

# **COMPETING AT THE “CUTTING EDGE”: OPPORTUNITIES FOR AGRIBUSINESS PARTNERSHIPS AND CO-OPERATION IN THE SOUTHERN AFRICAN REGION**

*A paper for area VI: Globalization*

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## **ABSTRACT**

*What are the opportunities of agricultural business, trade and co-operation in Southern Africa, in particular South Africa, Namibia and Zimbabwe, three of the most significant economies in the SADC region? The competitiveness status of agribusiness from a global viewpoint in sixteen food and fibre supply chains for these three countries is determined in this study using the Revealed Comparative Advantage method of Balassa. Based on this status there is potential in certain agro-food chains for supply chain integration and co-operation between agribusinesses in South Africa, Namibia and Zimbabwe. Such partnerships will improve competitiveness and will allow agribusinesses to compete at the “cutting edge” in the global environment.*

## **1. INTRODUCTION**

What are the real competitive advantages and opportunities for agricultural business, trade and co-operation in Southern Africa, in particular South Africa, Namibia and Zimbabwe, three of the most significant economies in the SADC region? The current turmoil in Zimbabwe obscure real opportunities for collaborative partnerships and cooperation between agribusiness firms in these three countries, setting a development path for internationally competitive agro-food and fiber industries in the greater Southern African sub-continent.

Two major forces influence the strategic environment in which farmers and agribusinesses in Southern Africa operates viz the drive towards economic globalization and the movement towards geo-political co-operation through trade blocks/agreements/common markets driven by multiple forces of technology, economies of size and specialization; (Tweeten, 1993; Zuurbier, 1999); and socio-political forces which *inter alia* emphasize land reform and the integration of “historically disadvantaged groups” such as small scale agriculturists into the main stream of decision-making, governance and economic participation (Van Rooyen, Greyling & Esterhuizen 1999),

This paper deals with the first mentioned aspect – agribusiness and trade through specialization and co-operation within the agro-food supply chain in the Southern African region, to exploit competitive positions and allow agribusiness partnerships to operate at the competitive cutting edge in the global economy. The Revealed Comparative Advantage (RCA) methodology of Balassa (1977; 1986) will be used to determine the competitiveness status of various agro-food supply chains in Zimbabwe, Namibia and South Africa. From this an optimal regional collaboration pattern for partnerships could be derived.

## **2. THE RELEVANCE OF THE AGRO-FOOD SUPPLY CHAIN**

A recent international survey (Zuurbier, 1999) indicated that vertical integrated supply chains and networks and trust relationships is expected to determine the structure of the food and agribusiness industry in the next decade (Table 1). The most important driving forces is expected to be technology and an understanding of consumer behavior (Table 2).

A supply chain focus on competitiveness is necessary because such an analysis (or added value analysis) will indicate the competitiveness of each element or activity in a particular value chain. Furthermore, a “supply chain perspective” gives substance to a particular description to the food and agribusiness sector *viz* the integrated nature of the supply chain require business transactions between all production processes – from the farm, past the farm-gate to processing, manufacturing, retailing and right to serving the final consumer. In the agro-food supply chain analysis conducted in this paper, agribusiness will be defined to include farming – primary agribusiness – and all other transactions between suppliers, processors and service deliverers which deal directly with primary producers – secondary agribusiness. This definition will include cooperatives, input supply companies, agro-processors, financial institutions and other service deliverers, processors, etc. linking with the farmer.

Supply chain interaction is currently viewed as one of the most important phenomenon in the food and agricultural industry for the future. Added value will be added or lost if the supply chain is not functioning in an effective and efficient manner. The importance of consumer demand (mass individualization) is expected to dominate high value world markets and unless such demands is transmitted rapidly and accurately to primary producers, farmers will find it difficult to compete effectively in such markets. In future supply chains will compete with each other and if only certain elements in the supply chain are performed efficiently, the full potential for value-adding will not be realized (Worley, 1996). An uncompetitive supply chain will therefore jeopardise farm level profitability and *visa versa*.

**Table 1: The structure of the Agro-food industry in the next decade**

Item	Netherlands	Europe	World	Total
Larger scope of companies	0,73	0,75	0,70	0,73
Vert integrated supply chains	0,85	0,91	0,90	0,88
Sport markets	0,23	0,19	0,20	0,21
Networks of companies	0,92	0,88	0,95	0,91
Virtual networks of companies	0,58	0,72	0,70	0,67
More fragmented markets	0,77	0,56	0,60	0,64
Increase in small companies	0,15	0,44	0,45	0,35
Increase in global companies	0,73	0,84	0,80	0,79
Electronic markets	0,81	0,78	0,80	0,79
Less trust/more opportunism	0,27	0,28	0,20	0,26

(percentage agreed: 0 = none, 1 = all)

Source: Zuurbier, 1999

**Table 2: Major factors driving the agro-food industry**

Item	Netherlands	Europe	World	Total
Multinational food companies	3,7	3,8	3,7	3,7
Supply chains	3,0	3,2	3,7	3,3
Regions	2,6	2,5	2,7	2,6
Local supply networks	2,9	3,3	3,2	3,1
Technology	3,9	4,0	4,1	4,0
Collusion/merger	3,8	3,3	3,5	3,5
Consumer behaviour	4,0	3,8	4,4	4,0
Increased competencies	3,4	3,7	3,6	3,6

(1 – not important: 5 – very important)

Source: Zuurbier, 1999

### 3. COMPETITIVENESS OF THE AGRO-FOOD INDUSTRY IN SOUTHERN AFRICA

To determine the competitiveness status and trends in competitiveness of agro-food industries (beverages included) of Zimbabwe, Namibia and South Africa, Balassa's (1977, 1986) Revealed Comparative Advantage<sup>1</sup> method were used (for a more detailed description of the method see Esterhuizen & Van Rooyen, 1999 and also ISMEA, 1999). Table 3 shows the results of 16 supply chains and 53 industries that were analyzed. The following are some major conclusions:

**Overall industry competitiveness:** The South African and Namibian agribusiness industry in general is marginal in so far as international competitiveness is rated (Figure 1). This implies that minor adjustments and increased productivity could contribute to changing negative into positive situations. It will, however, be important to pinpoint which processes need to be upgraded. A more comprehensive analysis for each supply chain is thus required.

Zimbabwean agricultural commodity chains are in general more competitive than other SADC countries but also more fluctuating and diverse in competitiveness status. The cotton industry is highly competitive with the pig, cattle, sheep and tomato chains.

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<sup>1</sup>RTA is formulated as:

$$RTA_{ij} = RXA_{ij} - RMP_{ij} \quad \dots 1$$

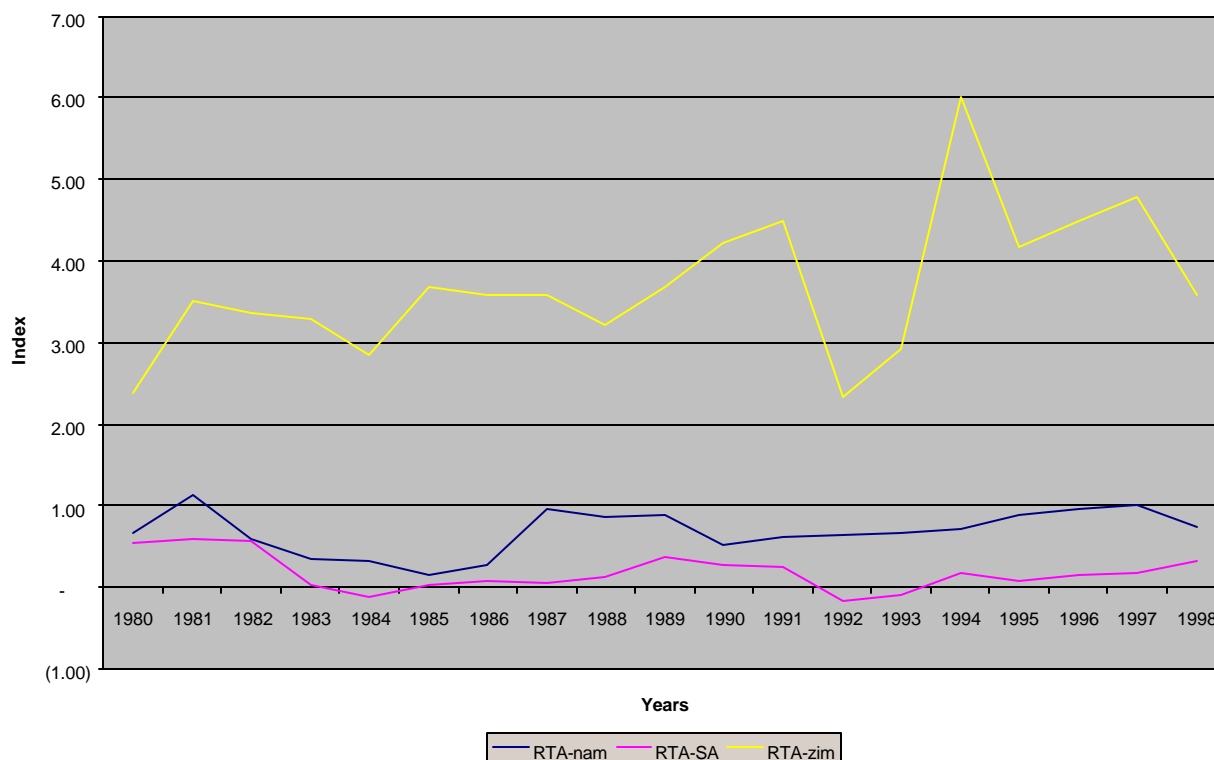
$$RXA_{ij} = (X_{ij} / \sum_{l, l \neq j} X_{il}) / (\sum_{k, k \neq i} X_{kj} / \sum_{k, k \neq i} \sum_{l, l \neq j} X_{kl}) \quad \dots 2$$

$$RMP_{ij} = (M_{ij} / \sum_{l, l \neq j} M_{il}) / (\sum_{k, k \neq i} M_{kj} / \sum_{k, k \neq i} \sum_{l, l \neq j} M_{kl}) \quad \dots 3$$

In equations 2 and 3, X (M) refers to exports (imports), with the subscripts i and k denoting the product categories, while j and l denote the country categories. The numerator is equal to a country's export (imports) of a specific product category relative to the exports (imports) of this product from all countries but the considered country. The denominator reveals the exports (imports) of all products but the considered commodity from the respective country as a percentage of all other countries' exports (imports) of all other products. The level of these indicators shows the degree of revealed export competitiveness/import penetration.

While the indices RXA and RMP are calculated exclusively based on either export or import values, the RTA considers both export and import activities. From the point of view of trade theory and globalization trends, this seems to be important and due to the growth in intra-industry and/or entrepot trade, this aspect is becoming increasingly important (ISMEA, 1999). The RTA indicator implicitly weights the revealed competitive advantage by calculating the importance of relative export and relative import competitive advantages. Values below (above) zero point to a competitive trade disadvantage (advantage).

Figure 1: The competitiveness of the South African, Namibian and Zimbabwean agricultural



**Competitiveness within added value processes:** In South Africa the maize, groundnut and orange chains are competitive. Except for the wheat, maize, tobacco and tea chains, competitiveness in all other chains decreases from primary to processed products.

In Zimbabwe the maize chain, sugar, sunflower, oranges, cotton, coffee, and tobacco chains are internationally competitive.

In Namibia the cattle and sheep chains are internationally highly competitive.

Many chains in all three countries show a downward trend in value adding. This implies that beneficiation or “value adding” opportunities in Southern African agribusiness are restricted. For most commodities, farm production level competitiveness, on the other hand, is positive. One possible explanation for this could be the high impact recorded for farm level transfer and application of technology at farm level (Thirtle *et al*, 1998).

**Table 3: Competitive advantage of selected agribusiness chains in Zimbabwe, South Africa and SADC and trends in competitiveness from 1980 based on the Relative Revealed Trade Advantage (RTA) index**

Sector Chain	Industries	ZIM RTA 1997	NAM RTA 1997	SA RTA 1997	SADC RTA 1997
Cattle meat chain	Cattle	0.11	40.70	-3.76	-0.74
	Beef and veal	0.01	4.74	-0.13	-0.57
Sheep meat chain	Sheep	-0.01	82.63	-5.17	0.07
	Mutton and lamb	-0.02	0.13	-1.73	-1.70
Milk chain	Cow milk (whole, fresh)	8.87		0.27	-0.68
	Butter of cow milk	-0.67		-0.70	-0.77
	Cheese	-0.21		-0.24	-0.34
Pig meat chain	Pigs	-0.28	-6.20	0.02	-0.16
	Pig meat	0.60	-1.99	-0.42	-0.37
	Bacon-ham of pigs	0.02		0.00	-0.19
Wheat chain	Wheat	-2.79	-1.30	-0.77	-1.53
	Flour of wheat	16.31		1.60	-1.68
	Macaroni	-0.43		-0.39	-1.14
	Pastry	0.26		0.06	-0.04
	Bread	-0.16		-0.11	-0.36
	Breakfast cereals	-0.86		-0.20	-0.44
Maize chain	Maize	9.34	-4.63	3.72	1.57
	Flour of Maize	3.57		10.10	-9.96
Sugar chain	Sugar (Centrifugal, Raw)	24.30		3.00	15.40
	Sugar refined	8.66	-16.12	1.86	-0.76
	Sugar confectionery	3.45		0.39	0.08
	Maple sugar and syrups	-0.35		-0.03	-0.04
Soybeans chain	Soybeans	-1.85		-0.11	-0.23
	Oil of Soya beans	-5.56		-0.43	-2.02
	Cake of Soya beans	0.10		-1.53	-1.09
	Soya sauce	-0.21		-0.27	-0.48
Groundnuts chain	Groundnuts in shell	0.00		8.69	5.43
	Groundnuts shelled	3.78		5.12	3.10
	Oil of groundnuts	-0.04		4.17	2.67
	Prepared groundnuts	-0.01		0.05	-0.19
Cotton chain	Cotton seed	73.31		-5.62	5.14
	Oil of cotton seed	3.05		-2.55	-1.62
	Cake of cotton seed	26.93		-12.01	-2.24
	Cotton lint	32.35		-1.24	2.25
	Cotton carded combed	32.27		-1.70	0.33
	Cotton linter	2.90		0.21	0.23
Sunflower chain	Sunflower seed	4.03	-0.98	-0.36	-0.02
	Oil of sunflower	-0.55	-5.52	-6.62	-5.51
	Cake of sunflower	0.33		-5.97	-3.73
Tomatoes chain	Tomatoes	-0.17		0.07	-0.13
	Tomato juice	-0.06		-0.08	-0.14
	Tomato paste	-0.17		-0.06	-1.64
	Peeled Tomatoes	0.10		-0.78	-0.59
Oranges chain	Oranges	5.04		13.67	9.53
	Orange juice	0.47		0.39	-0.16
Coffee chain	Coffee green	6.14		-0.41	1.83
	Coffee roasted	0.04		-0.24	-0.26
	Coffee extract	-0.27		-0.00	-0.12
Tea chain	Tea	18.20		-1.49	1.75

Sector Chain	Industries	ZIM RTA 1997	NAM RTA 1997	SA RTA 1997	SADC RTA 1997
	Tea prepared	-1.33		-0.01	n/a
Tobacco chain	Tobacco leaves	202.68		-0.83	16.61
	Cigarettes	1.68		0.42	-0.20
	Tobacco products	5.44		-0.03	-0.63

**Source:** Own calculation based on data from FAOSTAT 1999, and using Balassa's Revealed Trade Advantage method.

For the three countries it will be important to “discover” the underlying reasons for non-competitiveness and/or the declining trends in competitiveness. Does it relate to a lack of technological innovation in processing, unproductive labour application, high input cost, low product quality or inefficient management or maybe bad government policy and “unfair” international competition and which efforts to upgrade competitiveness will record the highest impacts? The status of the following in particular will have to be determined for each chain): the level of production factor costs; demand trends; the competitiveness of supporting industries; industry structure strategy and rivalry; Government policies and support; and the ability to manage change should also not be discounted (Porter, 1990).

For the Southern African (SADC) region as a whole low RCA's are recorded. This indicates the low potential for global trade by this block. Focus will rather be on bilateral trade by countries in the region, especially Zimbabwe and South Africa.

A limitation of RCA analysis is that it says nothing about how a country acquired its international market share. Market share may well be attained by means of costly export subsidies from the big world economies or protection (ie “uneven playing fields”). The sustainability of a competitive position might thus be in question, especially in view of the continuous global movement to “free-up” markets and reduce subsidies and protection.

For the SADC region's agribusinesses the reality of “unequal” playing fields (Van Rooyen *et al*, 1999) is indeed important. Without comprehensive policy and operational support to minimize “dumping” and crafty “green box” provisions by the highly subsidized economies of the European Union, Canada and USA any international competitive foothold could be difficult for Southern African agribusiness to attain and maintain. “Fair protection” to reduce “unfair” distortions in world markets will be required. The total removal of unfair distortions, however, is unlikely. The region should thus attempt to mobilize and “cope-with-the-slope” while attending to “unfair” trade practises as an economic block at World Trade Organisation level. This strategy is currently absent! The next section will attend to this issue i.e. how to operate at the “cutting edge”.

#### **4. OPERATING AT THE “CUTTING EDGE”: TO CREATE REGIONAL CO-OPERATION AND TRADE OPPORTUNITIES**

Trade analysis show that the majority of agricultural commodities in the SADC region are produced for local consumption, with a limited amount for neighboring countries. Agricultural trade between South Africa and other African countries consists basically of Zimbabwean exports to South Africa and South African exports to Mozambique with the regional trade focusing on commodities such as

tobacco, dairy products, vegetables, sugar and beef products. This somewhat does reflect the competitive advantage status in the region (Sartorius Von Bach & Van Rooyen, 1998). However, due to structural, policy and political changes, it is expected that regional trade will increase in future. It will also be important to increase competitiveness to combat imports from the global arena.

Does the current competitiveness status provide a basis for co-operation to enable trade in the global economy, in the region. **Table 4** indicates this potential through chain integration, partnerships and alliances.

This information include only industries which can be rated as competitive. Depending on free trade and the level of transportation costs, increased added value can be created by exploiting “competitive edge” positions through the following activities: Wheat flour milling in Zimbabwe; Maize production in Zimbabwe, but maize flour milling in South Africa; Cotton activities and sunflower processing in Zimbabwe; Orange activities in South Africa; Tea and coffee chain activities in Zimbabwe; Cattle and sheep chain activities in Namibia, but no clear competitive edge position for pig chain activities; Fresh tomato production in South Africa, but peeled tomato processing in Zimbabwe.

**Table 4: Potential partnerships between agribusinesses in the SADC region**

INDUSTRY CHAIN	PROCESS	COMPETITIVE EDGE LOCATION
Wheat	• Flour	Zimbabwe
Maize	• Maize (raw) • Flour	Zimbabwe South Africa
Sugar	• Full chain	Zimbabwe (South Africa)
Groundnuts	• Full chain	South Africa
Sunflower	• Full chain	Zimbabwe
Tomatoes	• Tomatoes (fresh) • Tomatoes (peeled)	South Africa (marginal) Zimbabwe (marginal)
Oranges	• Oranges (fresh) • Orange juice	South Africa South Africa
Tea	• Tea (raw)	Zimbabwe
Tobacco	• Full chain	Zimbabwe
Coffee	• Full chain	Zimbabwe
Cotton	• Full chain	Zimbabwe
Cattle	• Full chain	Namibia
Sheep	• Full chain	Namibia
Milk	• Full chain	Zimbabwe (marginal)
Pigs	• Full chain	South Africa (marginal) Zimbabwe (marginal)

This analysis does not imply specialization in any country *per se*, rather tradability with in the international environment. However, if the “competitive edge” in the global environment is to be exploited strategic alliances and joint ventures across borders should consider linking only competitive edge positions (as indicated above) for partnerships within a particular supply chain. This could allow the overall status of competitiveness in the region to increase.

## 5. CONCLUSIONS

World trade is driven by the competitive advantage that firms in countries have in producing different goods and services. It is clear that changes in the farm production structure, as well as the relocation of agribusiness activities can be expected world-wide, due to the increasing pressure to operate at the competitive edge. With the removal of trade barriers a different Southern African farming and agribusiness community will emerge. Much more joint ventures and partnerships to allow the exploitation of competitive edge positions within industry supply chains can be expected. To compete in a global economy Southern African farmers and agribusinesses will have to be competitive, scarce resources will need to be optimally utilized and focussed on the creation of pockets of excellence embracing the concept of the agricultural value chain. This will highlight each input supplier, producer and processor's ability to compete globally i.e. it is not good enough anymore only for farmers to be able to compete at farm gate level, whilst the locally processed commodity is not competitive in the world market.

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