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Key Issues facing Sugar Industries in the Southern African Development Community

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Abstract

The objective of this working paper is to highlight the major issues facing sugar industries in SADC. This is achieved within a framework that recognises the existence of distortions in global sugar markets. To this end, a conceptual framework whose central pillar is the existence of market distortions is presented. It is followed by a description of the characteristics of the SADC sugar industries and the kind of distortions that they face in the real world. The main features of the SADC Sugar Cooperation Agreement as well as a consolidated list of key issues facing the SADC sugar industries is presented.

The paper finds firstly that there is a strong case for special sugar trading arrangements. Secondly, mutual benefits can be generated from cooperation in accessing foreign markets. Thirdly, high exposure to world markets will improve market access within SADC. Finally, the paper brings together issues facing the SADC sugar industries that can be best handled at industry and regional levels.

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I. Introduction

Of the twelve countries that are signatories to the Protocol on Trade in the Southern African Development Community (SADC), nine of them are involved in the growing and milling of sugarcane (hereafter referred to as the sugar industry). In each country, the sugarcane growing and milling activities play an important socio-economic role. At the same time, there are severe distortions existing within individual SADC sugar markets as well as global sugar markets. We shall refer to these distortions (which have different implications for the various SADC sugar industries) as internal and external, respectively.

The objective of this paper is to use the internal and external distortions as a backdrop for highlighting the key issues facing SADC sugar industries. To this end, a conceptual framework whose central pillar is the existence of market distortions will be presented. This will be done in Section 2 of this paper. It will be followed in Section 3 by a description of the characteristics of the SADC sugar industries and the kind of distortions that they face in the real world. Section 4 presents the main features of the SADC Sugar Cooperation Agreement (appearing as Annex VII of the SADC Protocol on Trade), which is a response to, among other things, existing distortions. Section 5 presents a consolidated list of key issues facing the SADC sugar industries in the light of the analysis in the previous three sections. Finally, Section 5 will summarise, in broad terms, the major conclusions of the paper.

2. Conceptual Framework

The SADC Protocol on Trade provides for the free movement of goods and services. Exempted from this free movement provision are "sensitive products" which were selected on account of their strategic importance, peculiar characteristics or high profile in the economies of the countries concerned. Sugar is one of these sensitive products. The question is how should the movement of sugar be determined in light of its sensitive nature without ignoring the principles of efficiency and equity? It is in the process of answering this question that the key issues facing sugar industries in SADC will emerge.

The categorisation of sugar as a sensitive product can be rationalised on the basis of three major considerations. The first is the existence of severe distortions in the form of tariff and non-tariff barriers surrounding various markets in the different regions of the world. The end result of these distortions is that sugar trade is not governed by price signals generated by the interaction of the normal forces of supply and demand. Under such conditions, a country may be highly cost-competitive, but would not be able to access high-cost countries because of barriers to trade. In the extreme case, an efficient sugar industry may end up being driven out of production by an inefficient one that happens to be either well protected or well supported by its government.

The second consideration is that sugar is a political commodity. At a basic level, people need something sweet to make food palatable (a basic needs commodity); otherwise there would be a lot to complain about, ultimately casting the government of the day in a poor light. At a higher level, sugar features prominently in the policy-making of all the SADC countries – irrespective of stage of development. Even the most advanced country in the region (namely, South Africa), is on record as having stated that it will not fold its arms and allow its sugar industry to be driven to the ground by cheaper sugar imports from neighbouring countries. Some SADC countries have embarked on dam projects and the rehabilitation of old sugar mills with the active support of their respective governments. Examples in this connection are Mozambique, Swaziland and Tanzania.

The third consideration is that all the sugar industries in SADC play crucial strategic roles in their respective economies. For instance, they promote economic growth through contributions to national output, foreign exchange earnings and government revenues out of which social services are provided. They promote economic diversification through forward and backward linkages with other sectors (such as machinery, fertilizer, transportation, beverages, sweets, pre-packing, wholesale and retail). They promote human development through incomes generated from both direct and indirect employment (including the informal sector which can be quite vibrant); provision of social services (such as education, health, housing, water and recreation); participation of smallholder growers; and outsourcing of certain services (such as rations, painting, maintenance and garbage collection).

It can be appreciated from all the above considerations that sugar is indeed a special commodity, which requires special trading rules. In the long run, the best scenario is one where the distortions have been removed and trade is based on comparative advantage. This would be a first-best world. However, owing to the fact that we are in a second-best world, special rules to govern the trade of the sensitive product sugar are required before this can occur. It is the theoretical underpinnings of these rules that will be presented in this section of the paper. The approach will be general equilibrium in the sense of incorporating interactions among different sectors.

Suppose that the economy can be sub-divided into three sectors. Sectors 1 and 2 are producing closely substitutable commodities. Sector 2 has a distortion revealing itself in price being below the marginal cost of production (that is, there is a production subsidy). Sector 1 is the controlled sector where a decision is to be made on pricing. Should the price be set above or below marginal cost of production? If price is not equated to marginal cost, then a distortion shall have been introduced into the controlled sector. Sector 3 produces a composite commodity where price equals marginal cost (that is, there is no distortion).

To answer the question of where the price should be set in Sector 1, we make use of three diagrams corresponding to the three sectors. In each diagram, the vertical axis measures money value and the horizontal axis measures output in quantity terms. For analytical convenience, it has been assumed that the supply schedules are infinitely elastic in all sectors.

Suppose that the distortion in Sector 2 is in the form of a subsidy equal to P_2P_3 per unit. The supply schedule without the subsidy is S_2 whereas the supply schedule with the subsidy is S_3. Given the initial demand of D_2, the producer in Sector 2 will settle at point i where the output is Q_4. The socially optimal level of output is Q_3 (corresponding to the intersection of D_2 and S_2). There are too many resources devoted to Sector 2 than are socially optimal. The result is a net social loss equal to fig. It is the difference between the resource cost of fQ_3Q_4g and consumer surplus of fQ_3Q_4i. This is the welfare loss that needs to be eliminated.

In Sector 1, let the initial supply schedule be S_0 and the demand schedule be D. The intersection of these two schedules occurs at a; giving rise to output level Q_0. The question then is at what level should price be set in the controlled sector. Should it be equal to P_0 or not? To answer this question, let us observe what would happen if price were lowered below P_0. Specifically, let the price fall to P_1 through a subsidy equal to P_0P_1 per unit of output. The new intersection point at c gives rise to an additional resource cost of aQ_0Q_1d and additional consumer surplus of aQ_0Q_1c. Thus, there is an additional resource cost of acd.
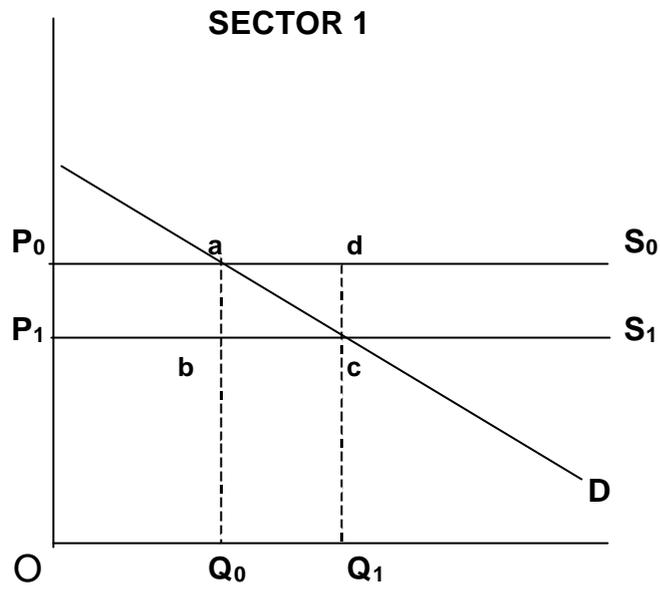
SECTOR 1

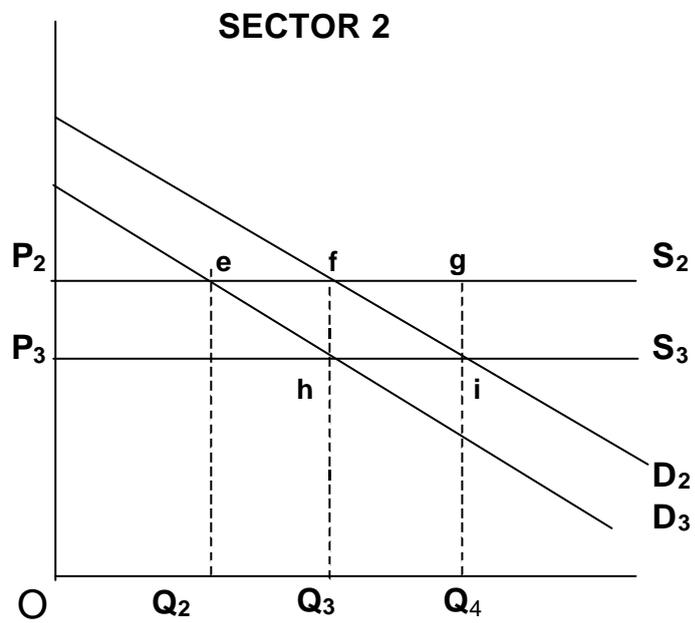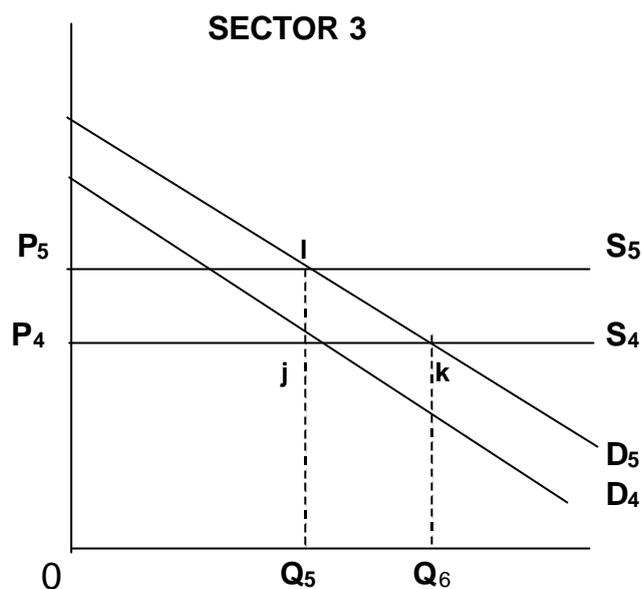## SECTOR 2

Figure 3: Sector 3

SECTOR 3

In the meantime, the fall in the Sector 1 price has brought about an inward shift of the demand curve in Sector 2 from D_2 to D_3. This occurs because the products of these two sectors are assumed to be substitutes. The demand schedule must shift inwards until the point of intersection with S_3 is directly below f. This is on account of the fact that the socially optimal level of output is Q_3. The resource saving associated with the contraction of output is fQ_3Q_4g and the consumer surplus loss is fQ_3Q_4i. Thus, there is a net saving equal to fig. This is the very amount that was a social welfare loss initially and needed to be eliminated. Hence the mission has been accomplished.

At the new intersection point of h, there is a net loss equal to ehf. This is on account of the fact that from a social viewpoint, the resource cost is eQ_2Q_3f whereas the consumer surplus is eQ_2Q_3h. Social welfare will be maximised if this loss as well that in Sector 1 (namely acd) are eliminated. This will be achieved through fiscal transfers from Sector 3. Assuming that the products of Sectors 1 and 3 are complements, then D_4 will shift outward to D_5 (in the wake of the fall in the price of the Sector 1 product). The complementarity assumption is reasonable on account of the positive linkages between the sugar industry and various other sectors. The new intersection occurs at k.

Let the subsidy for Sector 1 be financed by a tax levied on Sector 3. This will bring about a shift of the supply schedule from S_4 to S_5. The intersection point l has been deliberately chosen to be directly above j so that there is no permanent net movement of resources into Sector 3. The output level corresponding to intersection point l is Q_5. The movement from k to l has resulted in a loss of consumer surplus equal to ljk. For net social welfare to be maximized, the revenue of P_5P_4jl must be equal to ljk in Sector 3 plus ehf in Sector 2 plus acd in Sector 1.

There are two general conclusions emanating from the above diagrammatic analysis. First, price should not be set equal to marginal cost in Sector 1 if there is a distortion in Sector 2. In other words, a distortion should be deliberately introduced into Sector 1 for purposes of counteracting an existing distortion in Sector 2. Second, social welfare will be maximized if the sum of the consequential welfare losses is set equal to the fiscal transfers from Sector 3.

Let us now extend the first conclusion into the sugar world. We shall do so at two levels – namely, regional (one country versus other countries in SADC) and global (SADC region versus other economic blocs). At the regional level, the sugar industries in the different countries are subject to various forms of distortions. In the context of the second-best framework presented above, a given SADC country would be advised against opening up its borders to allow free trade in sugar. Net social welfare within SADC can only be maximised if there are special rules introduced to govern sugar trade.

At the global level, SADC has to decide whether or not to open up its borders collectively to other regions of the world. To the extent that these other regions are subject to various forms of distortions themselves, SADC would be advised against opening up its borders freely. It is not surprising in this connection that other economic blocs around the world exclude sugar from the normal free flow of trade. This is the case under the North American Free Trade Area (where sugar flows are governed by a side letter), European Union (where there is a sugar regime forming part of the common agricultural policy), Andean Pact and Mercosur.

The case for liberalised global trade is based on higher global income associated with comparative advantage. At some future point in time, sugar trade would also have to be liberalised. However, the liberalisation should be a gradual process rather than an abrupt event that takes place overnight. The economies concerned should be allowed adequate time to adjust in an orderly fashion to the new dispensation. This is particularly important in light of the fact that sugar is a political commodity which has historically featured prominently in national policy-making in both developing and developed countries. It also makes good sense from an efficiency viewpoint to the extent that it allows the relevant information for decision-making purposes to permeate throughout all the relevant sectors of the economy.

The second conclusion from the diagrammatic analysis can be generalised into the need for support of the sugar industry through fiscal transfers from the rest of the economy. This can come in different forms – such as improved infrastructure, subsidised credit for smallholder growers and tax credits for rebates given by the sugar industry to enterprises that add value to sugar locally. Whilst this is seemingly against the drive by the World Trade Organisation (WTO) to, among other reforms, reduce domestic support measures; it can be accommodated under the special and differential treatment allowed for developing countries. SADC is indeed a developing region.

The three-sector diagrammatic analysis presented above can be augmented by a consideration of its implications for both internal and external terms of trade (ToT). The former refers to the unit price of sugar relative to that of other domestically produced agricultural products whereas the latter refers to the unit price of exports relative to that of imports. Let P_s and P_z represent the prices of sugar and a composite agricultural product, respectively. The effect of excluding sugar from free trade is to raise P_s relative to P_z. In other words, the domestic ToT will move in favour of the sugar sector. Other things being equal, resources will move from other agricultural sectors into the sugar sector. This will raise social welfare only if the net benefits from increased activity in the sugar sector exceed the net loss from reduced activity elsewhere in the agricultural sector. Whilst this is an empirical question,   considerations indicate that social welfare will indeed be higher after the improvement of the domestic ToT for sugar. This stems from the fact that sugar was specified as a sensitive product using a set of criteria that were applicable to all other products in all the SADC countries. The underlying principle of these criteria is the pervasive influence in the economy. Thus, the movement of the domestic ToT in favour of the sugar sector is expected to enhance overall welfare.

From the higher output in the sugar sector, higher incomes are expected out of which will flow higher tax revenues.   This raises the ability of government to provide a better enabling environment for even higher investment, production, employment and incomes in the economy.

It could, for instance, increase the quantity of economic and social infrastructure as well as provide tax concessions for the sugar sector to indirectly encourage higher investment and employment elsewhere in the economy via special rebates extended to industrial users of sugar (small and large).

Turning to external ToT, let P_x and P_m represent unit prices of exports and imports, respectively. P_x will incorporate the price receivable from sugar exports to preferential markets. Because of the distortions already alluded to, P_x will be higher than would have been the case if all sugar exports went to the world sugar market. To the extent that all of the surplus sugar producers in SADC (that is, countries whose domestic production exceeds domestic consumption) have access to preferential markets (albeit to varying degrees), then P_x is higher than would have been the case otherwise for all of them. As long as barriers to sugar trade exist, P_m will remain constant both before and after the SADC Sugar Cooperation Agreement. This means that external ToT in the SADC region will be determined by P_x. Thus, for all SADC surplus sugar producers, external ToT will be higher than would have been the case otherwise. This represents an opportunity for the sugar producers to rise to higher stages of development. This is equitable to the extent that SADC is a less developed region. It is also efficient to the extent that it promotes market discipline and integrates SADC into the global economy.

Within SADC itself, there will be a differential impact among the countries involved. For the SACU sugar producers, the external ToT will deteriorate because for each ton of sugar coming in under the non-reciprocal arrangements, they have to sell a ton in the world market whose price is much lower than the SACU price. For the non-SACU SADC sugar producers, the external ToT will improve because they will be diverting sugar from the lower-price world market to the higher-price SACU market. This will essentially transfer income from SACU to the rest of SADC. This can only be equitable if SACU has an overall trade surplus towards the rest of SADC; otherwise not. This point will not be developed any further because it is outside the scope of this paper.

In conclusion then, we can say that because of the existing distortions facing the different sugar industries in both SADC and further afield, there is a case for special sugar trading rules. This case is built on the second-best theory. Until distortions in the rest of the sugar world are eliminated (or at least substantially reduced), it would not be in the long-term interests of the SADC sugar industries to engage in free sugar trade. If there were to be free sugar trade in the currently distorted world, a few countries may benefit in the short run. But in the long run, overall social welfare in SADC would be lower than would be the case otherwise. Finally, there will be movements in internal and external ToT. These movements provide an opportunity for government intervention to take national economies to higher stages of development.

3. Sugar Industries in SADC

In this section we describe the SADC sugar industries using selected indices (some quantitative, others qualitative) and also highlight the kind of distortions which they face. We start with the Table 1 showing production, consumption and trade.

Three are three observations to be highlighted from the Table 1. First, from an aggregate viewpoint, SADC is a net surplus producer (that is, production exceeds consumption). Second, SADC is a net sugar exporter (that is, exports exceed imports). Third, South Africa is the largest producer, consumer and exporter; followed by Mauritius; then Zimbabwe and Swaziland. The rest of the countries produce less than 210 000 tons per annum.

Table 2 ranks selected countries from SADC and rest of the world by unit production costs.

Table 1: Sugar Production, Consumption and Trade for SADC Countries (Raw Value; 1998)

Country	Production (Tons)	Consumption (Tons)	Exports (Tons)	Imports (Tons)
Angola	32 000	85 000	0	7 025
Malawi	209 703	158 161	67 224	16 469
Mauritius	666 841	42 683	638 694	41 434
Mozambique	38 555	121 125	20 286	98 307
South Africa	2 984 892	1 366 806	1 087 088	0
Swaziland	537 096	27 550	256 527	0
Tanzania	110 200	200 000	22 121	128 807
Zambia	172 600	74 800	86 800	2 564
Zimbabwe	571 943	305 325	242 641	11
Total	**5 323 830**	**2 603 400**	**2 421 381**	**294 617**

Sources: Sugar Yearbook 1999 published by the International Sugar Organisation, London and Swaziland Sugar Association for consumption in Swaziland.

Table 2: Raw Sugar Production Cost, Exports and Export Ratio for Selected Countries

Rank	Country	Cost per Ton (1997-92) (US $)	Exports (1998) (Tons)	Export Ratio (1998) (%)
1	Guatemala	234	1 371 186	81,5
2	Zimbabwe	235	242 641	42,4
3	Swaziland	250	256 527	47,8
4	Thailand	251	2 443 777	59,0
5	Colombia	256	773 778	36,4
6	Brazil	258	8 675 148	45,3
7	Fiji	271	243 282	87,6
8	Australia	273	4 691 495	92,3
9	South Africa	294	1 087 088	36,4
10	India	303	85 774	0,6
11	Mauritius	314	638 694	95,8
12	Philippines	320	188 119	12,2
13	Cuba	338	2 568 580	78,0
14	El Salvador	348	255 345	52,5
15	Dominican Republic	349	260 082	50,4
16	Argentina	371	227 683	13,0
17	China	485	459 138	5,2
18	Turkey	485	303 507	10,9
19	Poland	563	369 409	16,9
20	European Union	570	6 357 196	35,4

Note: Export ratio is defined as exports divided by production (and then converted into percentages).

Sources: LMC International (for cost per ton) and Sugar Yearbook 1998 published by the International Sugar Organisation, London (for exports and production).

Table 2 lists a sample of only 20 countries out of a total of 121 sugar-producing countries in the world. There are two observations to highlight from this table. First, the four SADC countries included in the sample are in the top 55% in terms of ranking by cost. They are in the top 45% if Mauritius is excluded because of its island status. This suggests that SADC is relatively cost-efficient in sugar production *vis-à-vis* the rest of the world. Bringing this observation together with that of SADC being a net exporter (Table 1), suggests that there can be significant mutual benefits derived from cooperation when it comes to accessing foreign markets. Such cooperation can

take on various forms – such as using common port facilities, arranging co-shipments, sharing market intelligence, and having a common approach on international developments.

The second observation is that there is no clear relationship between production costs and export levels.   In terms of neoclassical economic theory, low production costs would be associated with high export levels.   But this is not readily evident from the above table.   There is actually a contradiction in the case of the European Union (EU) which has the highest unit cost but at the same time has the second highest level of exports (virtually all of which goes to the world market).   There is also a contradiction where the EU has virtually the same export ratio as South Africa whose unit cost is almost half that of the EU.

The following model was specified to conduct a quick non-rigorous test of the hypothesis that production costs influence sugar trade:

$$\mathbf{Y} \quad = \quad \mathbf{a + bX + E}$$

    Where Y = Sugar trade;
           X = Cost per ton of sugar;
           E = Error term (assumed to be normally distributed with zero mean and constant variance); and
           a,b = Coefficients to be estimated.

The coefficient b is expected to be positive in terms of the hypothesis posited above.   X is measured by cost per ton as reflected in Table 2.   Y has three alternative measures – namely, export ratio (as defined in Table 2), volume of exports (as reflected in Table 2) and export share (defined to be the exports by a given country shown in Table 2 divided by the total of exports shown in that table).   The results from ordinary least squares regression are summarised in Table 3.

Table 3: Regression Results for Y = a + bX			
Alternative Measure of Y	**Estimate for a**	**Estimate for b**	**R-Squared**
Export Ratio	91,9127 (27,0253)	-0,1388 (0,0587)	0,2366
Export Volume	1 384 002 (2 420 930)	564,187 (5 262,756)	0,0006
Export Share	4,3939 (7,6859)	0,0018 (0,0167)	0,0006

Note: Figures in parentheses are standard errors.

Two observations can be highlighted from the above results.   First, two of the estimates for b are in accordance with the hypothesis (that is, they pass the economic test).   However, in both cases the estimates are statistically insignificant at the 5% level (as reflected in the relatively high standard errors).   Second, in the two cases which pass the economic test, the R-squared is virtually zero – signifying that X explains virtually nothing of the variation in Y.   It can be concluded from these two observations that for the sample of countries shown in Table 2, sugar trade is not driven by sugar production costs.   By extension, it can be concluded that other considerations (including market distortions) account for sugar trade.

In the case of SADC, some of the distortions are within individual countries and others are in the countries with which SADC would like to trade because of its comparative advantage in sugar production (especially the European Union and United States).   Examples of distortions within

SADC itself are quantitative import restrictions, high tariff walls, export licensing, subsidies and administrative changes in foreign exchange rates. Outside SADC, notable distortions are quantitative restrictions on sugar imports and various sugar price support measures. The latter types of distortions have a beneficial effect not only on the sugar industries in the developed countries where they obtain, but also on some of the SADC countries (under the ACP-EU Sugar Protocol and US tariff rate quota). Such distortions cannot be removed overnight.

The price structures faced by different SADC sugar industries to different degrees of impact are summarised in Table 4.

Table 4: Prices Obtaining in Different Sugar Markets, February 2000		
Market	Price per ton (US $)	Index (World=100)
EU - Sugar Protocol	530,76	424,6
EU – Special Preferential Sugar	448,67	358,9
US – Tariff Rate Quota	354,39	283,5
World	125,00	100,0

Note: EU = European Union and US = United States.

Source: Swaziland Sugar Association.

As can be appreciated, the highest price is obtainable from the EU under the ACP (African Caribbean Pacific)-EU Sugar Protocol (SP). It is more than four times the world market price. It is followed by the price obtainable from the Special Preferential Sugar (SPS) Agreement under the ACP-EU arrangements, which is more than three-and-half times the world market price. Next in line is the price obtainable in the US from the tariff rate quota (TRQ) operated under the Generalized System of Preferences. This is almost three times the world market price. Then comes the domestic price which lies somewhere between the US and world market prices.

Last in line is the price obtainable from the world market. The latter is a residual market where sugar that cannot go into higher-paying markets is dumped. The price in this dumped market is typically below production costs. The higher the proportion of production sold in this market, the lower will be the average price per ton; other things being equal. Clearly, as the composition of export markets shifts towards the world market, the average price computed from all markets will fall, other things being equal.

The discussion in this section can be summarised in terms of four statements. First, SADC is a net surplus sugar producer as well as net sugar exporter. Second, the SADC sugar industries are of various sizes – with South Africa being very large; followed by Mauritius, Zimbabwe and Swaziland which are medium; and then the rest of the countries which are small. Third, on the basis of unit production costs, the SADC sugar industries are in the top 55% bracket in the world. Whilst the currently existing distortions largely disable production costs from driving sugar trade, the relatively lower SADC costs present an opportunity that can be exploited in future when the world sugar scene changes. Fourth, all the SADC sugar industries play strategic multifunctional roles in their respective economies. Moreover, sugar is a political commodity. It features prominently in national policies. Accordingly, free trade which would cripple even the cost-efficient is not a realistic option. Hence the need for an agreement to regulate sugar trade within SADC.

4. Components of the SADC Sugar Cooperation Agreement

The basic objective of the SADC Sugar Cooperation Agreement is to enable an orderly growth of the sugar industries in the light of their strategic importance to their respective economies as well as the currently existing distortions surrounding various sugar markets.   It has two basic components – namely, market access and areas of cooperation.

In principle, market access can be reciprocal or non-reciprocal. In the former case, each of the SADC countries would open up their respective markets to each other on some agreed basis. In the latter case, one or some countries would allow market access without requiring reciprocal arrangements with other SADC countries. Currently, most of the sugar from the rest of SADC which does not go into preferential markets tends to flow into the Southern African Customs Union (SACU). There are three considerations which account for this tendency. First, the SACU prices are higher than the domestic prices in the rest of SADC. Second, SACU has a very large market provided by South Africa as the biggest and most advanced economy. Third, all the adjacent SADC sugar producers with an exportable surplus have relatively lower production costs and can, therefore, readily access the SACU market.

Very little sugar has flowed from SACU into the rest of SADC. The South African sugar going into Mauritius is basically world market sugar. It may fetch a higher than world-market price as a result of a premium due to lower transportation costs as compared to other world-market sugar suppliers. The point is that this sugar is not going there under special preferential arrangements.

Given the above scenario, the main challenge to deal with then is how to ensure that sugar flows into SACU from the rest of SADC do not create instability where net social welfare ends up being lower than would have been the case otherwise. In a second-best world, a justifiable principle on which to base market access is relative exposure to the world market. Generally speaking, the higher the exposure to the world market, the higher should be the access into the SACU market. This is an equitable principle to the extent that it recognises the pain of exporting to the world market where prices are not only considerably lower than prices obtainable from preferential markets, but are typically below production costs. It is also efficient to the extent that it encourages a better allocation of resources within SADC, given the multifunctional role played by the SADC sugar industries in their respective economies as well as the lower overall SADC costs *vis-à-vis* the rest of the world.

Exposure to the world market can be proxied by net surplus production which is, in turn, defined to be excess of production over consumption and exports to preferential markets. Table 5 presents the relative exposures of SADC countries into the world market for 1998.

The countries would then share in the SACU market on the basis of the figures in the last column of Table 5. There are three points to be noted in this connection. First, the figures in the last column have to be computed on an agreed basis that takes into account changes in economic circumstances over time. In other words, the market access formula must be dynamic in nature. Second, to facilitate forward planning, the formula should be applied to forecasts arrived at before the beginning of the season, say before April in each year for a season ending in March of the subsequent year. It must then be adjusted on the basis of revised forecasts in the course of the season and finally on the basis of actual figures at the end of that season. Third, if a country does not take up its share in any given year, that portion should be re-allocated among the rest of the member countries who are able and willing to supply. A shortfall cannot be banked, as this would be both inequitable and inefficient. It would be inequitable to the extent that it prevents other capable producers to supply the sugar and it places a burden on consumers

as prices rise because of lower supply. It is inefficient to the extent that it promotes a misallocation of resources within the different countries (particularly the prevention of additional resources being devoted to sugar production). All these points have been accommodated in the market access component of the SADC Sugar Cooperation Agreement.

Table 5: Exposure of SADC Countries to the World Market, 1998			
Country	Exports to Preferential Markets (Tons)	Net Surplus Production (Tons)	Relative Exposure (%)
Angola	0	0	0
Malawi	50 000	0	0
Mauritius	632 738	0	0
Mozambique	19 821	0	0
South Africa	40 244	1 577 842	76,8
Swaziland	186 000	323 546	15,8
Tanzania	12 000	0	0
Zambia	12 828	94 507	4,6
Zimbabwe	193 000	58 000	2,8
Total	1 146 631	2 053 895	100,0

Sources: Table 1 and Sugar Yearbook 1998 published by the International Sugar Organisation, London.

There are two additional dimensions of market access which are noteworthy. One is that the currently existing bilateral arrangements on sugar between Zimbabwe on the one hand and Botswana-Namibia on the other hand have been incorporated into the SADC Sugar Cooperation Agreement. This is a pragmatic solution. The other dimension is compatibility with trading rules and disciplines under the WTO. This is assured by specifying a period over which the agreement will exist. This period will largely depend on a review to be conducted after five years. If world market conditions are sufficiently liberalised, then the Agreement will cease to exist. There is also the possibility that the review may result in reciprocal market access arrangements so as to be fully WTO compatible.

It should be appreciated that the Agreement is a stepping-stone towards incorporating the SADC sugar industries into the global trading system. Being largely underdeveloped, the SADC region needs a period over which it will strengthen itself for competing effectively in the global trading arena. As pointed out earlier, gradual liberalisation is better than a big bang approach. Hence the need for a reasonably long period to enable adjustment.

There is a view to the effect that those SADC countries who are cost-efficient and can out-compete South Africa should be able to sell their sugar freely into the South African market. Those who argue that sugar is one of the commodities through which trade imbalances with South Africa can be redressed often push this view. Whilst it is true that South Africa has historically enjoyed a huge favourable balance of trade with all the sugar producing SADC countries, it is difficult to use sugar as the major means of redressing this imbalance. The reasons have already been alluded above (namely, the strategic multifunctional role of the sugar industry and the political considerations surrounding sugar). As pointed out in Section 2, terms of trade within SADC will move in favour of non-SACU SADC under the Sugar Cooperation Agreement. This is equitable to the extent that it results in some income transfers to the rest of SADC. The difficulty is that SACU also embraces Swaziland which is not only less developed but may not be in a net surplus trade position *vis-à-vis* non-SACU SADC sugar producers. Thus, there may be an inequity in the case of Swaziland. This is an additional consideration to argue that avenues for redressing trade imbalances should be found mainly outside the market access component of the Agreement for as long as the world remains second-best.

We now turn to the other component of the SADC Sugar Cooperation Agreement – namely, areas of cooperation. The areas of cooperation are meant not only to complement the market access component, but also to promote interaction among SADC sugar industries in the spirit of economic integration. Examples of these areas are sharing of training institutions, research facilities, sea-side export terminals, information on intra-SADC sugar flows, experiences pertaining to smallholder growers, transport to markets outside SADC and common approaches to international developments. The SADC sugar-producing countries themselves will work out details on how cooperation would work in these areas. As a matter of fact, they have already agreed on the terms of reference for the Working Groups that will elaborate the details of cooperation in specified areas.

It is in these areas of cooperation that additional avenues can be found to improve equity and efficiency within SADC. For instance, in the access of research and training facilities currently available in South Africa, a subsidised price can be charged to the rest of SADC sugar producers. The cost of sugar cane varieties developed in South Africa and made available to the rest of SADC can be subsidized. Technical assistance for smallholder growers can be provided to the less developed areas of SADC. All these are examples of avenues for raising the capacity of the less developed sugar producers in SADC so as to bring more equity and efficiency in the trading relations. The "subsidies" can come from funds generated from both within and outside SADC.

In summary then, we could say that the SADC Sugar Cooperation Agreement has been designed in the context of the second-best world in which sugar industries find themselves. This Agreement takes into explicit recognition the strategic and multifunctional roles played by SADC sugar industries in their respective economies. It would be myopic to engage in destructive competitiveness notwithstanding glaring trade imbalances among the different SADC countries. Other avenues should be found to redress the trade imbalances. The Agreement has two basic components – namely, market access and areas of cooperation. Whilst initially the market access will be offered by SACU on a non-reciprocal basis, eventually it must be reciprocal in nature to be WTO compatible. It is based predominantly on exposure to the world market. The areas of cooperation are meant not only to complement market access, but also to promote regional interaction for mutual benefit.

5. Consolidated List of Key Issues

The previous sections have alluded, both directly and indirectly, to various key issues facing the SADC sugar industries. This section brings them together for purposes of focusing ideas. The issues revolve around the central theme of long-term survival for the SADC sugar industries in the light of their comparative cost advantages on the one hand and distorted global sugar markets on the other hand. Some of the issues are largely under the control of national industries and/or governments whilst others can be best handled through cooperation at the regional level.

Issues emerging from the distortions of sugar markets which can be handled at the national level are as follows:

- *Efficiency of Operations:* Efforts should be continuously exerted to improve operational efficiencies at both field and factory levels. This entails ongoing training and upgrading of labour skills, installation of better equipment and generally adopting new technologies as well as new techniques.

- *Environmental Awareness:* This derives its importance from the need to internalise all externalities so that the financial viability of the sugar industry truly reflects net social returns.

It is only under such conditions that the allocation of resources can be said to be efficient and that the inter-generational distribution of net social benefits is equitable. Moreover, the demonstration of environmental friendliness of a sugar industry becomes a marketing tool. In the case of existing projects, there is need to undertake environmental audits to check whether all externalities are adequately accounted for. In the case of new projects, environmental impact assessments must be conducted routinely and effectively.

- **Value Addition:** Raw sugar is a primary commodity. If exported as is, there is a loss of potential domestic income and employment. This potential loss can be minimised via more value-added activities that use sugar as one of the major inputs. Furthermore, value-added products have relatively high-income elasticities of demand. This means that as a country moves into a higher stage of development (reflected especially in higher *per capita* incomes), there will be an increase in the domestic demand for the value added products. Thus, there will be a self-reinforcing effect resulting in a spiral of higher sugar production and higher value addition on the sugar.

- **Domestic Support Measures:** It was demonstrated in Section 2 that in a distorted world there is a case for fiscal transfers from the rest of the economy to the "controlled sector". This provides the rationale for the support of the sugar industry by a national government. The support can come in various forms – including, improvement of economic infrastructure (roads, bridges, etc); giving tax credits to the sugar industry for the provision of social services (education, health care, housing, water and recreation) which would normally fall under the purview of the public sector; and provision of limited subsidised credit to smallholder growers. Whilst domestic support measures in general are against the spirit of the multilateral trading system, they are permissible under WTO rules in the context of special and differential treatment for developing countries.

- **Internal Terms of Trade:** From improved domestic terms of trade in favour of the sugar sector, government's ability to provide a better enabling environment for higher investment, production, employment and incomes will be enhanced.

- **Private Enterprise System:** The sugar industries in SADC have prospered largely because of their private enterprise nature. Under such conditions, there is a higher and faster response rate to price signals as well as to incentives or disincentives. Government should restrict itself to the active provision of an enabling environment for the private enterprise system to operate efficiently.

Issues emerging from the distortions of sugar markets which can be handled at the SADC or regional level are as follows:

- **Market Access Within SADC:** In terms of the current SADC Sugar Cooperation Agreement, market access is non-reciprocal. Non-SACU SADC countries can sell specified quantities of sugar into SACU without similar access being granted to SACU countries into the rest of SADC. This is considered to be a medium-term arrangement with the long-term objective being reciprocal access. That will not only improve the regional allocation of resources, but will also improve the regional distribution of benefits in as far as the sugar sector is concerned.

- **External Terms of Trade:** For SADC *vis-à-vis* the rest of the world, terms of trade will be improved under the Sugar Cooperation Agreement. This represents an opportunity for the SADC sugar producers to raise their respective stages of development. Within SADC, there will be a differential impact. Terms of trade for SACU will deteriorate whilst those for non-SACU SADC will improve.

- ***Access into Foreign Markets:*** Because SADC as a whole is a net producer and net exporter of sugar, there is a potential for cooperation in accessing foreign world markets. This is especially the case where individual countries may not have large enough quantities of sugar to enjoy economies of scale in transporting and storing the sugar at the right places and at the right time. Cooperation at the regional level can enable the exploitation of such economies.

- ***EU Sugar Regime:*** Due to GATT (General Agreement on Trade and Tariffs) commitments and continuous pressures under the multilateral trading system, there are reforms expected to take place in the EU Sugar Regime. Some of these reforms will result in a reduction of domestic EU sugar prices, reduction of import quotas from the ACP (African, Caribbean and Pacific) countries and reduction of export subsidies (resulting in the reduction of EU exports to the world market). These changes will have differential impacts on the SADC surplus sugar producers. Those SADC countries currently benefiting from the protected EU markets (under the ACP-EU Sugar Protocol and ACP-EU Special Preferential Sugar Agreement) will be adversely affected by the reduction in the EU domestic sugar prices and import quotas. This adverse impact will be offset to some extent by an increase in the world market price expected from a reduction of EU exports. But the latter benefit may not materialise if large low-cost sugar producers such as Brazil, Australia and Cuba increase their exports. There is a need to study these possible effects using a general-equilibrium type of model. There needs to be consensus at the SADC level on how to approach the issue of the reduction of preferential market access. This is especially important in the context of the negotiations that are expected to take place in a few years time on the EU-SADC alternative trade arrangements to take place after year 2008 when the current Coutonou Agreement signed in June 2000 between the EU and ACP countries comes to an end.

- ***US Sugar Programme:*** As in the case of the EU Sugar Regime, the US Sugar Programme is under pressure for reform. If the reform comes in the form of a reduction in the domestic price of sugar without a concomitant increase in the world market sugar price, then the SADC countries enjoying tariff-free access under the Generalised System of Preferences will be adversely affected. The degree of impact will depend on the proportionate sugar quantities involved. There is a need to study these possible effects using a general-equilibrium type of model.

- ***WTO Agriculture Negotiations:*** Negotiations on the further reform of trade in agriculture (under which sugar falls) have been going on since January 2000 under Article 20 of the Agreement on Agriculture concluded at the end of the Uruguay Round in 1994. These negotiations have been taking place in special sessions of the WTO Committee on Agriculture. Negotiating proposals as well as technical background papers prepared by the WTO Secretariat will be tabled until March 2001 when there will be stocktaking. Thereafter, detailed negotiations will ensue. The problem with most of the SADC countries is that, with the exception of South Africa and Mauritius, they individually possess inadequate manpower and financial resources to participate meaningfully in these negotiations. Yet if they were to pool their resources, then they can have an impact. The potential for this cooperation was demonstrated in Seattle, USA, in November/December 1999 when the SADC countries followed the otherwise disorganised sessions through regular meetings among themselves to brief each other and agree on the next move. The SADC countries will not always see eye-to-eye on all issues being discussed. Where this is the case, a long-term view may yield some points of agreement and cooperation. For instance, if the ultimate objective is the same, there may be an agreement not to oppose each other on short-term tactics to be pursued by the different countries. Furthermore, there may be agreement on the kind of tradeoffs to be pursued by different countries. The point is that discussion at the SADC level has the potential of producing higher benefits for the region than non-cooperation.

- *EU-SA Free Trade Area Agreement:* This agreement has implications for South Africa's neighbours. This is the case within SACU because once EU products come into South Africa, they can move freely. It will also be the case for those products that will move relatively freely under the SADC Trade Protocol. Of immediate concern to the sugar industry is the importation of EU products enjoying the export refunds. Under this system, the EU manufacturer essentially buys the sugar at world prices. Given the fact that prices within SADC are higher than world prices, a manufacturer of a similar product based in SADC would be placed at a cost disadvantage. This adverse effect can be dealt with at the SADC or SACU levels. Solutions can be in the form of compensation (fiscal transfers, technical assistance, restructuring of industries, re-training of labour, etc) or basing the export refund system on the average SACU/SADC sugar price rather than the world market price.

- *General Cooperation at International Forums:* Because of shortage of national resources, it becomes important to pool them for effective participation in the international arena. Additional international forums to those already mentioned above where SADC can derive mutual benefit for the individual countries are the International Sugar Organisation and World Sugar Research Organisation.

6. Conclusion

The objective of this paper was to highlight the major issues facing sugar industries in SADC. This was done within a framework that recognises the existence of distortions in global sugar markets. We now wish to summarise the major issues emerging from the analysis conducted in this paper.

First, because of the existing distortions facing the different sugar industries in SADC and further afield as well as the strategic multifunctional role played by the sugar industries in their respective economies, there is a strong case for special sugar trading arrangements. These are encapsulated in the SADC Sugar Cooperation Agreement. Until distortions in the major sugar markets around the world are removed (or at least substantially reduced), it would not be in the long-term interests of the SADC sugar industries to engage in free sugar trade.

Second, SADC is a net surplus sugar producer and net sugar exporter. Coupled with the fact that the SADC sugar industries are relatively cost-efficient, this means that there can be mutual benefits generated from cooperation in accessing foreign markets. The exact nature of the cooperation will be a subject of discussion among the sugar producing countries themselves.

Third, the SADC Sugar Cooperation Agreement has two basic components – namely, market access and areas of cooperation. The access of each other's markets in SADC will be governed by special rules (given that free sugar trade is currently not a feasible option). A fundamental principle underlying such rules is exposure to the world market. The higher such exposure is, the higher is market access within SADC. This is both equitable and efficient. The areas of cooperation are meant not only to complement market access, but also to strengthen the spirit of togetherness in SADC.

Fourth, issues which can be handled at the national level include efficiency of operations, environmental awareness, value addition, domestic support measures, internal terms of trade and private enterprise system. Issues which can be handled at the SADC/regional level include market access within SADC, external terms of trade, access into foreign markets, EU sugar regime, US sugar programme, WTO agriculture negotiations, EU-SA free trade area agreement and general cooperation at international forums.