugar, the Sugar Protocol is a highly lucrative business. However, a feature less obvious is that only a small percentage of countries within the ACP group receives a disproportional large share of the income transfers, whereas a large group does not profit as much. The “NEI estimates that in 1997/98 the preferential access granted to ACP sugar exports generated an income transfer to ACP countries of nearly 500 million ecus per annum (rising to 1,000 million ecus in the 1999/2000 season, as world sugar market prices collapsed). This income transfer is however highly unevenly spread between the different beneficiaries of ACP sugar preferences. Mauritius is by far the largest beneficiary, while some of its least developed sugar-producing neighbours in Southern Africa benefit only marginally if at all. Looking beyond simple income transfers, EU sugar preferences are particularly important to high cost small island state producers in the Caribbean and the Pacific.”¹⁰² Well, Fiji acts as the perfect example. It does not seem fair that a policy should favour a relatively small group of countries. Therefore, the relationship between the EU and the ACP is under debate.

*“Partnership has been a consistent theme of EU relations with the developing world since the Yaoundé Convention, and it has been a leader among the development community: in its broad definition of the scope of partnership (political as well as economic); in creating institutions to pursue partnership (for example, joint parliamentary assemblies); and in developing a (limited) form of reciprocity and mutual accountability.”*¹⁰³

In the stead of the ACP relations, there will in all probability be Economic Partnership Agreements (EPAs) with ACP countries, but also with third countries, to be concluded in 2008. “The EU has declared that so-called [...] EPAs will have to fit into the WTO framework; they will thus be reciprocal rather than granting non-reciprocal preferences to the EPA partners.”¹⁰⁴ The Sugar Protocol was not simply reciprocal but rather a unilateral concession made by the EU to buy a certain quantity at a guaranteed price. Thus, the granting of preferences to former colonies, long regarded as the pride and joy of EU development policy

¹⁰² Agritrade, CTA: Technical Centre for Agriculture and Rural Cooperation ACP-EU, http://agritrade.cta.int/sugar/executive_brief.htm.

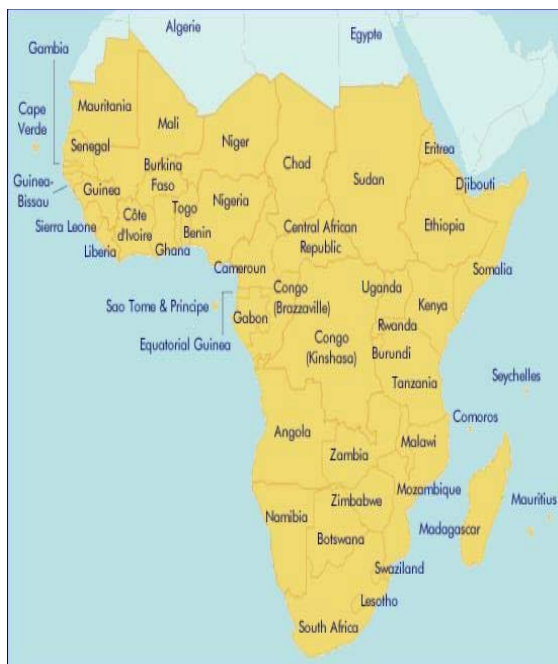
¹⁰³ Grimm, S., *European Development Cooperation to 2010, What scenario's for the future?*, in an ODI EDC Briefing, Overseas Development Institute (ODI), London, 2004

¹⁰⁴ Idem

(obviously, by the EU itself) will have to take a different form. “Gradual liberalisation on a world scale inevitably erodes the value of prior concessions. Special and differential treatment for developing countries, and derogation or waivers from global rules, can delay full integration, but not for ever.”¹⁰⁵

4.3.4.2. Third countries

Another major negative aspect of the EU-ACP relationship is that third countries are to a large extent ignored. Political and economic partnership with the ACP countries is very strong indeed, but many third countries are barred from economic and political partnership. No relationships with them, simply because historically the bonds are not as strong as with the former colonies. South Asia is the best example of a group of countries, containing countless poor people, that is denied partnership. The maps displayed below come from the website of the European Commission. They show the ACP countries, in Africa, the Caribbean and in the Pacific. Once again, keep in mind that only a hand full of countries receives a large share of total income transfers.

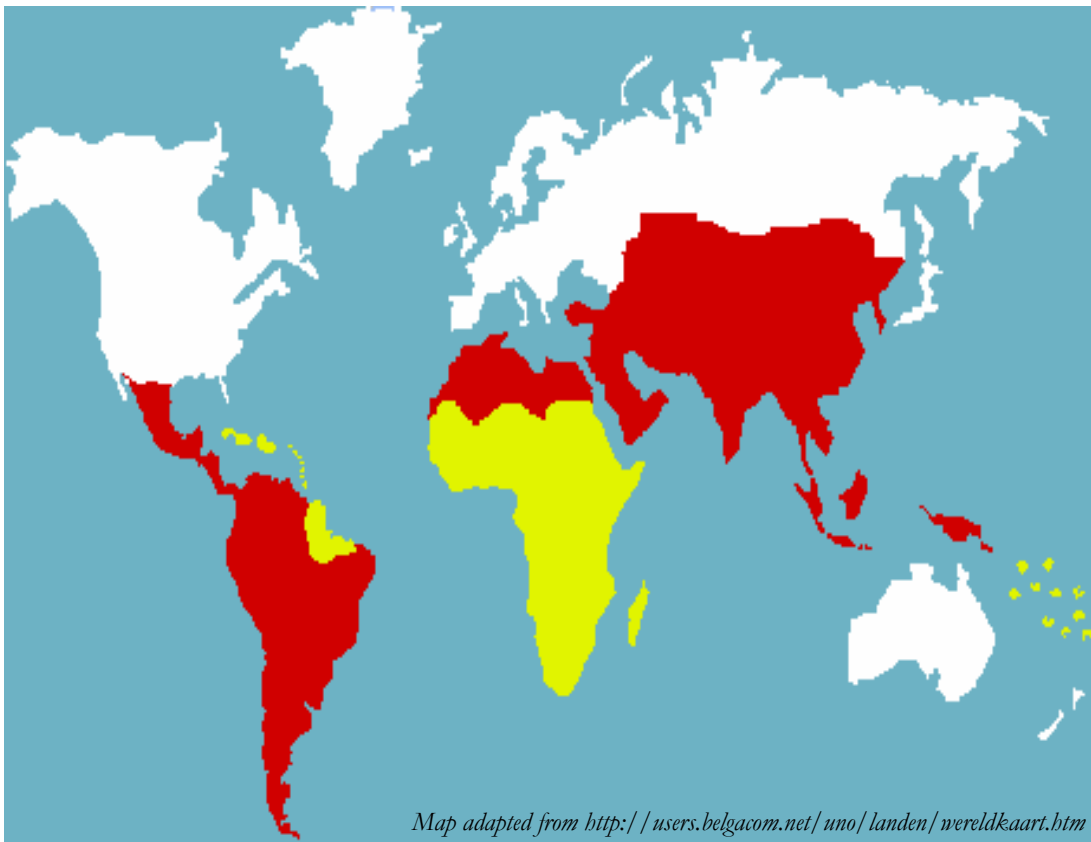


ACP Countries in Africa, the Caribbean and the Pacific. Maps from <http://europa.eu.int>

¹⁰⁵ Idem



These are all ACP countries, not just those benefiting from the Sugar Protocol. The countries benefiting from the Sugar Protocol are obviously not as numerous. Besides, these maps should be laid beside a map of the world, illustrating the areas that do not have agreements with the EU.

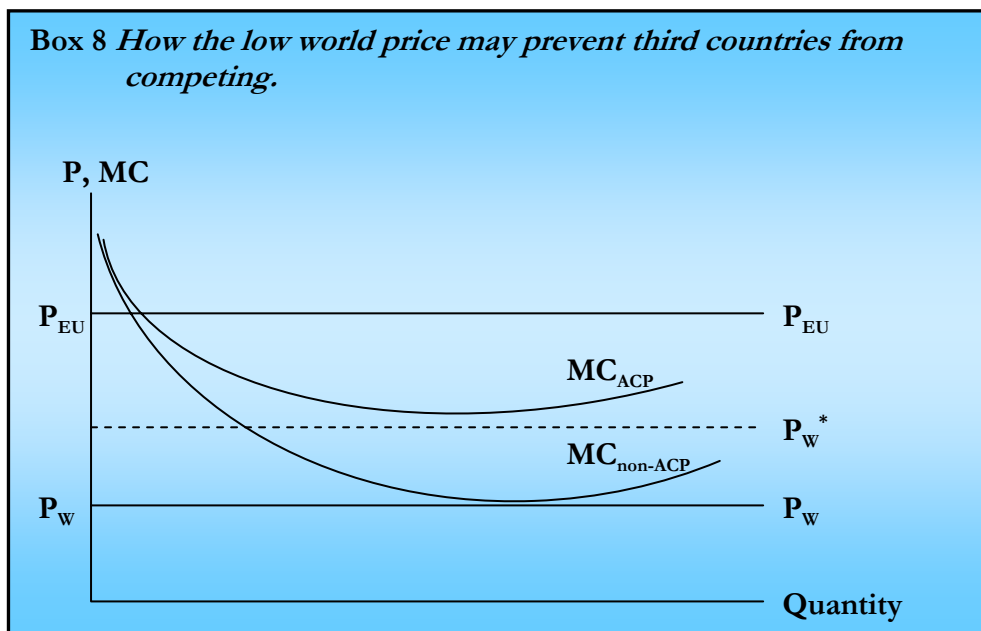


Map adapted from <http://users.belgacom.net/uno/landen/wereldkaart.htm>

ACP countries versus developing, non-ACP countries.

The yellow areas are the ACP countries; the red areas are developing countries that do not have the ACP status. It may be clear that a large part of the developing countries in the world has been left out. Of course, the EU cannot establish economic or political partnership agreements with all countries in the world, but giving preferential rights to a privileged few seems very unfair.

Another negative impact on third (developing) countries stems from the common agricultural policy in general and from the CMO Sugar and the Protocol in particular. Countries that have a comparative advantage in sugar need not be competitive because the world price for sugar has been kept relatively low thus far. Sugar is a relatively capital intensive crop to start producing and with the world price kept low by the EU's dumping practices and preferential imports, it is extremely difficult for a country to initiate sugar production. Even ignoring the start-up costs, with a low world price it is hard to compete. Box 8 illustrates this.



The non-ACP country has a competitive advantage in the production of sugar, or at least, it has a lower marginal cost ($MC_{non-ACP}$). However, the price it gets for this sugar is the world price (P_W), which is not high enough for the non-ACP country to be profitable. Therefore, it will not produce. The ACP country might have a higher marginal cost (MC_{ACP}) but receives the guaranteed price, the EU intervention price (P_{EU}). This makes it possible for the ACP country to compete. It may be clear that should the guaranteed price be abolished,

the ACP country is not likely to be competitive. The world price for sugar will increase, and depending on the size of the increase the ACP country may or may not be competitive. If the world observes a price increase as depicted in box 8 (from P_w to P_w^*), the non-ACP country is suddenly in a competitive situation, whereas the ACP country cannot compete.

*“[I]t is problematic that other important groups of countries [...] are excluded from the relationship. The questions for the future are whether the ACP will thrive, or even survive, and whether genuine partnership can be maintained in other ways.”*¹⁰⁶

4.3.4.3. Monocropping in ACP

The ACP does not appear to be fair, internally nor externally. A large group of countries is excluded and within the group of ACP countries, only a few countries benefit to a large extent. But even in the case that the ACP does appear beneficial, there are some harsh critics that point out the problem of monocropping.

By offering a guaranteed price for sugar, the EU creates incentives to produce sugar. The argument then goes that the country specialises in a product that it does not have a comparative advantage in and will not have incentives to produce as efficient as possible. The result of a guaranteed price is that a large part of an economy is centred on an activity that is only competitive because of the existence of this guaranteed price. It motivates farmers to produce only sugar cane: monocropping. And exports lean heavily on this product.

Sugar in Fiji is a good example. The intervention price the island is guaranteed has created incentives to produce sugar. The cropping of sugar cane has been intensified and enlarged, and agriculture has industrialised to become Fiji's second largest export sector.¹⁰⁷ “Sugar cane is the most important crop, and two industries, sugar and tourism, largely underpin the economy, resulting in a highly erratic GDP”¹⁰⁸ The dependency on sugar also means a dependency on the harvest and complicating factors such as drought, for example in 1997. This paper has also shown that on the world market, Fiji is not likely to be a competitive player.

¹⁰⁶ Grimm, S., *European Development Cooperation to 2010, What scenario's for the future?*, in an ODI EDC Briefing, Overseas Development Institute (ODI), London, 2004.

¹⁰⁷ Barrack, G.S.W., and May, J., *Fiji and the Sugar Protocol*, ECDPM Working Paper No. 17, ECDPM, Maastricht, 1997.

¹⁰⁸ The New Agriculturist On-Line, Reporting Agriculture for the 21st century, <http://www.new-agri.co.uk/02-2/countrys.html>.

“The profitability of Fiji’s sugar industry has depended on preferential trade agreements, such as the Lomé Convention Sugar Protocol. [...] However, it is generally believed that the subsidized Lomé price will only continue for another fifteen to twenty years. The country clearly needs to use this time to review its agriculture, not least its sugar production, in order to make it competitive on world markets.”¹⁰⁹

There are several reasons why monocropping should be a problem. First of all, monocropping gives the impression that a country is competitive in the production and export of a product whilst this need not be the case. This may withhold other countries from producing the product, because they do not receive the guaranteed price and cannot compete. Second, the national economy is highly dependent on the stimulated industry. But this is not on the basis of competitiveness, but on the basis of the guaranteed price. If the guaranteed price is to disappear, the economy is unimaginably hard struck.

Cuba is an illustrative example of how monocropping can cause a severe blow to a national economy. Cuba received a guaranteed price from the Soviet Union and thus sugar became its major export product. Once the Soviet Union fell apart and lost its interest in Cuba’s sugar industry, the result was a crisis that lasted for nearly a decade.

The challenge for the national governments and the EU is to create a higher diversity of exports and to lessen the dependency on just one crop or two crops. In Cuba, tourism has overtaken sugar and livestock has become more and more important. However, Cuba had to learn the hard way. To save Fiji from a similar experience “[t]he government has been keen to promote a greater diversity of cash crops for export, including high value products for niche markets. The most successful to date has been ginger, which is now a major growth industry.”¹¹⁰

4.4. In the end

The disadvantages of the common agricultural policy, and in specific the CMO Sugar, have proven more important than the advantages, despite the strong combined lobby of farmers and ACP countries. The WTO regulations have forced the EU to revise its policy and make clear the road for an eventual liberalisation of the agricultural market.

The EU internal market will have to deal with changes, the extent of which will depend on the speed with which reforms are implemented and the ability of farmers to diversify and direct other niches. Also, the degree of liberalisation challenges EU farmers, an eventual full-

¹⁰⁹ Idem

¹¹⁰ Idem

scale liberalisation might just result in sugar beet growing vanishing almost completely from (Western) European soil.

ACP countries are confronted with serious troubles with the coming of reforms. The intervention price will be much lower in the short run and may disappear altogether in the longer run. This means that countries dependent on the Sugar Protocol will lose large revenues and will be forced to compete on a world market. It is thus very important for many ACP countries, from a development point of view, to diversify their exports, to prevent a monoculture and to boost efficiency and productivity. Directing and monitoring these processes seems to fit the EU as an ideal role.

However, with the reforms both the EU internal sugar market as well as the world market for sugar will both become more transparent and will comply with WTO regulations. Also, for reasons of fairness it seems desirable and necessary to reform the current system, although all parties, including development NGOs would probably not foster a full-scale elimination of the CAP as yet, but advocate a slow transition to liberalisation. This gives the EU farmers and the refining sectors, the ACP countries and third countries time to prepare for the start of a competitive era after the fall of the sweet stronghold.

4.5. Conclusions

In August of 2004, the WTO ruled against the EU Sugar Regime after a complaint filed by Brazil. Not only is there great external pressure to reform, but also from within critiques are mounting. Especially the lack of competition is a feature of the policy on which strong reservations have been pronounced by the Court of Justice. This paper discusses shortly four sets of options for reform on the basis of the Commission Staff Working Paper of 2003 supplemented by outcomes of the working paper by Frandsen et al. (2001). These options are 'status quo', 'fixed quotas', 'fall in prices' and 'liberalisation'

The 'status quo' brings little change to the CMO and the system of quotas would still guarantee a price two to three times higher than world price. However, the option will have to comply with WTO rules and these commitments will bring prices down. A reduction in support for exports will lead to a major decrease in the production of sugar in Europe. All in all, the sugar sector would not become more competitive and competition is not at all increased. Winners of this option are Brazil, the Commission's budget, the 'Everything But Arms'-initiative and the Balkans. Losers are consumers, which continue to pay a high price for sugar, as are the ACP countries, which will feel the results of the lower quotas.

In the 'fixed quotas' option the internal market price would remain relatively high because of tariff protection. Each EU country would be assigned a fixed quota and preferential imports will be subject to quotas as well. This option is attractive because it provides a relatively stable and predictable supply situation whilst protecting the EU market from world price fluctuation. The WTO ruling can be incorporated but any other adjustments with respect to competition (tariff protection is a necessity) and transparency are left out so the WTO will not be happy. The winners are the EU farmers, the ACP countries and producers of sweeteners. Losers are all countries that will not have access to the EU market, of which Brazil, Thailand, Cuba and the Balkans are the most important.

In the 'fall in prices' option, domestic market prices are supported by an adequate level of tariff protection. Supply would be adjusted to prices free from production quotas. The advantages are that the WTO negotiations are facilitated and that the cost to consumers and users is reduced. Distortions to competition are diminished, as are inequalities amongst producers. Also, the road is made free for substitute products, like sweeteners. The budget is not under direct pressure, but if the Commission is to compensate farmers and ACP countries, the two groups of biggest losers.

The 'liberalisation' option means that all measures to protect the EU market are abandoned. Prices will go down and eventually converge to world prices. Most probably, the production of sugar beet in Europe will cease (maybe with the exception of France). Other losers are the ACP countries that will now have to compete on the world market. The winners are the consumers, big players such as Brazil and Thailand and the Commission's budget if there be no compensation.

The Commission has come with a proposal for reform. The intervention price is to be abolished and in its stead a reference price is to be introduced and will be a benchmark for determining the minimum price for sugar beet producers. Farmers will then be compensated (partially) in the form of direct income payments. The current system of quotas will be simplified, amalgamating the A and B quotas into one quota, and bringing down the level of this quota. The C-quota persists, but it is not likely that any Member State will be able to produce C-sugar. Quotas are made transferable between Member States, in order to smoothen the impact of adjustments. For the time being, however, the Sugar Protocol and the agreements with India are not changed, but dialogue is to be initiated as to how the EU can contribute to making the countries more competitive.

Although in the short run not the most realistic option, the paper assumes that the Regime be liberalised, causing a 30-38 per cent world sugar price increase. Besides, the internal

EU price falls 40 per cent. Liberalisation also has an effect on the world price elasticity of demand, most probably by raising it. But quantifying this effect is a study in itself and too extensive for this paper. Under these assumptions, the value of the Protocol for Fiji and Cuba is reconsidered.

At a 30 per cent higher price, the value of the Protocol to a 'short run competitive' Fiji diminishes to between 1.12 and 1.38 per cent of GDP in the period 2000-2002. Should the world price go up another 8 per cent, the value does not top 1.31 per cent. For the medium run scenarios, the value decreases too. But again, the world price elasticity of demand proves too low for Fiji's lower price to be offset by the increased demand. The value of the Protocol under the different assumptions is adequately summarized in 'Chapter 5: Conclusions'. It is interesting to note that even though the world price for sugar will increase the value of the Protocol remains at least 1.08 per cent of GDP. This is in the most colourful scenario for Fiji, as it is assumed competitive. This does not seem all that realistic as yet, which shows that the value of the Protocol is considerable indeed.

For Cuba the higher world price is bliss. It does not have any preferential trade agreements under the Protocol and thus receives the world price for its sugar exports. The share of sugar exports in GDP goes up from between 1.3 and 4.7 per cent of GDP to between 1.7 and 6.2 per cent, at the 30 per cent higher world price for sugar. At the 38 per cent increase the revenues make up for between 1.85 and 6.6 per cent. The value of a hypothetical Large Quota goes down from around 2.5 per cent to around 1.6 per cent when prices increase 38 per cent. For the other quotas, the decrease in the value of the quota is not as drastic but still quite large. The fall in value is larger for the higher quotas. Additionally, the EU price goes down and incorporating this in the analysis shows that the value of a quota goes down even more, sometimes even being negative.

It can be said that a quota under the Protocol has a large value for both countries. The value of the Protocol increases with the dependency on sugar exports and the size of the quota. The value decreases with the increase of the world price and the measure of competitiveness. These can be translated to the major challenge of sugar dependent ACP-countries that will have to boost competitiveness in order to cope with the changes reforms imply.

It has been shown that the value of the Protocol is considerable, mostly around 1-2 per cent of GDP. But the Protocol has major drawbacks as well. First of all, the sharing within the group of ACP-countries does not at all seem fair. A small group of countries profits greatly, the rest hardly. Second, third countries are left out. The criteria for attaining the ACP status

are implicit to the name of the status. Especially countries in Asia are left out. Third, the Protocol creates a monoculture of exports. It creates incentives to produce and export one or two commodities but this way a country becomes very dependent on these commodities. What the current situation calls for is diversification in the basket of export commodities. Cuba in the mid 1990s is a good example of how a one-sided export basket can devastate an economy once preferential trade agreements come to a halt. For all parties involved, a gradual road of reform is the most comfortable and provides the necessary time for adjustments.

Chapter 5: Conclusions

5.1. CMO Sugar and the Protocol

To shred the reign of colonial sugar, sugar beet was introduced at the end of the 19th century. The common market organisation 'Sugar' is part of the Common Agricultural Policy, which is made up of common market organisations for each agricultural market. The CAP adheres to three basic principles. The first is that of a single market, the second is that of Community preference and financial solidarity is the last. By far, the most important objective the CAP has assigned itself is to ensure farmers a fair standard of living whilst at the same time increasing agricultural efficiency. Also, agricultural markets are to be stabilised as well as the availability of supply but simultaneously reasonable consumer prices are to be ensured. An obstruction to its working might be the fact that these objectives seem contradictory.

The CAP had four different instruments at its disposal, discussed in the first chapter. The Variable Levy System (VLS) with or without intra-EU price support was long a predominate policy in most agricultural sectors, until in 1995, the URAA obligations forced the variable levies to be replaced by bound tariffs. However, the tariffs do not seem to have decreased protectionism as compared to VLS. The latter system of income protection protected the EU agricultural prices from world prices by a system of import and export levies. It was designed to protect the EU market from non-EU supply. Often the combination with intra-EU price support was made, which is a complex system of prices. The target price was decided upon in meetings of the EU Council of Ministers. The threshold price is the target price minus the transport costs. The difference between the threshold price and the world price is the variable levy that protected the EU market. And when the actual market price should fall below the intervention price, the EU would intervene.

The CAP also makes use of direct income payments but implementation costs are relatively high. Supply quotas discourage overproduction and serve to reduce the government's budgetary burden..

The CMO Sugar used a VLS with intra-EU price support until 1995. Now, conform URAA obligations, a system of bound tariffs protects the market. Each Member is assigned a quota of A-sugar and B-sugar, depending on its size and sugar production capabilities. The farmers are guaranteed a price for this sugar, the A-quota price being the higher of the two. The price for the last quota, C-sugar, is even lower as it is sold at the world price. Besides this system of ABC-sugar, the CMO Sugar has clauses that define preferential agreements of which the Sugar Protocol is the most important in this paper. Certain countries with the ACP status (African, Caribbean and Pacific) are guaranteed a price, based on the intervention price.

These countries can export a certain specified amount of sugar under a quota at this guaranteed price.

The CAP has been forced to comply more and more with WTO rules. The strong lobby of farmers and ACP countries, in combination with the self-financing nature of the regime, have helped the CMO Sugar to escape major CAP reforms, making it the last major market regime. However, the pressure has grown and reform is on its way.

5.2. The value of the Protocol

In the third chapter the value of preferential agreements under the Sugar Protocol stands central. Two countries are analysed under different scenarios to attempt to estimate the value of ACP membership¹¹¹ for these sugar producing countries. The first country investigated is Fiji, an ACP country that benefits tremendously from the Sugar Protocol and is extremely dependent on its sugar industry and consequently on the Protocol. The simple assumption is made that Fiji loses its ACP status and it is estimated what the direct cost would be to this country. The second country is Cuba, also a country highly dependent on the production of sugar but that has not profited from the Sugar Protocol.¹¹² This country was assigned a hypothetical quota that was decided upon on the basis of other Protocol Members' quotas. At the end of section 5.3.2., the scenarios, i.e. the value of the Protocol under the different assumptions, are summarised in a box.

5.2.1. Fiji

For the first scenario, the assumption was made that world demand and price are given, production processes are fixed and only direct costs are estimated. Furthermore, the EU does not reform the CAP (so world prices remain much lower than the EU internal price) and Fiji receives the intervention price for its sugar. In 2000, Fiji loses its ACP status and it cannot compete on the world market. The costs of losing the ACP status are high. In 2000, these costs rise to 2.36 per cent of GDP. In the following two years the value of the Protocol are estimated to be 2.52 and 1.84 per cent, respectively.

The second scenario is only different in the fact that Fiji is competitive. The assumption in this scenario is that Fiji's marginal costs for sugar are below the world price in each of the years. Again, Fiji loses its ACP status in 2000. Thus for three years, Fiji is not guaranteed the 523.7 Euro per tonne of raw sugar, but it can sell the quota at the world price. In this scenario,

¹¹¹ Although the benefits of ACP membership and the benefits of the Sugar Protocol are not likely to be equal, for the sake of simplicity they are used interchangeably in this essay.

the costs are estimated between 1.3 and 1.6 per cent of GDP. Compared to the scenario in which Fiji is not competitive, the costs have decreased considerably, showing the importance of being competitive.

To make the study more dynamic, the assumption that world demand is given is abandoned as it is allowed to change at a price elasticity of demand for sugar of -0.644 per cent, which is the estimate given by Tyers and Anderson (1992). So now Fiji is assumed to be competitive and the world can demand more of Fiji's sugar as Fiji offers a lower price. In this medium run scenario, Fiji can be highly, reasonably or marginally competitive, offering a discount from the world price of 10%, 5% or 1%, respectively.

In the 'highly competitive'-case, Fiji offers a 10% lower price whereas demand from the world increases with 6.44 per cent. However, the costs in 2000 are still 1.628 per cent of GDP as compared to the 1.596 per cent in the short run scenario. Also for the 'reasonably competitive'-case and the 'marginally competitive'-case the costs are higher than the short run scenario, for all the years. That means that the decrease in price (the lower price Fiji offers) is not offset by the increase in demand. The conclusion that can be drawn from this is that the world price elasticity of demand is too low for Fiji to be able to decrease the costs of losing the ACP status via competition.

Fiji gains to a large extent from the Sugar Protocol. Its dependency on the sugar sector is reflected in the estimates of the Protocol's share in GDP of around 1.5 per cent. With the prospect of reforms to the CMO Sugar and the Protocol, the subject of competitiveness is crucial to the survival of Fiji's sugar sector and the prevention of a serious blow to the economy. Fiji is not competitive as yet, considering the fact that the last couple of years it has hardly exported more sugar than the quota they are entitled to under the Sugar Protocol. It will have to increase its productivity if it is to stand up to the fierce competition of a liberalised world market.

5.2.2. Cuba

Cuba was assigned a hypothetical quota based on data available for other ACP countries. On the basis of this data, Cuba could either be given a large quota (86% of exports), two middle quotas (60 and 40 per cent of exports, respectively) and a small quota (25 per cent of exports). Although the importance of the sugar industry has declined over the last decade because the Soviet Union lost its interest in Cuba's sugar industry, it is still a major industry. A quota would, consequently, be very profitable to the sugar industry.

¹¹² This is a tricky case, as Cuba does profit from the MFN clause. Also in 2000 it was assigned the ACP status but

For the 'large quota'-scenario, the value of a quota is obviously largest. The value of the quota is estimated to be an astonishing 5.09 per cent of GDP for 1992. However, that is the year that the Soviet Union stopped importing sugar from Cuba on a large scale and may thus be misleading. The estimates for the next decade lay between 2.26 and 3.48 per cent of GDP, still very substantial. For the first 'middle quota'-scenario, the share of the quota in GDP would lie between 1.5% and 2.5%. The second 'middle quota'-scenario falls between 1% and 1.5% and for the smallest quota the share in GDP would lay around 1%.

For many years, Cuba had preferential trade agreements with the Soviet Union. When those trade agreements came to an end, the sugar industry was severely hit. A quota from the EU would have supported the sugar industry, the value of the quota depending on its size. The likelihood of Cuba being assigned a large quota (86 per cent) does not seem all that large, because Cuba is not just a small player on the world market. However, a quota of 40 per cent, or even of 25 per cent of exports, which is a more realistic figure, would still have had considerably large direct income effects.

5.3. Reforms and the value reconsidered

The internal and external pressures to reform the CMO Sugar became ever larger. Brazil's claim that the EU is guilty of dumping practices was acknowledged by the WTO in September 2004. The lack of transparency and competition, the downward pressure on the world market price and the system of preferences and the selection criteria with respect to preferential agreements are some of the most harshly criticised aspects of the regime.

The Commission has come with a proposal in which the institutional price for EU sugar is to be reduced considerably. The intervention price is to be abolished and in its stead a reference price is to be introduced. The current system of quotas is to be simplified, merging the A and B quotas into one quota and reducing the level of this quota. C-sugar regulations will not change but the import regime will be altered, especially with the Balkans kept in mind. Quotas are made transferable between Member States, in order to smoothen the impact of adjustments. Also, the Commission considers the way in which the EU can best contribute to the necessary and inevitable adjustments in sugar production in African, Caribbean and Pacific (ACP) countries and India. All in all, the proposal will prepare all parties involved "for the adjustments needed to perform within a realistic and economically sustainable environment."¹¹³

has not yet profited from the agreement.

¹¹³ European Commission, *Acomplishing a sustainable agricultural model for Europe through the reformed CAP – sugar sector reform*, Commission of the European Communities, Brussels, 2004.

In compliance with WTO rules, it seems realistic to expect an eventual liberalisation of the sugar regime. The current proposal is an intermediate step to full cooperation with WTO regulation. A full scale liberalisation has important effects on the world sugar price because of two reasons. The first is that the EU will not export any sugar. The second is that the EU will import sugar to fulfil nearly all its demand for sugar. The effect is a shift of demand of 12 million tonnes, on a total demand of 130 million tonnes of sugar. The resulting price increase on the world market is estimated by Borrel and Hubbard to be between 30 and 38 per cent. Also, the EU internal price is to fall by 40 per cent.

Currently, the price elasticity of demand is -0.644 per cent. This is relatively low. However, it can be expected that this figure will change. Because a large market opens up and the EU will become far more dependent on imported sugar, the price elasticity of demand for sugar is expected to go up, but the extent of this increase (or even proof of this statement) is beyond the scope of this paper.

5.3.1. Fiji

The value of the Sugar Protocol changes with the different assumptions a liberalisation of the sugar regime implies. Firstly, the short run scenario is discussed. Production processes, world demand and the world price are fixed, although the latter is 30-38 per cent higher. Again, only direct costs are estimated. Then the CAP is liberalised and the Sugar Protocol's existence ceases in 2000.

At a 30 per cent price increase, the value of the Sugar Protocol has decreased considerably, on average over the period 2000-2002 by 10 million Euros annually. That is a 13 to 16 per cent decrease. The value of the Sugar Protocol for 2000 is now 1.365 per cent of GDP, for 2001 it is 1.377 per cent and for 2002 it is 1.122 per cent. At a 38 per cent increase, the value of the Sugar Protocol is yet smaller. The island wins back another 0.07 to 0.17 per cent of GDP.

The value of the Sugar Protocol is still relatively large, but the higher world price is extremely important for Fiji's sugar industry because it weakens the blow of not being guaranteed a certain price for a certain quantity of sugar. Again, the analysis is adapted to become more dynamic.

For the period 2000-2002, at a 30 per cent higher world price, in the 'highly competitive'-case, the value of the Protocol lies between 1.152 and 1.425 per cent of GDP. The 'reasonably competitive'-case has an estimated value of the Protocol of between 1.136 and 1.399 per cent of GDP. And finally, in the 'marginally competitive'-case the value lies

between 1.125 and 1.381. The value is obviously lower than at the 30 per cent lower world price, but it is not lower than under the short run assumptions. Again, the price elasticity of sugar demand proves too low for the price decrease to be offset by the demand increase. On a trial and error basis, it is estimated that the price elasticity should be around -1.12 per cent before the demand increase compensates the price decrease.

Box 1 <i>The Value of Fiji's quota under the Protocol</i>					
FIJI					
<i>P_w</i> = 1.00	<i>Short Run</i>		<i>Medium Run</i>		
	Non-Comp.	Comp.	Highly Comp.	Reasonably Comp.	Marginally Comp.
2000	2.36	1.60	1.63	1.61	1.60
2001	2.52	1.64	1.68	1.66	1.64
2002	1.84	1.29	1.31	1.30	1.29
<i>P_w</i> = 1.30	<i>Short Run</i>		<i>Medium Run</i>		
	Comp.		Highly Comp.	Reasonably Comp.	Marginally Comp.
2000	1.37		1.41	1.39	1.37
2001	1.38		1.43	1.40	1.38
2002	1.12		1.15	1.14	1.13
<i>P_w</i> = 1.38	<i>Short Run</i>		<i>Medium Run</i>		
	Comp.		Highly Comp.	Reasonably Comp.	Marginally Comp.
2000	1.30		1.35	1.32	1.31
2001	1.31		1.36	1.33	1.31
2002	1.08		1.11	1.09	1.08

5.3.2. Cuba

Assuming no preferential agreements with the EU, Cuba has to compete on the world sugar market. It has done so since 1992. A 30 per cent higher world price is good news for the island because it is the world price Cuba receives for its sugar. The export figures of the last decade at the observed world prices are compared with the same export figures at the assumed 30 per cent higher price. This shows that revenues go up by 30 per cent as well, which is tremendously large. Before the change in world price, sugar export's revenues accounted for between 1.3 and 4.7 per cent of GDP. At the 30 per cent increase of world prices for raw

sugar the revenues comprise between 1.7 and 6.2 per cent. At the 38 per cent increase the revenues make up for between 1.85 and 6.6 per cent.

The value of an ACP membership has gone down considerably in the light of the new developments. Not only does the world price increase, but also the EU internal price decreases. That is, assuming there is still a separate EU internal market and thus that there persist some sort of protective measures. The EU price is expected to fall by 40 per cent. The value of the large quota, under these assumptions, has diminished to 0.01 and 1.21 per cent. In some years, the value of the quota would even have been negative. In those years Cuba would have been foolish to sell the sugar under the quota at EU prices instead of the higher world price. At the 38 per cent price increase, the value of the quota is yet lower, but this option seems less realistic since the assumption was made that some barriers may yet persist.

Box 2 The value of a hypothetical quota for Cuba (with persisting EU intervention price).

$P_w =$	Cuba			
	LQ	MQ1	MQ2	SQ
1.00				
2000	3.02	2.57	1.76	1.07
2001	2.32	1.66	1.13	0.69
2002	2.52	1.74	1.19	0.73
$P_w =$	Cuba			
1.30	LQ	MQ1	MQ2	SQ
2000	2.11	1.80	1.23	0.75
2001	1.62	1.16	0.79	0.48
2002	1.77	1.22	0.84	0.51
$P_w =$	Cuba			
1.38	LQ	MQ1	MQ2	SQ
2000	1.87	1.59	1.09	0.66
2001	1.44	1.03	0.70	0.43
2002	1.57	1.08	0.74	0.45

Box 3 The value of LQ when world price increases 30% and EU intervention price goes down 40 %

	Share of GDP
	%
1992	0.58
1993	0.03
1994	-0.01
1995	-0.28
1996	-0.05
1997	0.01
1998	0.46
1999	1.21
2000	0.82
2001	0.49
2002	0.75

5.4. Future

The Sugar Protocol has been and still is of utmost importance to the sugar industry of a small, sugar dependent country, such as Fiji. Other well-off countries are Guyana, Tanzania and Jamaica, that all profit to large extents from the Sugar Protocol. For countries that do not fall under the Protocol, but that are extremely dependent on the sugar industry nonetheless,

the preferential agreements have an extremely high (hypothetical) value as well. For Cuba, the value could have risen up to 5 per cent of GDP.

The prospect of reforms, large or small, forces all parties involved to rethink their competitive position. The EU will have to find a solution for a large number of farmers that will not be able to produce sugar. Fiji will have to boost productivity to be able to keep itself standing amongst big players such as Brazil and Thailand. Cuba's downward trend of sugar exports has shown that the country's sugar sector was long dependent on the trade relations with the Soviet Union. However, it does seem that Cuba is a competitive player for it still exports sugar on a large scale.

Development NGOs advocate a distinct role for the EU in the adaptation to a new sugar market. Diversification is one of the most obvious solutions. By directing attention to other products that demand only little investment to switch over to, ACP countries can be made competitive on other markets. Another option is to use the last phase of the Protocol's existence to extend the preferential agreements not only to sugar, but also to sugar by-products. Until now, by-products are not accounted for by the Protocol, but by creating incentives to invest in the processing industry, or in sugar related products, these countries could become more competitive.

All in all, it is questionable how the market will develop. Within the EU, but also outside, developments should be closely monitored. 'Gradual' and 'adjustment' seem the themes for reform, so that all parties will incur as little costs as possible. However, the sweet stronghold will eventually fall, at a high cost to European farmers and some ACP countries.

5.5. Limitations

The analysis is quite useful in determining the value of a quota for a small sugar producing country. However, there are some limitations that prevent the conclusions to be used for other countries.

The first problem is that the data used is very country specific. Fiji is a very small island and very sugar dependent. Other ACP countries that produce sugar are different simply because of their size, the climate and other geographical specificities. Guyana is larger than Fiji and although sugar is one of the major export products, Guyana's dependency on sugar is not as large. The same holds true for a country as Tanzania. Obviously, the value of the Sugar Protocol to a country varies with its size and dependency on sugar.

Secondly, only direct gains are estimated. Trying to identify any indirect gains demands an intensive study, too intensive for this essay. However, it does seem likely that the guaranteed price has many indirect gains as well. Sectors thrive but would otherwise probably

not exist, or at the least be a lot smaller than they are today, jobs are created and communities are supported. The indirect value of the Sugar Protocol is probably much larger than the direct value, especially to countries that are highly dependent on the guaranteed sugar price.

Thirdly, the data used is not always as trustworthy as it ideally should be. Especially for the analysis of Cuba, data was sometimes estimated on the basis of trends or simplifying assumptions were necessary. For example, data on Cuba's GDP is not readily available and estimations were made on the 2003 growth rate.

Cuba is assigned hypothetical quota. At one point, it is mentioned that the quota could have helped the Cuban sugar industry recover from the blow in 1993, when it had to do without the Soviet Union's support. However, should a quota have been installed as of 1992, it is questionable whether the drop in production would have taken place to the same extent or whether it would have taken place at all.

The estimations of what would happen to the world price when the common agricultural policy is reformed are based on literature of well-known economists. However, it remains unclear what would happen to prices in the light of reform. Strong competitors such as Brazil and Thailand might distort any predictions as they tend to keep world prices low. The role of Brazil in the new world sugar market is a very interesting subject to investigate further. Another interesting point of further investigation is how world demand and the price elasticity of demand for sugar are affected by reforms. Because when the sweet stronghold falls, a new era of bitter competition will begin.

Evaluation (In Dutch)

Het gaat bij een scriptie niet eens zozeer om de inhoud. Natuurlijk is het een blijk van je niveau, van je analytisch vermogen, van wat je de afgelopen jaren hebt geleerd en bovenal een blijk van je interesse. Maar waarom vinden veel mensen de scriptie dan een struikelblok, terwijl ze tenminste vier jaar universitaire bagage met zich meedragen? Ik denk dat het vooral een eind is. Of een begin. Van een nieuwe periode in je leven. Nog een studie, of meteen werken? Het maakt niet uit, het is een nieuwe, spannende fase in je leven en nu sta je pas echt op eigen benen. Ik vond het super leuk om aan mijn scriptie te werken, maar ook bij mij ging het niet zonder slag of stoot. Normaal een zondagskind, ging het me de zomer van 2004 even iets minder voor de wind. Mijn begeleider, Aad van Mourik, wil ik bedanken voor het geduld met deze niet altijd even voorbeeldige student. Mijn moeder, Joke, voor de zorg waar ik toch nog niet zonder bleek te kunnen. En mijn vader, Henk, voor de inspiratie en (ironisch) wat lijk ik toch op je hè? Lieke, jij bedankt voor alledrie.

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