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UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

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CENTRE FOR THE STUDY OF AFRICAN ECONOMIES

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***Can African manufacturing firms become successful exporters?\****

**CSAE-UNIDO Working Paper No. 4**

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#### ABSTRACT

The poor performance of many African economies has been associated with low growth of exports in general and of manufacturing exports in particular. In only two sub-Saharan African countries has there been a substantial growth in manufacturing exports, Mauritius and South Africa. Mauritius is one of the most successful economies in Africa. In this paper we examine the evidence for which aspects of policy are necessary for enabling African economies to improve their performance. We consider exporting from three African countries classified as among the least developed – Tanzania, Uganda and Zambia. It is argued that while macro economic policy is important in creating the pre-conditions for growth it may not be sufficient. There is evidence that the efficiency with which firms operate is important in understanding whether firms can be successful exporters. Policies which improve efficiency at the firm-level may greatly enhance the potential for macro reform to impact on overall performance in African economies.

#### ACKNOWLEDGEMENT

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## **1 Introduction**

The last two decades have witnessed major changes in economic policy in many African countries. A common factor in these changes has been a transition from economies where government controls were extensive to more open, market-oriented, regimes. In parallel with economic changes have been political and social transitions, from single- to multi-party states and an increasing concern with issues of governance and transparency in the policy making process. These changes in the mid 1990s were associated with optimism that economic performance in Africa would improve dramatically. There was talk of African economic lions able to emulate the performance of the Asian tigers. The economies whose performance improved dramatically in the 1990s include Ghana, Uganda, Mozambique, Tanzania and Ethiopia. Four of these countries – Uganda, Mozambique, Ethiopia and Tanzania - are among the countries classified as least developed. Is it possible these improvements in performance can be sustained to the point where the talk of African lions to match the Asian tigers moves from rhetoric to fact? Can the least developed countries shift to much higher growth rates? If so will manufacturing exports be part of the success story? What factors have limited exports of manufactures to date? In addressing these issues the paper seeks to answer the question posed in the title: can African manufacturing firms become successful exporters?

In the next section we examine four African countries, two of which, Botswana and Mauritius, have been very successful exporters and two of which, South Africa and Zambia, have not. We show just how large are the differences between these economies and we compare them with the countries for which growth has accelerated in the 1990s - Ghana, Uganda and Tanzania. We then focus on manufacturing, both at the macro and the firm-level, to establish what factors appear to have limited the success of most firms in Africa in exporting. We show that South Africa is an interesting case, as manufactured exports have developed rather more favourably than overall exports during the 1990s. We conclude with a summary of the policies necessary to enhance the growth of manufacturing.

## 2 Exporting Success in Africa

The most prominent feature of the Asian tigers was the growth of their exports. In particular it was the growth of their manufacturing exports. Are there any African economies which have proved able to emulate their performance? Figure 1 shows an index of the volume of exports, based on 1974=100, for four African countries. Two are long term African export success stories, Botswana and Mauritius. Two are countries which have experienced a continuous long run decline in per capita exports - South Africa and Zambia. These countries span the range of African economic outcomes in the 1990s, from long-term success in the cases of Mauritius and Botswana to long term failure in the case of Zambia. The bleakness of Africa's reputation stems from the fact that long term success is rare.

In Botswana and Mauritius over the period from 1970 to 1998 trend growth of export volumes was 7 and 5 per cent respectively. Indeed these figures understate the performance of Mauritius where growth only began in the early 1980s, following major trade reforms. If attention is focused on the last decade the trend growth rates for Ghana, Uganda, Tanzania and Mozambique exceed those achieved by the longer run success stories of Botswana and Mauritius. These dramatic improvements in trade performance all follow periods of major trade reform involving a reduction in protection and a liberalisation of the exchange rate regime. Milner and Wright (1998) show that trade liberalisation in Mauritius led to a massive rise in employment in the new export industries and that the bulk of these newly created job opportunities went to women.

While in many respects Botswana and Mauritius are atypical of other African countries their relative success means that understanding how they grew may have lessons for other African economies. They are also of interest as Botswana grew by exploiting natural resources, the path which other African success stories have followed, while Mauritius is the only country in sub-Saharan Africa which has seen a very rapid growth in manufacturing exports over more than a decade. The contrast with South Africa is particularly important as in absolute terms South Africa is by far the most important economy in sub-Saharan Africa for exporting manufactures. To see this we turn first to viewing the value of exports, we then consider manufacturing exports.

Figure 2 shows the value of exports, in 1995 US\$, on a per capita basis for the same countries as in Figure 1. This figure shows, in effect, how much the exports of African countries could purchase at 1995 prices. In the early 1970s the four countries - Mauritius, Botswana, South Africa and Zambia - all exported about US\$ 500(at 1995 prices) per capita.

By 1998 both Mauritius and Botswana exported approximately four times as much [US\$ 2,400 for Mauritius and US\$ 1,800 for Botswana]. In contrast the real value of South Africa's exports were virtually unchanged while those for Zambia had fallen to some one-fifth of their 1970s level. Some of this fall in the purchasing power of Zambia's exports was a decline in terms of trade but the per capita volume of exports in 1998 were about one third of the level of 1970, as can be seen from Figure 1. This decline combined with falling terms of trade ensured that Zambia's per capita exports in the late 1990 were reduced to just US\$ 106 (at 1995 prices). So from being on a par in the early 1970s the gap between Mauritius and Zambia by the late 1990s was a factor of 20.

What is the role of manufacturing in these exports? Figure 3 shows, again in 1995 US\$, the figures for per capita exports of manufactures from Mauritius and South Africa. In 1980 these were at a similar level about US\$ (1995) 200. After a period of stagnation exports from South Africa have started to grow in the 1990s. Notice hence that South African manufacturing exports has developed more favourably than overall exports during the last decade. However this achievement is markedly less than that of Mauritius where per capita exports of manufactures rose from some US\$ 200 to over US\$ 1000 (all at 1995 prices). In the case of Botswana and Zambia manufacturing exports are negligible. The growth in Botswana reflects the discovery of diamonds, the decline in Zambia reflects the contraction of the copper industry.

### **3 Exporting recoveries in Africa**

In the last section we examined two long-term success stories, Botswana and Mauritius. In this context how successful have been the economies which have recovered in the 1980s and 1990s? Figures 4 and 5 show similar series for Ghana, Uganda and Tanzania as were shown in Figures 1 and 2. Figure 4 shows the volume of exports based on 1974=100 while figure 5 shows the real value of exports in US\$ at 1995 prices. The dramatic turnaround in export volume growth in the mid 1980s in the case of Ghana and in the 1990s in the case of Uganda and Tanzania is apparent from figure 4. It is also the case for all three economies that both export volumes and the real value of their exports at the end of the 1980s still have not returned to their 1970 level. Not only are these substantially lower than they were in 1970 but the gap between these economies and the two successful economies - Botswana and Mauritius - by 1998 was simply enormous. These economies export less than US\$150 per capita, as compared with the US\$ 1000 of Mauritius. The gap has expanded greatly since

1970 and reflects, not changes in the terms of trade as is often suggested, but differences in the volumes of their exports.

#### **4 Reasons for Economic Failure**

So why has success been such a rarity in Africa? That question has been posed in two recent survey papers by Collier and Gunning (1999a,b). In their first paper they ask if macro and micro evidence give broadly similar answers to the question as to why Africa performed badly. In their second paper they consider whether it is policy or destiny, either internal or external, which is the principle determinant of widespread failure in Africa. Their answer in their first paper is that both macro and micro evidence point in the same direction - Africa suffers from low social capital, poor infrastructure and risk. Their second paper argues that it is policy not destiny that is the key to poor performance. Their analysis points to poor policy resulting in a nexus of constraints from which escape is difficult but not impossible.

What areas have been ones of policy failure? One has been macroeconomic policy. Overvalued exchange rates and constraints on imports can make exporting unprofitable for nearly all producers not only, or mainly, for manufacturing ones. A large real overvaluation is a common factor in the dramatic decline in exports volumes during the 1970s and early 1980s in Ghana, Uganda and Tanzania shown in Figure 4. It was the reversal of these policies that was the key policy that enabled export volume growth to occur. The evidence seems clear that policies which avoid an overvaluation of the real exchange rate are a pre-condition for the growth of exports. Trade liberalisation and macroeconomic stability are policies which have frequently been adopted at the same time as large nominal devaluations. In these areas of macroeconomic policy there have been divergent outcomes. Ghana is a good example of a country which has made substantial progress on trade liberalisation but has had very much less success with macro stability. South Africa is a country which since 1994 has moved rapidly in both areas. In terms of export growth generally Ghana has been more successful than South Africa. In terms of manufacturing export growth South Africa has been the more successful economy of the two.

The second central area of policy failure, following the analysis of Collier and Gunning, has been that investment faces high risks in Africa. If there are substantial changes in the real exchange rate or the underlying rates of inflation this can make planning for firms very difficult or impossible. Another area of policy failure has been in the business environment. This is the issue which Collier (2000) has identified as the high transaction

costs facing firms. Collier argues that manufactures are intensive users of services which are particularly expensive in Africa. Some of these costs are induced by inappropriate government policies, some are inherent in doing business in economies where the quality of the infrastructure services is often very poor. It needs to be noted that improving the business environment in Africa is essential for all sectors of the economy - not simply manufacturing. It is possible, as Collier argues, that such improvements will disproportionately benefit the manufacturing sector.

How important is macroeconomic policy, relative to other factors, in explaining firm success and failure? There is limited evidence on this point. A comparative study of firms across four African countries, but over a very short time period, found limited evidence that firms responded to real exchange rate changes (see Bigsten et al.1999). Other evidence, based on macro data, suggests that changes in the real exchange rate can have a major impact on manufacturing exports from Africa, Sekkat and Varoudakis (2000). Macro policy which changes the real exchange rate will benefit those firms which export, it will reduce the profitability of firms which are intensive users of imported inputs. So the effects of real exchange rate changes on exporting depends very much on the orientation of the sector. The limited response which have been observed in the micro data may reflect the short time period for which we have data. It may reflect the fact that firms remain oriented to the domestic market and import of much of their raw materials which will mean that real devaluation will adversely affect their profitability.

Mauritius and South Africa are two countries where trade reform measures have been associated with marked increases in exports of manufactures. As we have already noted the overall increase in Mauritius, on a per capita basis, was much greater. It is possible that the nature of the manufacturing exports differ between the two economies although there is little firm-level information on this issue at present. The intention of the macro economic reforms is to shift the focus towards exporting and in this respect there is little evidence, either at the macro or micro level, of success for most countries in Africa. Most manufacturing firms in most African countries remain focused on the domestic market and in this context they are likely to find trade liberalisation and real exchange rate devaluation problematic for their profitability.



## **5 What enables manufacturing firms in Africa to export?**

Why do most firms remain focused on the domestic market? What limits their entry into foreign markets? How can improvements in their access be brought about? These are all questions central to policy making for the manufacturing sector in Africa. Some of the answers can be found from work carried out from surveys of the manufacturing sector, see Bigsten et al (1999) and (2000), Söderbom and Teal (2000) and Teal (2000).

First it has been found that most large firms (which in this context means firms over 100 employees) do export. Further these firms do not specialise in exporting, they typically export only 20-30 per cent of their output. There is substantial diversity across African countries. Some, like Ghana and the Cameroon, tend only to export from their natural resource sectors, in both cases this is the wood sector. In other economies, for example, Kenya and Zimbabwe, exports are far more diversified across sectors. There may also be important differences between firms which export regionally and those which export to international markets, although this dimension of exporting in Africa is not well understood. Finally there is strong evidence that exporting firms are generally more efficient than non-exporting firms.

None of these findings are distinctive to Africa. The finding that manufacturing firms which export do not specialise in exporting has been found in other studies, see Clerides Lach, and Tybout (1998, Table 1 p.915). Why is there this lack of specialisation? One explanation is that exporters face declines in price when they increase exports. This would mean that exporters were limited by the market for their product. If this is the case then either new markets need to be created or actions taken, either by firms or by government, to expand the size of their market. Policy in this area would need to focus on increasing the market for products made in Africa. An interesting example of policy in this area is the actions of the Australian Wool Corporation to expand the market for wool. The policy was aimed at increasing consumption of wool. As such, while not directly benefiting an individual supplier, it clearly benefits them indirectly by increasing the demand for their product.

The lack of specialisation in export markets may have other causes. It may be the case that regional exports for many firms are close to being an extension of their domestic markets. In this case the failure to specialise may reflect the fact that regional markets in an African context offer only a limited extension to the domestic market. If specialisation does not occur in international markets and the problem is not in the markets for the product then the implication would be that at the margin both foreign and domestic markets were equally

profitable and that domestic prices were similar to foreign ones. There is limited evidence on these points but the reasons for the lack of specialisation are clearly a major element in explaining the limited use made of foreign markets by African business.

The finding that exporting firms are more efficient than non-exporting firms is a rather general one. An important policy issue in this area is whether it is efficiency which generates exporting or if firms which export become more efficient in doing so. There is some evidence to suggest that both factors are at work, see Bigsten et al. (2000), although their analysis is based on only a short run of data, three years in the early 1990s. There is also evidence based on a longer run of data from Ghana to suggest that efficiency plays a role in the exporting decision. Söderbom and Teal (2000) find that while relatively efficient firms are not more likely to enter the export market they are less likely to leave it. These findings which at the moment are rather limited as to the time period, or the countries covered, do suggest that the efficiency of firms is linked to exporting in important ways.

The finding that exporting firms are relatively large, at least by African standards, has important implications for the type of products that these firms export. Economic theory suggest that African countries should export labour rather than capital intensive manufactures. In terms of the macro data we reviewed above exports from Mauritius have been overwhelmingly from the textile and the garment sector. In fact those two sectors are very different in their use of capital. Textiles are relatively capital intensive while garments are among the most labour intensive of any sector. We would expect that the garment sector, being the most labour intensive, should be among the earliest of the sectors to enter the export market. In fact the data suggest that in the African countries for which we have comparative information the garment sector is among the least export oriented, see Söderbom and Teal (2000). Why is this?

## **6 Policies for creating labour-intensive manufacturing exporters**

Can African countries generally create successful garment manufacturing exporters? This is a key issue for African policy makers. If Mauritian type success were possible then transformation of their economies in less than two decades is feasible. Further Mauritian type growth generates job opportunities in a way that even the very successful Botswana economy has not, Leith (2000). What policies are needed? What do Mauritian firms have that firms in other African countries do not? We have already considered the general issue of the macro-economic environment and the levels of risk and transaction costs in the economies. All these may be an important part of the reason for the different outcomes although their quantitative importance is hard to establish. Clearly improving macroeconomic policy, reducing the level of risk and the size of transactions costs are key ingredients of policy. In this section we want to go further and ask if firm-level issues are important. These include the training of the workforce, the amount of capital equipment used in the firms and the efficiency of the firms.

It is possible to make a close comparison between firms in Mauritius and those in Ghana. In Table 1 we compare firms in Ghana with those in Mauritius. The samples are small and comparison must be made with care. Neither are random samples from the population. It is known that for Ghana the average size of firm in the sample is much larger than for the population of firms. It is probable that the same is true for the Mauritius sample, see Teal (2000) for details. However, keeping these qualifications in mind the comparison is instructive. As is to be expected the amounts of capital per employee is much higher in Mauritius. However the level of efficiency with which firms work in Mauritius is also much higher. The measure of labour productivity is value-added per employee where value-added has been converted to purchasing power parity US dollars so it can be compared across countries. While Mauritius has three times as much capital per employee as Ghana its output per employee is seven times higher. In fact in the case of the textile and garment sector capital per employee is about the same in the two economies although output per employee is much higher in Mauritius. Wages in Ghana are much lower than those in Mauritius, US\$56 per month compared with US\$339. Teal (2000) argues that the high wage economy of Mauritius may well be a much cheaper place to produce the goods than Ghana given that the higher labour productivity in Mauritius more than compensates for the higher wages. It may well be the case that capital cost are lower in Mauritius than in Ghana. In which case this would be an additional factor enabling Mauritian firms to export successfully.

Why are firms in Mauritius so much more efficient than those in Ghana? It is clearly not due to the amount of education of the workers this is remarkably similar across the two countries at about 10 years. It may be that there are skill elements in the Mauritian firms which are not captured by the crude measure of average years of education. It may also be that the similar value for the capital stock series hide very different age and quality of the capital stock. If this is the case the figures may be exaggerating how much more efficient firms are in Mauritius. We cannot be sure but the evidence is suggestive that firm-level factor may be important in explaining the ability of Mauritian firms to enter the export market relative to those in Ghana. Policies which improve the performance of firms can greatly enhance the growth prospects of economies which include those classified as least developed as such countries are likely to be facing problems making the first steps into the export market with new products.

## **7 Conclusions**

We have examined several possible explanations for the poor performance of manufactured exports from Africa. All have in common the search for the factors that make producing manufactures in Africa higher cost than in their competitor countries. We began by examining macroeconomic policies particularly to do with the exchange rate. We argued that policies in this area were the key pre-condition for growth of all exports and possibly particularly manufactured exports. Other areas of macro policy, trade liberalisation and macroeconomic stability, have been associated with improvements in manufacturing exports from South Africa. Influential surveys of the causes of slow growth in Africa have pointed to the role of poor policies in creating a high risk environment and one characterised by high transaction costs.

It is not obvious that with improvements in policy and a lowering of transaction costs that manufacturing exports will grow. It is possible that these policies will benefit more traditional exports or encourage exporting in new areas of which tourism is the most obvious example. One reason that the growth of the Mauritian economy is of such interest is that its new exports have included both tourism and manufactures. It appears to be the case that macro policy in Mauritius has provided a lower cost general environment than virtually any other African country. We also have evidence that firms in Mauritius are much more efficiently run than firms in potential competitor countries like Ghana. The lesson for policy

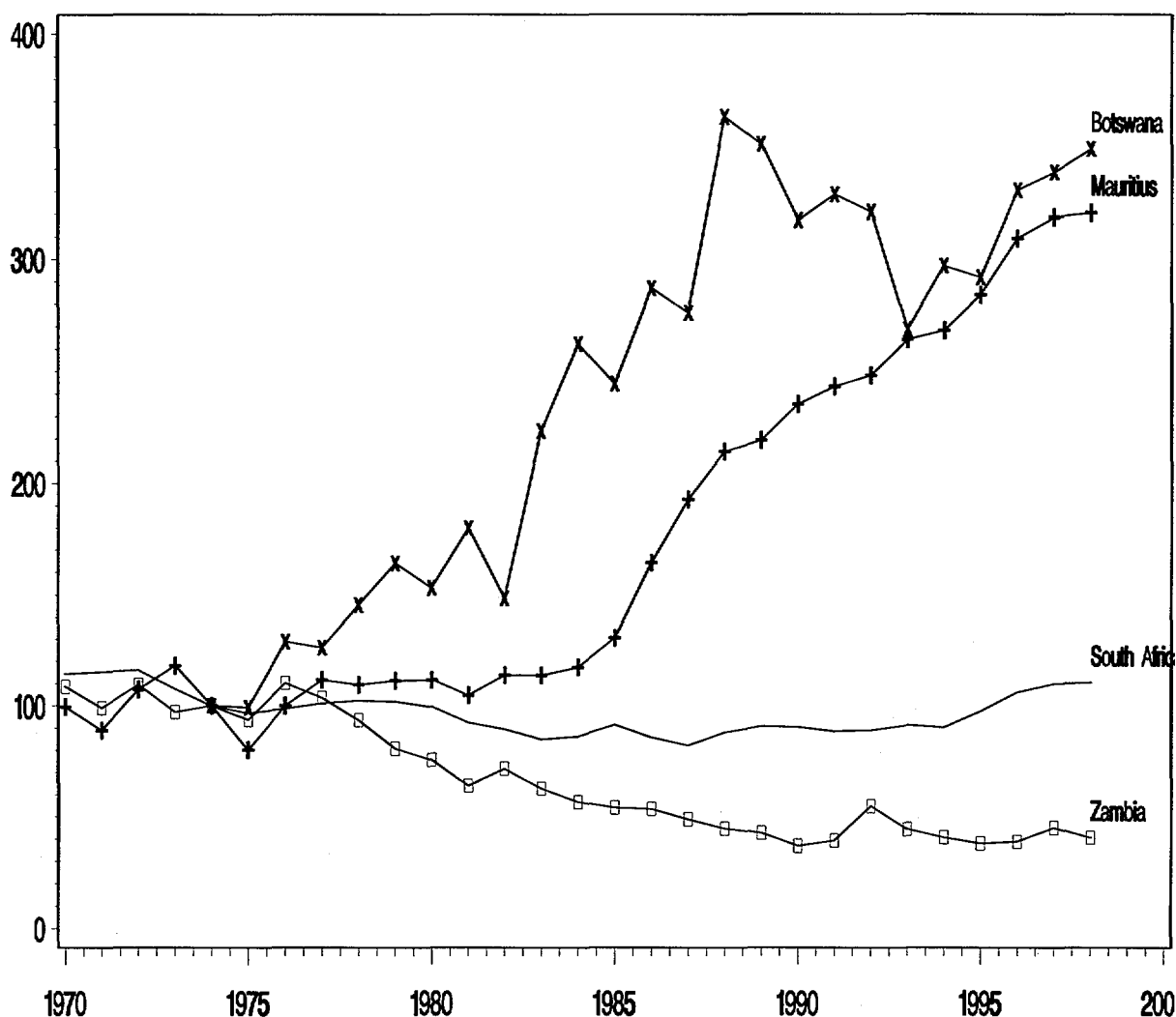
makers is that both macro policy and firm-level efficiency are key ingredients to enabling firms to enter the export market.

We have reviewed much evidence on firms in Africa which show that, contrary to what is often believed, that most large firms (meaning those with more than 100 employees) do some exporting. The fact remains that most firms in Africa are small and these do not export. Further the exports tend not be in labour intensive sectors like garments. It is in sectors such as this that both more jobs and profitable export opportunities can be created by a combination of better macro policy and more efficient firm operation. The potential gains to the people of Africa from policy success in this area are simply enormous.

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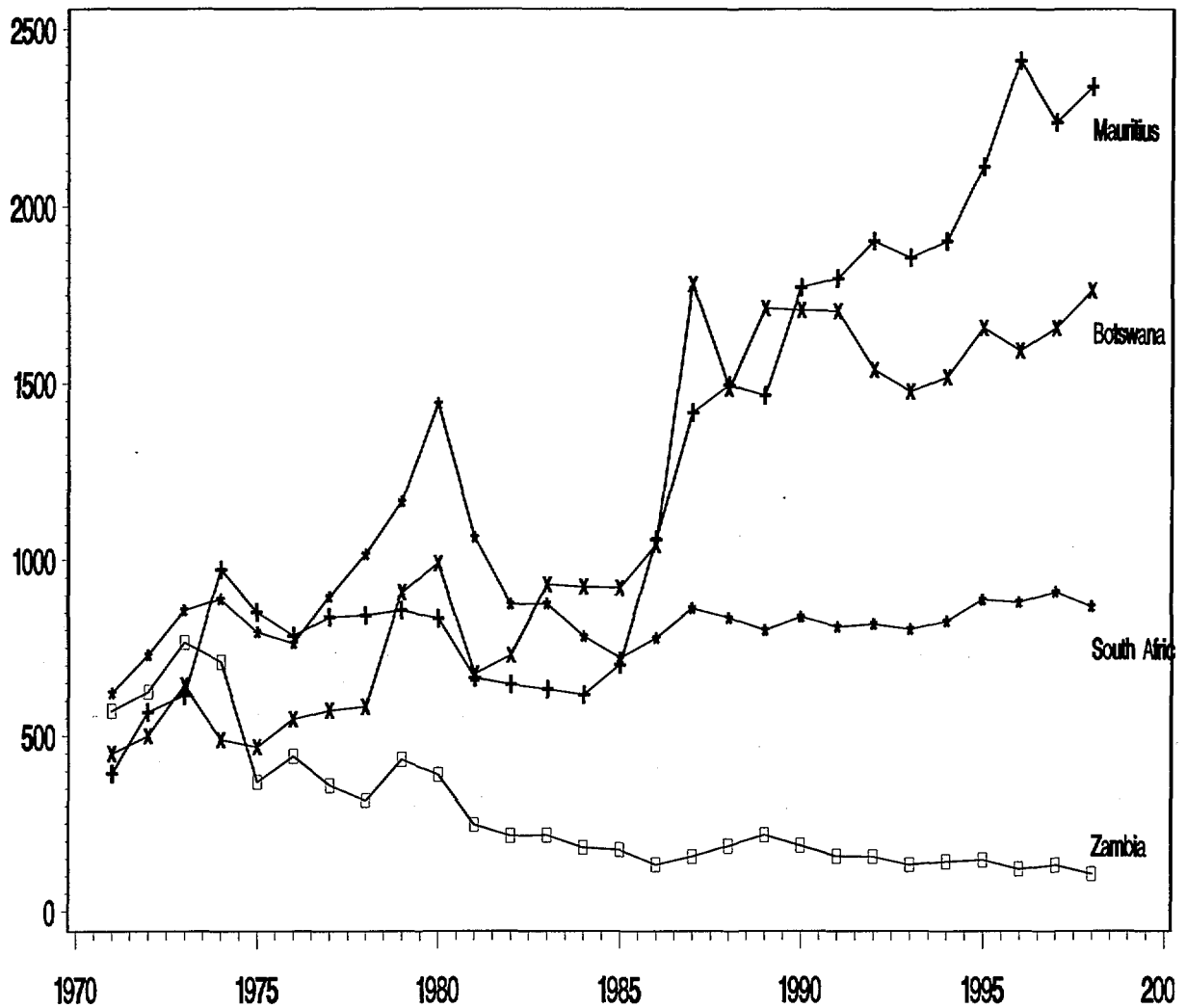
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**FIGURE 1**  
**INDEX OF EXPORT VOLUMES PER CAPITA (1974 = 100)**  
**BOTSWANA, MAURITIUS, SOUTH AFRICA AND ZAMBIA**



Notes: The export volume figures, for all the countries except South Africa, are obtained from the World Bank Data Base published in World Development Indicators for 1999 with updates on volumes from World Bank Africa 2000 Database. For South Africa the volume index from the South African Reserve Bank Quarterly Bulletin for June 2000 was used for the more recent data as this seemed more reliable than the data published in the World Bank. For all countries the volume number is obtained from the series for total exports of goods and services in constant local prices figures divided by the country's total population. These figures are then converted into index numbers based on 1974=100.

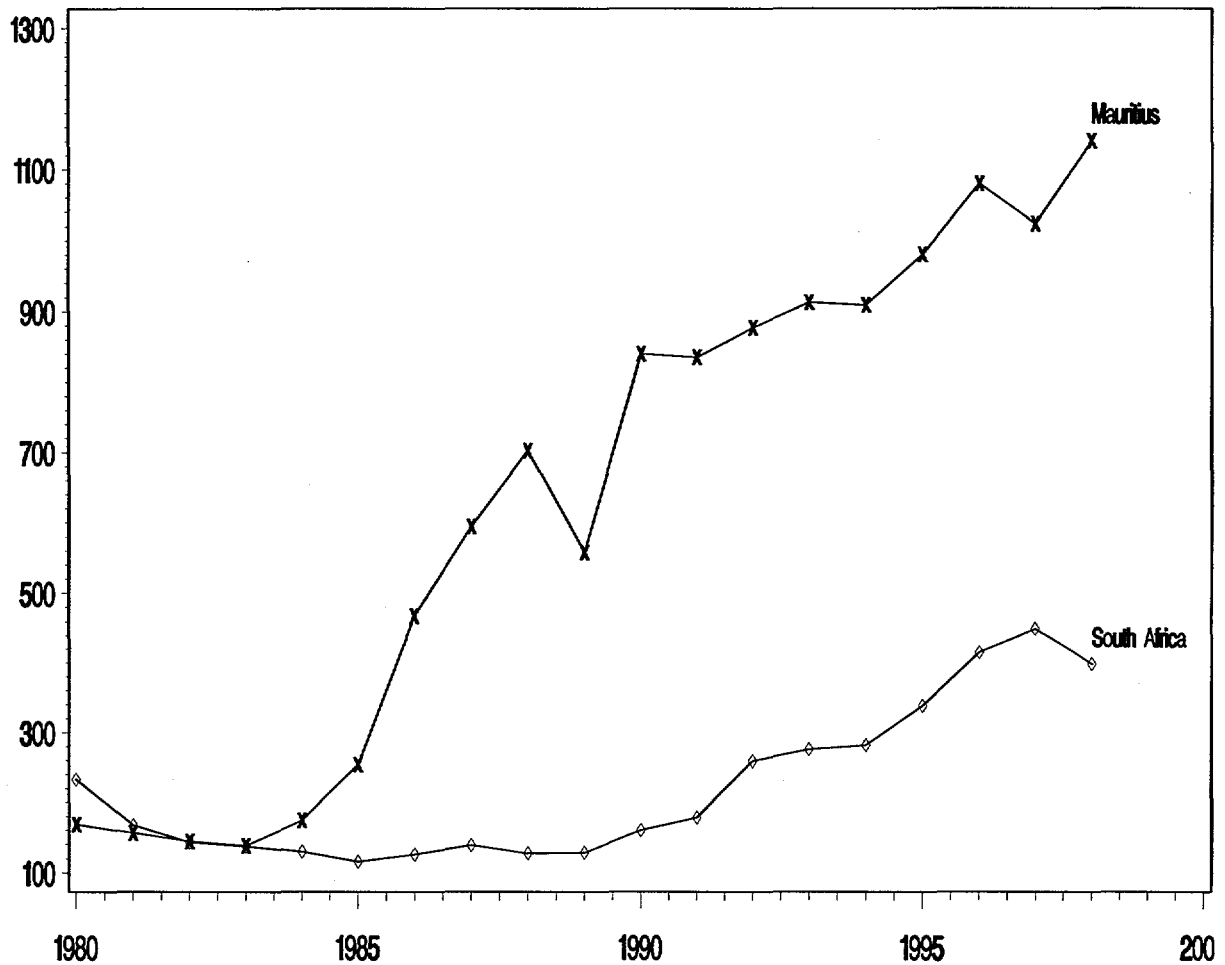
**FIGURE 2**  
**EXPORTS PER CAPITA IN US\$ 1995 PRICES**  
**BOTSWANA, MAURITIUS, SOUTH AFRICA AND ZAMBIA**



Notes: The figures for exports in US\$ for all the countries were obtained from World Bank data published in World Bank Africa 2000 Database. These figures were deflated by the unit price of exports from the US obtained from the IMF Financial Statistics converted to an index number based on 1995=100. The export numbers are divided by the total population to give the per capita numbers shown in the figure. In 1995 prices all four countries exported approximately US\$500 per capita in the early 1970s.

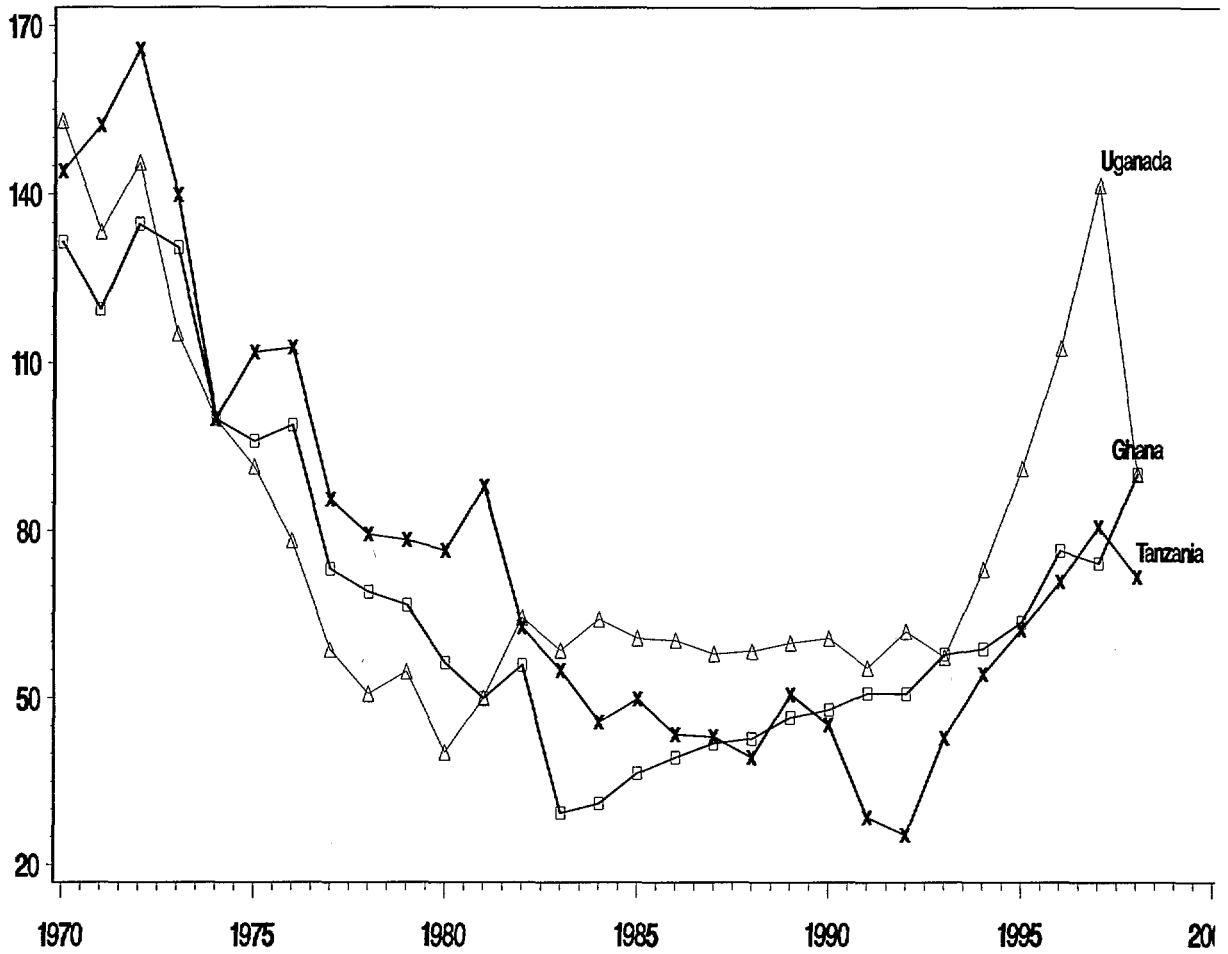


**FIGURE 3**  
**EXPORTS PER CAPITA OF MANUFACTURES IN US\$ 1995 PRICES**  
**MAURITIUS AND SOUTH AFRICA**



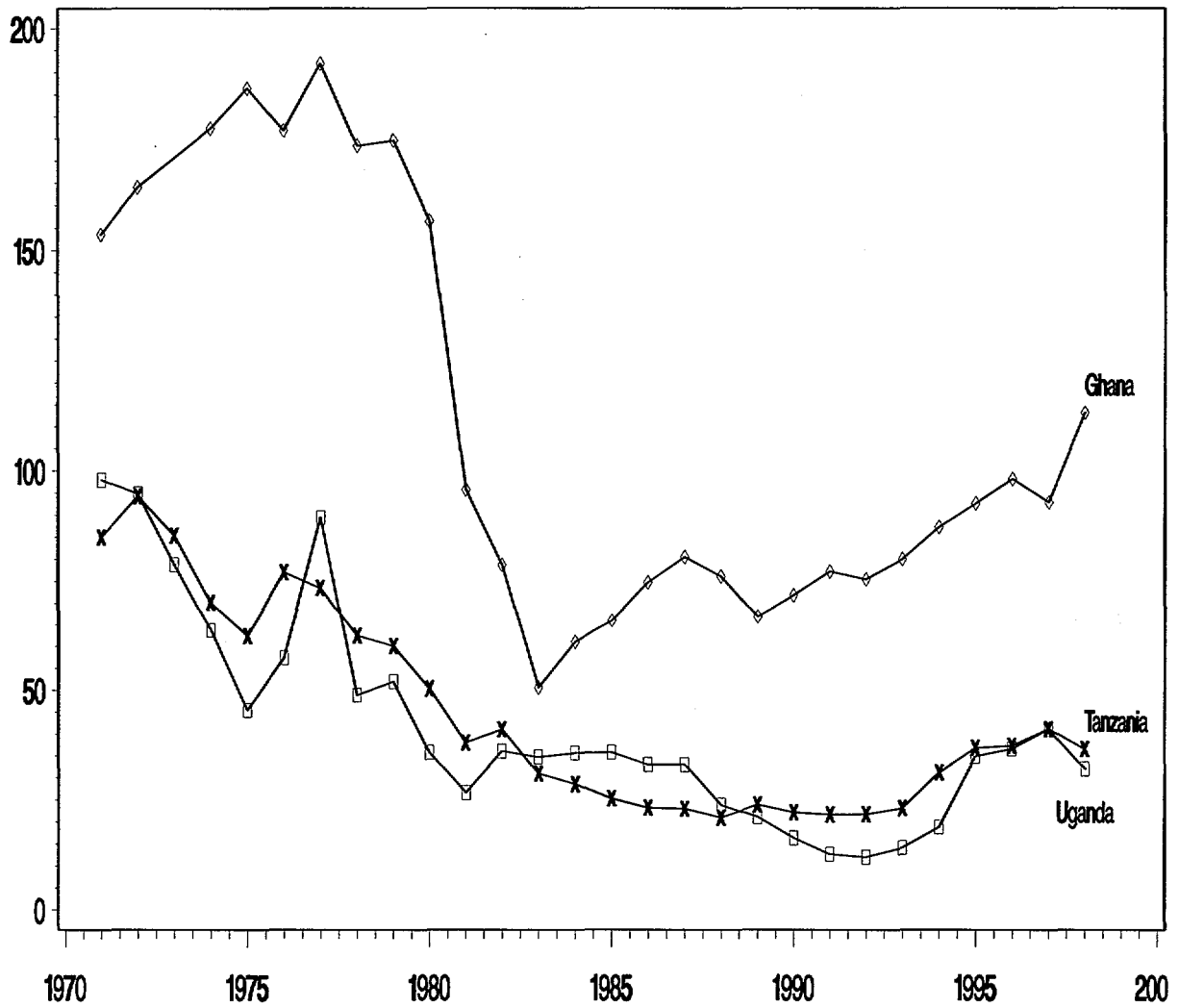
Notes: The data in the figure was obtained from World Bank sources. The World Bank Development Indicators give the percentage of merchandise exports which are manufactures. This percentage is only available for some countries and for some, which includes South Africa, it can differ substantially depending on which version of the World Development Indicators is used. We use the figures from the World Development Indicators for 2000. These show for South Africa that manufactures were 54 per cent of merchandise exports. This figure seems more consistent with the number used by Wood and Mayer (1998, Table a.2, p.85) than World Bank figures given in earlier version of their data.

**FIGURE 4**  
**INDEX OF EXPORT VOLUMES (1974 = 100)**  
**GHANA, TANZANIA AND UGANDA**



Notes: The data presented in this figure was obtained from the same sources as those given in Figure 1.

**FIGURE 5**  
**EXPORTS PER CAPITA IN US\$ 1995 PRICES**  
**GHANA, UGANDA AND TANZANIA**



Notes: The data presented in this figure was obtained from the same sources as those given in Figure 2.

**TABLE 1**  
**FIRM CHARACTERISTICS: BY SECTOR**

	Food	Textile and Garments	Wood and Furniture	Metal Working and Machines	All Sectors
<b>Ghana</b> N	35	36	35	37	143
Employment	50	19	79	55	51
Monthly Wages	76	36	56	54	56
Value-added/ Employee	6,761	1,884	3,935	7,410	5,009
Capital/ Employee	8,291	3,829	7,829	9,605	7,393
Education	9.0	9.2	9.5	9.6	9.4
<b>Mauritius</b> N	2	13	3	18	36
Employment	136	169	200	96	133
Monthly Wages	257	384	303	322	339
Value-added/ Employee	41,405	13,396	94,955	43,264	36,682
Capital/ Employee	55,984	3,284	7,573	30,784	20,319
Education	10.3	10.2	6.8	10.5	10.0
Source: Teal (1999)					

Notes: Employee is number of Employees, Monthly Wages is in US\$, Value-added and Capital are measured in purchasing power parity US\$, Education is in Years