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Structural Barriers to Trade in Africa

Mary Kay Gugerty
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Abstract

The economic performance of Sub-Saharan Africa (SSA) over the past two decades has been disappointing. The initial explanation for this poor performance focussed on deficient macroeconomic policies. However a number of SSA countries have undertaken and sustained a reasonable measure of macroeconomic reform and still see no significant expansion in the growth of manufactured exports. This suggests that a stable, credible, and consistent macroeconomic environment may be a necessary but not sufficient condition for export growth. This paper reviews the literature dealing with other constraints, including poor infrastructure, lack of appropriate human capital, a failure to develop a variety of export support services, and the impact of an unresponsive civil service. We conclude that while there are clearly numerous structural barriers to exports in SSA, no systematic analysis has been undertaken that would assist policy-makers in determining which constraints are most important.

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Structural Barriers to Trade in Africa

I. Introduction.

There is a growing consensus among economists and policy makers that outward oriented developing economies grow more rapidly.¹ The poor export and growth performance of much of Sub-Saharan Africa over the last three decades has increasingly suggested to economists that a lack of openness and a failure to increase exports may be to blame. While the precise role that

Table 1: Growth of GDP and Exports
(Percent)

Region	Real GDP growth per capita 1991-95	Export growth per capita 1991-95
East Asia	8.0	14.1
South Asia	2.2	8.4
Latin American and Caribbean	1.1	7.2
Middle East and North Africa	-0.2	0.4
Sub-Saharan Africa	-1.5	-1.6

Source: The World Bank: *Global Economic Prospects and the Developing Countries: 1996*. Washington, DC (1996)

exports play in raising total growth is still not fully understood, there is a growing and persuasive body of statistical evidence that shows a strong positive association between export development, especially of manufactured exports, and an acceleration in income growth. Table 1 brings together data on the growth of real per capita GDP and of per capita exports. Although the period covered is short, the data do show a strong correlation between the growth of exports and the growth of real GDP per capita, and indicate that Sub-Saharan Africa has lagged behind all other regions in both areas.

Most analysts believe that the process of exporting, combined with the easy availability of imported inputs and machinery, accelerates the acquisition of technology in developing economies, thus contributing to the overall higher growth rates. [Feder; 1983]. And to the extent that some manufacturing activities have significant economies of scale, these may only be captured if there is access to the international market. Finally, as Dollar notes, "outward orientation makes it possible to use external capital for development without encountering serious problems in servicing the corresponding debt." [Dollar (1992) p. 524]. Given this evidence, the lack of success of most sub-Saharan African economies to grow and diversify their export base must be viewed with deep concern.

Underlying the consensus on the importance of openness to growth, there is also a growing consensus on the necessary conditions underpinning a successful export-led growth strategy.

¹ The literature on growth and export development is vast and well known. See for example, Balassa [1978]; Edwards [1993] and David Dollar [1992]. For a more skeptical view of the impact of trade liberalization on economic growth see Rodrik, "The Rush to Free Trade in the Developing World: Why So late? Why Now? Will It Last," in Haggard and Webb [1994].

Foremost is the need to establish conditions that make it comfortable for new exporters, domestic and foreign. Currencies should be convertible and adjusted frequently to maintain a realistic real exchange rate. Exporters must have ready access to necessary imports at world prices and governments should focus their energies on a limited range of activities leaving resources and opportunities to be exploited by private investors. Experience shows these conditions are necessary, but not sufficient, to promote outward-oriented growth.

Although the establishment of an "outward-oriented" trade regime is often associated with a "*laissez-faire*" or "*liberal*" economic regime, we note that different policy regimes have been successful in promoting non-traditional exports. Thomas (1991) points out that rapid export growth is found in both liberal and liberalizing economies, as well as in moderately interventionist policy regimes. Chile, for example, has achieved high rates of export growth with minimal policy intervention but a neutral incentive structure. By contrast, Korea and Taiwan achieved high-export growth rates with significant market interventions, especially during the early stages of development. While it would appear that an open economic orientation can be achieved either through a relatively hands-off approach or through selective and judicious government assistance, in all cases the necessary condition for any improvement in export capacity is the establishment and maintenance of a sound, stable, and effective macroeconomic environment.

In addition to creating a conducive macroeconomic environment, measures are needed to increase factor mobility and the reallocation of resources that are expected to occur in response to trade reform. If trade reform is to succeed it must be accompanied by efforts to improve the infra-structural and institutional landscape that supports economic activities, by improvements in the physical and human infrastructure, and by creating a relatively stable political environment that encourages investment and risk taking. Without these supporting measures, the response to policy reform may be severely muted.

This would seem to be the case in number of African countries which have adopted economic reform programs in the expectation that these measures would accelerate growth and stimulate exports, especially of manufactured goods. Yet after some time it is becoming apparent that the supply response of the industrial sector to structural adjustment programs has been more sluggish in Sub-Saharan Africa (SSA) than would have been expected on the basis of similar reforms elsewhere. This is obviously cause for concern for African governments as well as for the development community at large. First, it seems to call in to question the appropriateness of accepted policy prescriptions and at least opens up the possibility that the African economies "are different." Second, a weak short-term supply response may impede reform by limiting its effectiveness. Thomas notes that "... a strong and rapid increase in output from export or efficient import-substitution industries helps the sustainability of reforms by quickly absorbing resources released from the previously highly protected sectors." [Thomas, *op cit.* (pp. 39 - 40)] A rapid supply response also helps reduce the balance of payments crisis which is often the motive force behind trade reform. By contrast a slow export expansion can contribute to a weariness with the reform process which may lead to its abandonment. Hussain (1993) believes that the slow response of exports contributed to Kenya's failure to continue with its deregulation program.

In order to understand the poor supply response in Africa, there is a need to examine the factors that underlie this outcome. This is the focus of this review which looks at the structural supports, or the lack thereof, to exporting from Sub-Saharan Africa. In section II we review the literature dealing with physical infrastructure, while in section III the focus is on human capital and its impact on export development, and section IV looks at how institutional failures as well as political constraints may impact export growth. In each section we also suggest areas where further research is needed in order to provide support for policy recommendations.

Two points should be noted before turning the literature review. First, although increased exports of all kind are important, our focus is primarily on the development of manufactured exports. The reason for this is that export diversification, both in terms of products and markets, reduces an economy's vulnerability to external shocks. Compared with manufactures, the demand for primary commodities is more cyclical and historically has risen less rapidly. As a result primary product exporters are subject to substantial terms of trade losses, which often translate to lower investment levels and reduced growth. There is a further important, although less often noted, benefit from manufactured exporting. For reasons only partly understood or analyzed, many of the initial manufactured export activities, both in the rapidly growing East Asian and in the Latin American economies, have relied extensively on female labor. This not only increases total employment but in many instances the possibility of formal employment in export activities represents an opening up of opportunities for female workers that often has significant social effects.

Second, while there is general agreement that a well formulated and soundly implemented macroeconomic framework is a necessary condition for rapid export growth, it is more difficult to establish the relative importance of other conditions. It is easy to list shortcomings in the supporting structure in the SSA countries – a weak legal system, poor telecommunications facilities, a lack of roads and well maintained ports, and the presence of wide-spread corruption – and numerous writers do so. Yet it is important to remember that a number of rapidly growing Asian and Latin American countries suffer from some of the same impediments. Indonesia is ranked as one of the most corrupt countries; a civil war is ongoing in Sri Lanka; and China's legal system and copyright protection laws leave much to be desired. Nevertheless, each of these countries has achieved some success developing manufactured exports and are often cited as models of successful export-led development. If there is a lesson to be learned here it is that while a variety of factors are important for the development of a vibrant non-traditional export sector, a country does not have to meet the highest standards in every dimension. More important, the literature review indicates that in spite of the relatively widespread focus on the weakness of Africa's physical, human, and institutional capacity, little has been done to link this information directly to the ability of SSA nations to produce and market manufactured goods at internationally competitive prices. Until such a framework is developed one is left with a list of shortcomings but with little real understanding of the particular importance of any particular one.²

² There are two exceptions. Sachs and Warner [February 1966] incorporate a variable that measures physical access to port facilities in their analysis of the slow growth in African economies, and Easterly and Levine [August 1995] report on attempts to incorporate "*neighbor spillovers*" as a variable explaining Africa's growth.

The more rapidly growing developing countries have also shown a remarkable capacity for shifting out of primary product exports and moving in to manufactured exports. On balance the African economies have been less successful in this regard than either the Latin American or Asian economies. While exports often constitute more than a quarter of GNP in African countries, there has been no widespread change in the reliance on primary commodities to generate exports earnings. Indeed for some countries, crude material exports have become more important, while others have been successful in increasing the value-added component of their primary product exports. On balance it remains true for most SSA countries that there has been only a limited increase in exports of manufactured goods.

Table 2 brings together data on the diversification of exports in developing countries. For Africa, manufactured exports formed some 15% of total merchandise exports in 1970 and now constitute about 22%, a level that still represents a decline from the level reached a decade earlier. By contrast, manufactured exports in the Asian developing countries rose from 42% in 1970 to nearly 75% in 1990.

Table 2: Developing Countries: Diversification of Exports^(a)
(Percent of merchandise exports)

	Africa			Asia			Middle East and Europe			Western Hemisphere		
	1970	1980	1990	1970	1980	1990	1970	1980	1990	1970	1980	1990
Non-fuel primary products	62.8	17.0	31.2	49.4	30.7	16.0	10.7	1.8	5.7	64.5	42.1	39.9
Fuel	22.8	56.0	47.2	8.8	21.4	10.2	80.1	93.0	73.6	23.7	39.9	26.6
Manufactures	14.5	27.0	21.6	41.8	47.9	73.8	9.2	5.1	20.7	11.8	18.1	33.5

International Monetary Fund. *World Economic Outlook*. (October 1995), p.47.

^(a) Based on 65 developing countries for which data are available.

In addition to product diversification, export market diversification also contributes to the ability of an economy to withstand trade shocks. Market diversification not only reflects the capacity to penetrate developed countries' markets but is also reflected in a rise intra-regional trade. The growth of intra-regional trade has been particularly strong in Asia where almost 40% of the region's exports are now destined for other Asian countries. By contrast intra-African trade still constitutes a very small part of total exports. The reason for this difference is not clear. In part the recorded data may give a false impression because, as Gersovitz and Paxton (1990) note, much of the intra-regional trade that does take place moves through illegal, and hence unrecorded, channels. If this perception is correct, it is possible that intra-regional trade may actually be more important than the current information suggests.

While details will differ for individual countries, one is left with an impression that Africa has failed to participate in the rapid growth of manufactured exports that have characterized the past two decades of economic development. A potential antidote to the pessimism often surrounding discussions of Africa's growth potential is the interesting issue of whether as a late-comer to the

export development scene, African economies can learn from earlier efforts or whether, having fallen considerably behind Asia and Latin America, catching-up has become more difficult.

II. Physical Infrastructure.

A. Introduction

Infrastructure services – including power, transport, telecommunications – are central to economic production representing, if not the “engine”, then the “wheels” of economic activity. While the special technical and economic characteristics of infrastructure are presumed to give government an essential role in its provision, evidence bears out the contention that the dominant and pervasive interventions by government have often failed to promote efficiency or responsive delivery of services in SSA [World Bank (1995)]. Recent changes in technology now make it possible to increase the scope for the application of commercial principles to the provision of infrastructure services. This development may in fact allow SSA countries to improve the quantity and quality of their infrastructure, even in a situation where governments face severe financial constraints, by inducing private investors to become suppliers of infrastructure services.

Competition for new exports markets is especially dependent on access to an adequate supply of reliable infrastructure. The World Bank [p.17, 1995] notes that “during the past two decades, increased globalization of world trade has arisen not only from the liberalization of trade policies ... but also from major advances in communications, transportation, and storage technologies.” These advances allow producers to achieve major cost savings in inventory and working capital and to respond more rapidly to customer demands, creating closer links between producers and customers and making “just in time” delivery possible. To be competitive, producers in SSA countries must meet these same standards. But this will only be possible if potential exporters have access to modern infrastructure services that can help speed information about markets to export producers. In short, the availability of modern infrastructure services is critical for the modernization and diversification of production and of export development.

The relatively poor state of infrastructure in SSA is clearly brought out by the data in the Table 3. In all categories, SSA supplies less infrastructure per worker than other developing economies.

Table 3: Averages of Infrastructure Indicators: 1960 - 1980
(per '000 workers)

	Sub-Saharan Africa	Other Developing Countries	Industrial Countries
Telephones	14	70	485
Kilowatts of electricity generating capacity	118	277	1,936
Kilometers of roads and railways	1	3	16

Source: William Easterly and Ross Levine. *Africa's Growth Tragedy: A Retrospective, 1960 - 1989*. Washington, DC.: The World Bank. Policy Research Department, Macroeconomics and Growth Division and Finance and Private Sector Development Division. (August 1995)

Moussa and Schware [1992] report that there were only 0.3 telephones per 100 persons in SSA. This figure is twice as great in Asia (excluding Japan), 16 times greater in Latin America, and 60 times higher in the European industrialized countries. The *Economist* [April 13, 1996] reports that Africa, excluding South Africa, has two-thirds as many telephone lines as Switzerland, but 75 times as many people, although it goes on to point out that ".... statistics about telecoms in Africa are no more reliable than the directory-inquiry services in Lagos." The infrastructure that exists is also poorly maintained. The local call completion rate for telephones is less than 30% in Africa, compared to over 70% in OECD countries. International call completion rates are even worse, often below 20%. Moreover the data shown in Table 3 probably understates the extent of the infrastructure gap between Africa and the rest of the world because, as Easterly and Levine (1995) point out, there is no correction for quality. Thus while Chad has 15 thousand telephones, 91 percent of all local phone calls are unsuccessful! Electric power failures are frequent in many parts of SSA and paved as well as unpaved roads are often in poor condition. For example Uganda has two thousand kilometers of paved roads, but only 10 percent of in good condition and as Lemer (1990) notes "... in some African countries more than half the population lives more than a day's travel from an all-weather road... ."

Evidence on the Importance of Infrastructure for Export Development

Although there is a need for more research on the relative importance of various infrastructural failures, one can note some obvious links between a failure to provide a reasonable level of infrastructure services and the response by potential exporters. Under an import substitution regime, firms often can absorb or pass on the higher costs they incur when they are forced to provide for their own infrastructure services. In such a situation a failure by the public sector to provide infrastructure services may not be very important. But when some measure of trade liberalization occurs, firms that may actually have some export potential are unable to compete because they are now saddled with inefficient production structures that were created as they substituted the private provision of electricity, communication, transport, and water services in response to the failure in the public sector.

The poor infrastructure that characterizes much of SSA also reduces the likelihood that private entrepreneurs, domestic and foreign, will increase their investment in response to policy reforms. Enterprise-level surveys conducted in several countries have found infrastructure costs and problems of unreliability to rank high among issues of concern to businessmen. A 1991 survey of enterprises in Ghana cited power outages, transportation costs, and other infrastructure problems among the top four operational problems, ranked immediately after taxes, with the response strongest among the "micro" and small firms. Wheeler and Mody (1992) examined panel data on forty-two developed and developing countries in an effort to explain patterns of foreign direct investment in manufacturing and electronics through variables representing "classical" features of comparative advantage (labor cost, corporate taxation, market size) agglomeration benefits (infrastructure quality, degree of industrialization, and level of past foreign direct investment), as well as socio-political risk and economic openness. They found that among developing countries, infrastructure quality is the dominant explanatory factor in both manufacturing and electronics investment.

The impact of these failures on export development is noted by Abubakar and Ubogo (1990) who go so far as to argue that the "main barriers to the expansion of intra-African trade are the

inadequate and inefficient transport and communications links." Kessides (1993) reports that inadequate and unreliable infrastructure cripples the ability of countries to engage in international trade, even of traditional export commodities. She points out that the fight for new, that is manufactured, exports is even more dependent on infrastructure.

Investment and Maintenance of Infrastructure

While there is general agreement that infrastructure in SSA is poor, relative to that in other developing countries, it is less clear whether this outcome reflects an under-investment in infrastructure in the past or whether a failure to maintain existing capacity. Making this distinction is important to identifying the means by which this state of affairs can be improved. To the extent that the current situation reflects a failure of sufficient investment in creating infrastructure, the answer may well be to increase investment, either using public or private funds. But if the current situation reflects a failure to maintain an adequate level of investment in good repair, then there is a need to understand the forces that led to this outcome. It may be that regulations governing the infrastructure sector prevent its efficient operation or at least sanction inefficiency. If so, and if such regulations are still in place, then there is a need to identify such regulations in some detail and recommend their removal. In case where outright privatization is not considered socially or economically acceptable, a program to commercialize state-owned providers of infrastructure services should be considered, and an appropriate relationship between government and the providers of infrastructure services needs to be developed that will increase the accountability of the public sector.

To build support for programs that will improve infrastructure services requires that governments have a clear understanding of the cost of infrastructure failure. It is unfortunate that while there is general agreement that infrastructure in SSA is deficient, little research has been done to tie this generally recognized state of affairs to difficulties in exporting or importing, aside from the obvious statements that better roads, port facilities and telephone service would improve the possibilities for domestic producers to enter international trade. We agree with Kessides [1993] who notes that much of the formal research on the linkages between infrastructure and economic growth has looked at macroeconomic or industry-wide variables, where infrastructure appears to "lead" economic growth, although the effect seems to be indirect and relatively long-term. But a problem with this highly aggregated analysis, which attempts to capture all of the possible externalities or spillover effects, is that it does not provide specific policy guidance. Nor does it explain the mechanisms by which infrastructure affects the growth of exports.

As an example of what is needed, consider the classic study by Morawetz (1981) on the failure of Columbia's export drive. Morawetz focussed in some detail on the infrastructure shortcomings in Latin America relative to the situation in competing East Asian exporting countries, and relates poor infrastructure to the failure of Colombian export growth. Morawetz describes the relative handicaps imposed on Colombian and Latin American exporters by the lack of a number of support services, including the lack of frequent direct flights to major American and European fashion centers; the cost and delays in placing international phone calls; the difficulties that exporters encountered in sending samples abroad; the problems and paperwork that exporters faced if they wished to visit potential buyers; and so forth.

A similar body of data does not yet exist for SSA although there are scattered examples that bring together data on the infrastructure costs faced by African exporters relative to costs faced

by their competitors in Asia and Latin America, suggesting that the current situation in SSA is not very different from what Morawetz reported nearly two decades earlier for Columbia. For example, the World Bank (1996) reports that the waiting period for a telephone line exceeds ten years in Uganda and six years in Côte d'Ivoire, compared to about one year in Indonesia, Brazil and Mexico, and that the cost of a one-minute telephone call from Tanzania to the United States is about \$7.50, whereas the charge for the same call in the reverse direction, from the United States to Tanzania, averages about \$2.00. Expanding this kind of detailed micro-oriented information would supplement the more rigorous analytic efforts that link infrastructural shortcomings to the slow growth of manufactured exports from SSA and would be extremely persuasive to policy makers.

Export Processing Zones

It is sometimes suggested that countries which lack the infrastructure to support exports can reap the benefits of liberalization by establishing Export Processing Zones (EPZ). Firms located in such zones can either be given special infrastructure support or can be induced to supply their own infrastructure. This, it is argued, avoids the often politically difficult process of decontrolling the bulk of economic activity and allows a country to reap the benefits from exports even before it has improved its physical infrastructure. But a review of EPZs by Balasubramanyam (1988, p. 163) reaches a less sanguine conclusions. He notes that "... EPZs are unlikely to be potent tools of industrialization and development in the absence of the requisite ingredients for development in the economies of the countries that established them." And most important, the evidence is clear that EPZ are unsuccessful in situations characterized by weakness in the general provision infrastructure.³

B. Electric power and telecommunications:

An adequate and reliable power supply is essential for most modern production processes. Most electric power in SSA is provided by public utilities and the evidence suggests that such publicly owned corporations provide electric power inefficiently, at a high costs, and with a low degree of reliability. The resulting high power costs reduce export competitiveness.

In such a situation, those who can afford it install their own electricity generators, and often their own water supply systems and communications facilities.⁴ A study of manufacturing firms in Nigeria found that virtually all firms were hooked to (and paid for) the public power grid, although every firm with more than twenty employees had its own generator [World Bank (1989)]. While the substitution of private power for public power is possible, it is often achieved

³ A review of EPZ by the World Bank (1992) concluded that a key success factor, together with a favorable macroeconomic policy environment, is the level of *supporting international communications and transport links*. The establishment of an EPZ is no substitute for the creation of a sound infrastructure that supports production and exporting. [Emphasis added]

⁴ In any discussion of infrastructure, it is useful to distinguish between infrastructure that can be supplied the private sector and infrastructure that is more appropriately supplied by the public sector. While poorly maintained roads and inadequate port facilities also raise production costs and erode competitiveness, private producers can less easily substitute for such services.

at a cost that reduces profitability. Moreover there is also evidence that the effort to substitute private for public power impacts differently on different sized firms. Lee and Anas (1992) attempt to measure the cost to Nigerian producers of meeting electric power needs from their own sources. Two important points emerge from their study. First, small firms cannot afford to make the expensive capital investment needed to meet the required power need. As a result the production processes and the profitability of such firms is severely handicapped. Second, since there are considerable economies of scale in electric power generation, even at the level that private firms undertake, large firms can meet their electric power needs at prices not very different from those charged by national power company. But for small- and medium-scaled firms the cost of using private power supply is a significant cost factor. Steel and Webster (1991) report that electricity outages were ranked among the top four constraints on expansion by very small firms. To the extent that small firms are more severely affected by poor infrastructure, the growth of such enterprises and the generation of employment will be retarded.

This is particularly unfortunate because there is evidence that new small firms can play a significant role in employment creation. Lee (1989) noted that small- and medium-scaled firms generated between 60 and 80 percent of new jobs created in Asia and Latin America although the role that small and medium-sized firms play in export development is less clear. On the one hand Levy (1994) suggests that the small and medium enterprise sector can make a substantial contribution to export while Berry (1992) reaches a less sanguine conclusion. He suggests that the export potential of small firms is limited to processing of natural resources, the manufacture of traditional products using labor-intensive indigenous technology and protected by the special characteristics of the product or the special skills used in production, and to products which cannot be standardized or to specialized products with small total markets ("*niche*" products). The first two categories probably offer limited scope for exports; the potential of the third category thus becomes the major question.⁵ Sound econometric research on the role that small firms can play in export development remains to be undertaken. Tybout (1992) notes that "... it is difficult to find studies that correlate trade policy with the size distribution of plants in developing countries."

While small and medium-scaled firms may not become significant exporters of manufactured products they can often serve as suppliers of "indirect exports," that is as producers of parts used by major exporters. The lack of infrastructure deters such developments. Kessides [(1993) pp. 10-12] finds that new small firms tend to start up near urban centers with easy access to good utilities. Cities with poor infrastructure are unable to offer this "*incubator*" function to new small firms, which are less able provide their own infrastructure. As a consequence the potential links between small and medium-sized firms and larger firms, including exporters, fails to develop.

Globalization and Information Technology

The increased globalization and intensification of competition in world trade has resulted not only from liberalization of trade policies but also from major advances in communication, transport, and storage technologies. The thrust of these developments has been to transform the

⁵ Biggs [1994] writes that "A window of opportunity has emerged for African manufacturers to supply major ... retailers ... Afrocentric merchandise ...". His study is illustrative of the potential for such exports but also illustrates the pitfalls that small and medium-scale exporters face in breaking in to a new export market.

traditional organization of production and marketing to one focussed on the management of logistics with the objective of achieving cost savings in inventory and working capital and allowing for rapid responses to changing consumer demands. During the 1980s, the "*order cycle times*" in OECD countries were reduced by up to 80 percent; more than 60 percent of production and sales in these markets are now processed directly to order and the expectation is for an increased reliance on "*just in time*" delivery. Trade and industry managers in OECD countries report that a one percent reduction in logistics costs are equivalent to a ten percent increase in annual sales. [Peters (1992)]

Virtually all technologies that reduce logistics costs partake of the so-called "*new information technologies*". Indeed some would claim that electronic data exchange is the most pervasive change to affect international business practices in recent history. It is therefore disturbing to note that the gap between Africa and the industrialized world in terms of computer access is already quite large and in all likelihood still growing. For example, computer spending in Africa in 1988 averaged 0.34% of GDP, compared with 1.4% of GDP in Italy, 2.5% in the US. On average, spending on computerization – as a percentage of GDP – is six times higher in industrialized countries than in Africa.⁶ One reason for this outcome is a shortage of qualified personnel to man and maintain computer equipment [Moussa and Schwere (1992)]. Firms are reluctant to invest in such technologies if they do not have a reasonable assurance that the equipment can contribute to labor productivity and can be reasonably well maintained. And the lack of telephone lines, and poor call completion rates, further serves to discourage use of new information technologies, all of which rely on telephone lines to transmit information.

Note has already been made of the poor state of telephone services in the SSA countries. Easterly and Levine (1995) incorporate data reflecting the relative paucity of telephones in Africa in their analysis of growth rates in Africa relative to other developing countries and find a "... strong link between growth and telephones per worker" In fact their results suggest that the relative paucity of telephone services per worker explains about 40 percent of Africa's lower growth rate relative to non-African countries. While Easterly and Levine admit skepticism that the direct effects of phones could be this large they suggest that "... it may be a good indicator of the poor state of infrastructure in general." (p. 11)

Despite the generally recognized poor quality of telephone services, some analysts, in a more optimistic vein, suggest that this infrastructure shortcoming provides the SSA countries with an advantage over other regions in creating a modern infrastructure. It is argued that the latest technologies could be particularly beneficial because they may help SSA countries "*leapfrog*" entire stages of development. With less invested in the current communications, as well as transportation technologies, so the argument runs, countries can adopt new technologies more quickly and at a lower cost. This is probably an overly optimistic assessment. More realistically it should be noted that changes in technology now allow for smaller units to operate efficiently.

⁶ SSA also lacks computer access to various sources of information that are now electronically available and the capacity to exchange information electronically. In an effort to deal with this situation Vice President Gore announced the *Leland Initiative* at the recent (May 14 - 15, 1996) Information Society and Development conference, held in South Africa. The *Leland Initiative* will be a USAID developed initiative that would create a policy environment more favorable to the introduction of 'telematic' technologies and increase the provision Internet services in SSA. (*Daily Report for Executives*, LEXIS/NEXUS)

Economies of scale no longer dictate that large facilities are the optimal size for power plants or that communications providers need be centralized entities. Efficient small cellular communications systems can help SSA overcome some of its shortfalls in the communications sector. Cellular networks offer a quick way to bring more telephones to Africa. Fixed cellular connections – otherwise known as wireless local loop – use radio rather than a wire, and are now said by some to be less expensive. An article in the *Economist* (April 13, 1996) noted that “[i]n Ghana, Capital Telecom is building such a network to serve 50,000 rural homes by 1998.” Mobile cellular networks, while more costly to build, are increasingly preferred to the hidebound services offered by state-owned telephone companies. Despite the fragmentary evidence that some new technologies are being used, there is as yet no real analysis of the cost of such new communications technologies, nor whether they are “appropriate” given the level of technological competence. And, one might add, there is no clear understanding of the regulatory reforms needed to allow these newer technologies to be put in to place.

C. Transport and Port Facilities.

Roads

Access to a well maintained roads and a well functioning railway system are essential in linking potential producers to their market, domestic or foreign. Poor road conditions will hamper the supply response by producers to changes in the economic environment. To quote a World Bank study [Carapetis, et al. (1991)] “[t]he transport sector - particularly roads - is a key to unleashing the potential for increased production and incomes in Sub-Saharan Africa. ... If farmers and manufacturers are to take advantage of reforms in agriculture and other productive sectors they must have a dependable road system.” Unfortunately this same study reports on a 1987 survey of road conditions in SSA countries which found nearly one-quarter of paved roads in poor conditions and another quarter in fair condition. As is shown in table 4, this situation is even more serious for unpaved roads where about 39% of roads are in poor condition and the situation appears to have marginally deteriorated between 1984 and 1988.

Table 4: Road Conditions in Sub-Saharan Africa: 1984 and 1988
(Percentages)

	Good		Fair		Poor	
	1984	1988	1984	1988	1984	1988
East Africa						
Paved roads	42	50	32	33	26	17
Unpaved roads	42	28	30	30	28	42
West Africa						
Paved roads	52	54	23	17	25	29
Unpaved roads	20	19	36	34	44	47
All Sub-Saharan Africa						
Paved roads	47	52	27	25	26	23
Unpaved roads	33	29	32	32	35	39

Note: Weighted by average length of network by type (i.e., paved and unpaved).

Source: Steve Carapetis, Hernán Levy and Terje Wolden. The Road Maintenance Initiative: Building Capacity for Policy Reform. (Vol. I) Washington, DC: The World Bank, EDI Seminar Series (1991).

There are numerous ways in which the poor road systems retards the transformation of the African economies. For example, Tomich (1994) notes that the poor transport system reduces the potential for linking the production in the agricultural sector to the manufacturing sector. The possibility of efficiently processing agricultural products, and adding value to them before they are exported, is thus retarded. Other studies find that poor transport facilities are a major constraint to high value and highly time dependent exports, such as horticultural products [Stryker and Shaw (1994)]. Islam (1990) adds that improvements in infrastructure which result in lower transport and handling costs can significantly improve the price competitiveness of horticultural exports.

While the transport sector allows for a rich mix of options for service provisions, roads offer the least scope for private sector involvement, because of pricing problems. And the large sunk costs and the need to ensure network access for railways suggest that if they are privatized, they must remain under some form of regulation. The key issue for roads is to find appropriate institutions that will have the incentive to manage and maintain them adequately and have the funds to do so. The key issue for railways is to find ways to give them greater autonomy to operate as commercial activities while ensuring that the stock of assets is tailored to the future needs of a restructured industrial sector. In both areas there is a need to look at the current institutional constraints that impinge on improved road maintenance and that influence railway services in SSA and suggest appropriate and acceptable new management modalities.

The poor road system raises transport costs and often makes them unreliable or unavailable. As with electric power, private firms will attempt to compensate for the absence of transport services. But here, too, the impact is likely to vary by firm size. For example, while large firms may find it relatively cost-effective to supply transport services to their workers, and may even be able to do so at a cost that is not very different from what workers would pay for using public transport, the cost of providing such services will be much higher for small firms. The same will undoubtedly be true in terms of providing trucking services to take products to the port or to bring inputs from the port, or elsewhere, to the factory. Despite the fact that transport costs impact on the location decisions by firms and on their employment creating potential, it is an area that has not yet been studied.

Port and Airport Facilities

Poor port and airport facilities obviously hamper the development of exports. Exporters need rapid access both to necessary imports and to export markets. Thus Stryker and Shaw [1994] note with reference to Madagascar that:

[t]he seaport capacity of Madagascar is also strained. Lighterage costs are high in the eastern ports because of exposure to heavy seas. Also, the vast majority of cargo in Madagascar is transferred from truck to train to ship manually. The lack of a freight terminal in the capital city ... and the lack of cold storage at the airport are serious infra-structural shortcomings for exporters. (pp. 63 -64)

World Bank (1995) data indicate that because of poor transport facilities, including ports, the cost of shipping plywood from Africa to Europe is 30 percent higher than the cost of shipping the

same commodity from Asia to Europe. Sachs and Warner (1996) make an imaginative attempt at estimating the impact of poor port facilities on SSA export capacity. They construct an index of physical access to port facilities. A country with a container port is given a value of zero, reflecting complete access to international shipping; a land-locked country without navigable access to the sea via rivers is given a value of 1. An effort is also made to include the type of port facility. Coastal economies with container ports are given the value of 0.1 while land-locked countries with navigable river access to container ports are given a value of 0.2. The resultant index is then included in their analysis of the sources of slow African growth. Their results indicate that poor physical access to global markets, as measured by the index described above, explains a significant portion of Africa's lower growth relative to other developing countries.

Ensuring the high-quality and reliable transport services needed for international trade also requires that customs procedures be reasonably efficient and honest. Unfortunately the converse is often the case so that necessary customs procedures raise costs and increase shipping times. It is estimated that one-third of the time required to ship freight between landlocked Mali and neighboring ports in Lomé (Togo) and Abidjan (Côte d'Ivoire) is accounted for by delays in customs clearance. Improvements in customs services fall under the rubric of improved "governance", an issue considered in Section IV, but in part it also depends on the quality of in communications and information processing technologies that are available. Customs services increasingly rely on electronic data exchange. The lack of computers and reliable telephone lines reduces SSA's competitive position in this area as well.

D. Strategies to address infrastructure shortcomings.

What seems patently clear is that infrastructure improvements are needed if SSA is to improve its general economic performance and in particular its export performance. What is less clear is the relative importance of improvements in different infrastructural services - roads, ports, power supplies, communications, etc. - and how such improvements are to be undertaken.

There is little doubt that exigencies of modern logistic management in developed countries impose similar requirements on the developing countries wishing to compete in these markets. The ability of developing countries to provide the transport and communications services essential for modern logistics management will increasingly determine their ability to compete for export markets and for direct foreign investment. There are many examples of countries losing their competitive edge because of infrastructural shortcomings many times combined with procedural delays in export related activities. A closer analysis of the situation prevailing in SSA countries may well find that the main reason for the poor supply response to policy reforms lies in excessive regulation of trade and transport, administrative practices, and inefficient management by public sector entities.

Although it is increasingly recognized the infrastructure in SSA needs to be strengthened, extended, and improved, this task may not be as daunting as it appears. Some analysts, as for example Berg [1994], suggest that greater emphasis be given to "*indirect*" privatization instruments as a supplement to reliance on more "*classical*" divestiture, which is often opposed. Whether indirect privatization can achieve the efficiencies needed remains to be proven.

Moreover, newer technologies, such as cellular phone systems and small power plants, now allow private firms to become providers of infrastructure services. In other areas, government control may still be needed to prevent monopolistic market behavior.

Yet two things are fairly clear. First, a substantial upgrading of infrastructure is needed in SSA and second, where it may be difficult to raise public resources to fund investments in port facilities, road maintenance, water supply, and so forth, appropriate modalities must be developed which will make possible increased private sector participation. The challenge is to determine those areas in which competitive market conditions can work and those that will continue to require public action. Private sector participation will only occur where a climate exists that allows for a reasonable assessment of costs and future returns. The legal and regulatory framework in many SSA countries may not be conducive to private sector participation. To establish this will require a review of existing laws and regulations that will result in specific recommendations for changing those laws and regulations that impede either private sector operation or private sector financing of infrastructure investments.

III. Human Capital

A. Introduction

It is now by now commonplace to note that human capital formation plays a crucial role economic growth. Data to support this belief range from sources of growth estimates, where human capital is adjusted for quality, to rate of return calculations. Psacharopoulos [1988 and 1994] reviews a number of studies that estimate private and economic rates and returns. All of the data reported by Psacharopoulos support the generally accepted belief that investment in education has high economic as well as private returns. While one can have serious reservation about the quality of the data used, or the applicability of rate of return calculations for a non-market activities such as education, it is instructive to look at the data brought together in Table 5. The data suggests that the highest economic rates of return, in SSA and elsewhere, are in primary education with lower returns in secondary and higher education. Although the data and its sources has been sharply criticized by Bennell [1995, p.195], he nevertheless concurs that "... well- directed and very sizable investments are urgently needed to raise the quality of education provision."

B. Formal Education

The research on education and economic growth has led to the somewhat facile conclusion that growth in the years of schooling increases overall growth. Pritchett [1995 (p.48)] points out "... recently created data on growth of years of schooling provide no support at all for the proposition that more rapid rates of growth of education capital produces greater output growth." Indeed, he goes on to note that a number of studies have found that primary education had a *negative* effect on growth for Africa and an insignificant effect in South Asia and Latin America, with only a significant positive result in East Asia. Moreover, Pritchett states that "the educational attainment of Africa's labor force actually grew at a faster percentage rate than any other region, including East Asia. This is partly because of the initial low base, but even its absolute growth in years of schooling is nearly as high as other regions." [Pritchett (1995) p. 22]. Yet the growth of output per worker in Sub-Saharan Africa was half that of Latin America and only a quarter that

of the more rapidly growing Asian countries. Since the SSA did in fact accumulate a great deal of human capital over the last three decades, which apparently did not pay off in increased aggregate growth, one conclusion is that education is a necessary although not a sufficient condition for growth.⁷ To the extent that an expansion of the stock of human capital only delivers its full potential when there is a corresponding increase in market-driven demand for labor skills, the failure to implement sound macroeconomic policies may have destroyed the economic potential from education in SSA.

Another possibility for the apparent failure for economic growth to accelerate as human capital is increased, is that the education that was offered in SSA was inappropriate. While it may have

Table 5: Aggregates of Economic Rates of Return, by level of education and year of review ^(a).
(Percent)

Region	Review year	Primary	Secondary	Higher
Africa	1973	28	18	13
	1980	29	17	12
	1985	45	26	32
	1993	24	18	11
Asia	1973	14	15	11
	1980	16	12	11
	1985	31	15	18
	1993	20	13	12
Latin America and Caribbean	1973	33	19	16
	1980	44	17	18
	1985	32	23	23
	1993	18	13	12
LDC average	1973	25	17	13
	1980	27	16	13
	1985	NA	NA	NA
	1993	NA	NA	NA

Note: ^(a) Refers to year of reviews prepared by Psacharopoulos.

Source: Paul Bennell. "Rates of Return to Education: Does the Conventional Pattern Prevail in sub-Saharan Africa?" *World Development*, (1995) Vol. 24, No. 1, pp. 183 - 199.

increased cognitive skills, it may not have created the skills that lead to the entrepreneurship and management needed by a modern economy. Human capital tends to be relatively unproductive where the skill acquired in school do not match market opportunities, or where higher education is promoted at the expense of primary and secondary schooling. These views strengthen the

⁷ This phenomena is not unique to Africa. For example, the World Bank [1995, p. 37] reports that "the work forces of Viet Nam and the Philippines have historically had higher rates of adult literacy and educational attainment than other countries in the region. Yet both of these economies have grown relatively slowly."

importance of identifying and undertaking those complementary reforms in the non-education sector that will result in education paying off.

Focussing on the level of human capital, rather than its rate of growth, Lindauer and Velenchik [1994] note that "... African workers have generally acquired much less human capital than Asians, even in comparison with historical Asian experience. In general, African populations, with a few exceptions, are less literate and less well educated than the Asian populations were at a similar point in their countries' development." (p. 293) Roemer [1994] shows that in terms of **government expenditure**, the performance of African countries in the 1990s was indistinguishable from Asian countries. But the **stock** of education achieved by these expenditures reveals a very different picture. In fact the educational stock of the Asian countries in the 1960s, before they began their rapid growth, looks quite similar to the situation found in Africa in 1985. Roemer concludes that not only does Africa start out with a "... clear disadvantage compared to Southeast Asia of three decades ago, Africa also has to make massive and effective investments in education to support the rapid growth over the next two decades." [Roemer (1994) p. 3] Precisely what improvements in education policy are needed to ensure that expenditures on schooling will yield productive investments in human capital need further study.

Workforce Training

Pack [1993] believes that there is a clear link between the shortage of trained manpower and the slow response that many SSA countries have had to macroeconomic policy reforms. He writes that "... while industrial productivity in Africa might be improved by the typical macroeconomic cum liberalization policy package, the magnitude of the gain is not likely to be particularly large given the scarcity of experienced industrial managers and the paucity of general industrial experience." Steel and Wange [1991; p. 284] note that the process of education, especially technical training, is critically important in raising growth rates and that "[r]aising the skills and access to information of the general labor force is the only effective way to achieve the objective of growth through rising productivity while pursuing the goal of equity through greater participation in the economy." Sorting out what might be wrong with the education process in SSA is an important prerequisite for any policy recommendation that suggests increasing public expenditure on education as a whole.

Another strand in the literature on education and development suggest that investments in human capital have important positive externalities. For example, Schleifer [1990] notes that not only does investment in human capital lead to higher productivity, higher wages, and therefore to an increase in the aggregate demand for manufactures, but if these increases in demand reduce the inefficiency in the market for manufactures, increases in human capital will have produced an external benefit. There may also be important agglomeration effects in human capital accumulation. For example, firms might be reluctant to go ahead with implementing relatively sophisticated technologies because they are afraid they can not get qualified personnel. This, as was noted above, is one reason why SSA may be lacking in the use of computers and other modern informatics systems. The lack of qualified personnel may well result in firms continuing to use relatively backward technologies with potentially negative impact on cost and the ability to export. Stryker and Shaw [1994] find that in Ghana and Madagascar a major constraint on the development of nontraditional exports is the lack of qualified skilled labor and middle-level managers. Lall [1991] goes even further. He suggests that the structural features of African

industry that account for its past record and impose limitations on its future development have more to do with the human resources base available for industrialization than with the physical conditions and macroeconomic policies or adverse external circumstances. This may overstate the case although the introduction and transfer of modern technologies clearly does depend on the availability of skilled labor, to operate and maintain the plant.

The transfer of modern technology depends in large part on capacity of the labor force to manage such technologies. This requires in turn that a large segment of the population be exposed to basic scientific concepts and be able to relate these concepts to the surrounding physical, social and economic environment. Not only must Africa acquire modern technologies, it must be able to adapt them and maintain them. In this regard Steel and Wangwe [1991] point out that a substantial investment in human capital is a necessary condition for industrial development to be indigenous rather than just a transplantation of foreign machinery and managers.

Science and Engineering Training

Turning to the issue of science and engineering training, Zymelman [1990] reviews the available data⁸ on university enrollments by field of study in SSA and concludes that

... the proportion of the population in SSA enrolled in higher education, especially in the natural sciences and engineering, is appallingly low; [that] SSA countries graduate only 2.5 people a year per 100,000 population in the combined field of natural science and engineering compared to 95 in industrialized countries; [and] ...the contrast is starker in the field of engineering [where] developed countries graduate 166 times more engineers per capita than do SSA countries.

Zymelman suggests that, given the need to produce more graduates in science and engineering, the options are to a) to increase total enrollment leaving the same structure of enrollment by field of study; b) increase the ratio of the graduates to entrants in the science field; and c) change the enrollment structure to favor science and engineering. Option a) is being followed by most SSA countries and, Zymelman concludes, is doomed to fail because of budgetary constraints and the poor employment prospects for the vast majority of graduates from fields other than science and engineering. Option b), an efficiency measure, should be pursued in any event since one can hardly argue against efficiency improving measures, but it is only option c) that offers any “...realistic hope to increase the number of science and engineering graduates ...” [Zymelman (1990) p. 26] Unfortunately, efforts to expand the relative share of enrollment and graduates from science and engineering is costly since the unit cost in the science and engineering fields are usually higher than in the rest of higher education. Where the needed financing will come from is a question that needs to be addressed.

⁸ Zymelman notes that “there is a dearth of data on SSA’n (sic) universities...” (p. 22) and recommends that an effort be made to obtain more reliable data on graduates by level and by field of study on a time series basis. [Zymelman, (1990)].

Not only is formal education and training needed at all levels so that large-scale industries can have access to far higher inputs of well trained workers, technicians, managers and engineers, but efforts also must be made to increase supporting staff. Scientists and engineers require an adequate number of complementary technicians and artisans to be effective. And a modern economy also requires a growing stock of trained personnel in such fields as accounting and financial analysis. There is little specific information on how well SSA is served in these fields.

Options for Education and Training

Two questions need to be addressed. First, what programs, formal and informal, can help remedy the situation, and second what is the cost of labor market impediments?

Lall [1991] argues that government should be the agent to provide training, presumably through formal education channels. Yet the potential of less formal educational channels, such as apprenticeship and in-service training programs, also needs to be considered. Such programs appear to be fairly common in SSA, yet little evaluation of their effectiveness has been undertaken. Perhaps the most thorough analysis of in-house and apprenticeship training programs has been undertaken by Biggs, who notes that

... small firms train much less than large firms; foreign owned firms train more than local firms; and exporters are more likely to train than domestic producers. ... African firms, like firms the world over, also train managers and skilled workers more than their non-managerial, non-technical compatriots. Where African firms appear to differ most from those in other regions is in the overall incidence of training, both formal and informal. Enterprise training appears much lower in Africa, formal training in particular. This deficit in training is even greater when one considers the need for training to reach internationally competitive skill proficiencies, given the lack of experience in manufacturing and the quality of vocational and general education available.
[Biggs (1994) p. 91]

Another review of technical training by Stryker and Shaw [1994] found that government technical schools (at least in Ghana and Madagascar) are not an effective training channel because the training provided by them is often not what is needed. They suggest that it would be better if the training can be provided by the private sector, and that government ought to support the private sector, for example through tax credits to individual firms that provide training. But a word of caution is in order. While there may well be an economic rationale for the use of tax credits, there is a real question of how many governments, already saddled with weak tax administrations, would monitor such programs. Alternatively, the public sector could join with professional associations in developing training programs at the industry level. A more sanguine view is expressed by Havenga [1986] who notes that, at least in South Africa, certain non-profit organizations are very close to business and are particularly aware of the needs of their members. This allows to them design training programs that are specifically tied to the needs of industry. The degree to which this experience can be transferred to other SSA countries is unknown.

Apprenticeship

It is sometimes suggested that since there is a strong apprenticeship tradition in Africa, apprenticeship training could help fill the gap of well- and appropriately trained workers. However, we note that apprenticeship training in Africa is heavily tied to the transmission of traditional handicraft skills, especially weaving. Bas [1989] notes that the "traditional apprenticeship system is a good example of "pure" on-the-job training without organized theoretical courses. The traditional cultural model includes a long period of "socialization" during which the apprentice wins the acceptance of the master, progressively meriting the right to learn." Dilley [1989] reports, much of the apprenticeship system, at least in West Africa, is as much concerned with transmitting weaving lore and social identity as it is with the training of workers for the modern industrial sector. Moreover termination of the apprenticeship period is often delayed because the apprentices are unable to raise funds to set up their own shops or because they cannot find employment or because the master craftsman is reluctant to create potential competition. These shortcomings, notes Bas [1989, pp. 485 - 487] have led some African governments to enact legislation to adapt or reform the prevailing apprenticeship system. All of this leaves open the question of whether and how, the traditional apprenticeship system can be adapted to train a labor force that can work with modern technology.

In turning to the type of training to be provided, Pack [1993; p. 7] argues strongly against a strategy that ties education to specific industrial sectors. He writes that an appropriate training strategy would consist of

... sending successive cohorts of students for foreign training in business administration and a wide mix of engineering programs not geared to specific subsectors but appropriate for the broad sectoral categories likely to be important to Africa. These guidelines militate in favor of mechanical and chemical engineering and against training in electrical engineering and biotechnology in which industrial process and products change so rapidly that success requires very large numbers of trained people.

Foreign training would seem to be an obvious means of increasing the relevant skill levels. Here the experience of other countries should be reviewed. How many students actually return to their home country? How many actually undertake the courses for which they are sent? And for what kind of training is overseas training appropriate? Pack would have overseas training restricted to master's degree level because, he argued, with more advanced training the probability that the trainees will return to their home country declines. He also notes that "... this strategy for providing a broad range of training that can be transformed relatively quickly to sector specific skills will work best if the Development is undertaken in conjunction with agents who already have specific skills, for example MNCs, so that the sector can emerge 'naturally' as dictated by comparative advantage." [Pack (1993)] This strategy however begs the question of what policies are needed to attract MNC investment and how one can ensure that such investment transfers skills and technology. It seems equally possible that MNCs will be attracted to low-wage areas but will have little incentive to upgrade skills or engage in technology transfer. Whether and how one can adapt the traditional apprenticeship systems to

serve the needs of the modern industrial sector remains to be studied. What policies can be implemented to ensure such an outcome is not clear.

There is also some evidence that impediments in the operation of the labor market affect the cost of labor. Regulations that deal with issues such as laying off workers, fringe benefits, minimum wages, collective action, and the like may be important and may need to be adjusted to reduce labor costs and increase flexibility at the enterprise level. Little research dealing with labor market conditions and their impact on firm efficiency seems to have been done. Stryker and Shaw [1994] do deal with the issue of labor regulations and report that "... both domestic and foreign-owned firms in Ghana must go through the Ministry of Labor for recruitment of personnel, making the hiring process lengthy and uncertain." Moreover retrenchment of workers must be negotiated with unions and powerful political groups. Although most firms avoid these requirements by hiring labor only temporarily, it would be preferable to undertake a substantial liberalization of labor market regulations so as to enable firms to rid themselves of unproductive workers and adapt flexibly to changing economic circumstances. The extent to which labor laws increase the cost of labor to the firms and reduce the incentive to use labor rather than more capital intensive techniques is not clear. To the extent that firms find it more profitable to use capital rather than labor, Africa's comparative advantage is eroded.

IV. Institutional Constraints:

A. Introduction

The recent emphasis in both academic and policy-oriented literature on the role of institutions and economic performance has indicated that institutional constraints and bureaucratic sloth often inhibit export development, even where macroeconomic conditions are optimal. But creating an appropriate institutional structure to support new exporting activities is no simple task. In this regard the SSA countries are no different from other countries at the initial stage of switching from an import substituting regime to one that promotes exports. An import substituting legacy increases the complexity of the effort required to develop exports. Not only must potential exporters become efficient producers but they must be able to access foreign markets, contact potential buyers, meet international standards for design and quality, send and receive samples, import needed supplies and machinery, obtain credit and insurance, and eventually ship the actual goods with a reasonable degree of certainty that the shipment will arrive quickly and safely. Amicus Most [1969 (p.29)]⁹, writing about Korea's early export development efforts, points out that any serious "... export development program [must] involve almost every part of the economy, including the private and the public sectors, ... quasi-governmental agencies and universities, the banking community and all sections of the business community."

While considerable theoretical advances have been made in modeling trade flows and policies, there is still a near universal neglect in trade theories of issues relating to the information requirements and flows, as well as to the marketing efforts involved in exporting. Whether in

⁹ Most (1969) offers detailed descriptions of actions taken by the Korean government in support of its nascent export drive in the early 1960s. Although dated it remains both fascinating and persuasive.

the neo-classical or in the 'new trade' theories, there is usually no explicit recognition of marketing and information flows, or the learning involved. Yet it may well be that in the final analysis it is precisely the information flows and marketing efforts that are critical to the development of a strong manufacturing export sector. Writing about East Asia, Keesing and Lall, note that

... [p]roducing [for exports] calls in each case for a vector of inputs meeting exacting quality requirements and specifications, since such exports are only saleable as complete packages meeting all buyer specifications. ... [N]ot being able to get **one** input, even if it accounts for a tiny share of the cost of production, turns out to be a disaster that can knock a country out of a large export business.

... For many orders, not only dependable and punctual delivery but also rapid delivery and a readiness to meet reorders are required. This depends on rapid access to suitable inputs as well as quick response capabilities on the part of suppliers, both difficult to achieve in a developing country setting. (p 179; emphasis added).

Their observations are no less relevant to SSA exporters. Studies by Abubakar and Ubogo (1990), Stryker and Shaw (1994) Fitzgerald and Monson (1988); and Mutharika (1976) focus on institutional problems facing SSA exporters. The problems they identify range from a shortage of export credit financing, to slow and costly procedures for clearing exports and imported inputs, to a lack of competition for air and sea-freight, to problems of contract enforcement, and to a poorly developed system of settling international payments. A number of the problems identified by these authors mirror the generally poor state of infrastructure in SSA. But the institutional shortcomings are sufficiently important to warrant their own identification and analysis. It is noteworthy that few attempts have been made to measure the cost of these institutional problems or to provide well grounded recommendations on how to overcome them.

We focus on three areas: the role of quality and marketing in breaking in to new markets, the acquisition of export development skills through foreign assistance, and finally the role that trade promotion agencies can play.

B. Quality and Marketing of New Exports

Lall (1991) and Choi (1992) make the important point that conventional trade theory neglects marketing factors which may represent a serious entry barrier for products from developing countries. Choi classifies these barriers into two main categories: pre- and post-shipment barriers. In his scheme, pre-shipment barriers include product design, product quality, and shipping and delivery. Post-shipment barriers include wholesaling, retailing, after-sales service, and brand name promotion. Traditional theory, by ignoring information costs, bypasses these issues. Yet the evidence from numerous case studies [Biggs (1994); Levy (1994); Wange (1995)] suggests that both pre- and post-shipment barriers are significant.

Pre-Shipment Barriers and Credibility Issues

Choi points out that recent research shows that while firms in mature economies have an incentive to develop a product quality "reputation," since this will allow them to eventually

receive a premium on their products, the problem is more complex in developing countries. Two factors working against the supply of quality products are a high rate of seller turnover and relatively low exogenous entry costs. This leads to "fly-by-night" behavior, providing firms with little or no incentive to try and maintain quality and to develop a long-term reputation with potential developed country importers. Choi concludes that if "... markets in developing countries do not provide sufficient incentives to firms to follow a more 'long-term' approach to ... establish reputations for quality, there may be need for government intervention" This is also the conclusion of Bagwell and Staiger (1989) who argue that where information barriers exist, some form of infant industry protection is justified. Skeath (1995) develops a model which leads to the conclusion that whether subsidies are justified or not depends critically on the form of the underlying market failure, on the assumptions about consumer expectations, and on whether or not there are further externalities to be gained by expanding production. Skeath concludes that there is a growing consensus that "... any policy that decreases the cost of signaling, and discourages false signaling by low-quality firms, improves welfare" [Skeath (1995) p. 269]. Yet the issue deserves further study. Additional research, theoretical and institutional, is needed before one can decide what the proper response in SSA countries should be to a situation where informational asymmetry discourages entry by potential exporting firms. And until the reason for the persistence of false signaling is understood, it is unclear what role government should play in remedying the situation. For example, one question is whether government should use subsidies or some form of infant industry protection as means of encouraging firms to develop a quality reputation, or whether other means to change firm behavior should be sought.

One avenue through which exporters can obtain credibility is to rely on international organizations to certify standards. There are more than 200 world-wide organizations writing international standards but three Geneva based institutions – the International Organization for Standardization (ISO), the International Electrotechnical Commission (IEC), and the International Telecommunications Union (ITU) – dominate the field. Broadly speaking the ITU deals with telecommunication and broadcasting standards, the IEC with the electronics sector, while the ISO tackles all other products. The ISO is a non-governmental independent organization established in 1947 for the purpose of developing worldwide technical standards to improve international communication and collaboration and to promote the growth of international trade.

ISO has developed a series of standards, ISO-9000, that represent international consensus on best practices and quality. Although voluntary, obtaining ISO-9000 accreditation is fast becoming a prerequisite for exporting to the European Community. This is a trend that can be expected to expand to include the East Asian Free Trade Area, NAFTA, APEC and other regional trade blocs. While ISO-9000 may not be a complete Total Quality Control (TQC) system, it is a foundation on which quality recognition can be built. Unfortunately, to date Sub-Saharan Africa countries have made little effort to establish procedures for ISO quality standards and to effectively link producers to local ISO facilities. A telephone survey of local ISO bodies¹⁰ revealed that Kenya, Malawi, Mozambique and Nigeria had only a few companies

¹⁰ A telephone survey of ISO member bodies in Sub-Saharan African countries was carried out in March 1996 by Donald Mosgrove.

that were given ISO-9000 certification, although the various national bodies all stated that they "expected" to certify other firms within the near future. In Zimbabwe 18 of the 24 ISO-registered companies were accredited by ISO member bodies located in either England or South Africa, a unique way of ensuring that the quality certification is broadly accepted. While there are no studies of the effectiveness of ISO-9000 certification in creating quality recognition for exports, it is interesting to note that some of the new emerging manufactured exporters have made a much more serious effort to obtain ISO certification. As of 1994/5, China had 150 ISO certified companies; South Korea had 662; Brazil had 364, India had 328 while Malaysia had 258.¹¹ A more active participation by SSA countries in ISO standardization may not fully resolve the quality issue but it undoubtedly would help.

The question of quality control and of establishing a reputation is even more difficult for small and medium-sized firms. This is an issue explored by Biggs [1994] in his study of the potential for African textile exports. Biggs concludes that African exporters had trouble meeting American standards in terms of timely delivery and size of order, as well as in terms of quality. Specifically Biggs found there was a mismatch in scale and technical competence of the African exporters and the American buyers. The African exporters lacked the necessary information and expertise to negotiate a realistic price and there was a near total lack of familiarity on the part of the African exporters with the financial institutions and instruments of international trade. Such a lack of information resulted in delays in shipment and receipt of payment, creating further problems for both producers and buyers. Based on Kenyan experience, Biggs concluded that African firms should be able to successfully compete as suppliers of "boutique" goods, but that such efforts should involve government commitment, foreign technical assistance, and a slow build-up in the size of successive orders so that these move in line with the capacity of SME to produce larger and larger quantities. While Biggs remains optimistic about the role of SMEs in the export development effort, both as direct exporters and as suppliers of indirect exports, it is clear that such firms face even more daunting problems than the larger African firms.

Post-Shipment Barriers

The classic post-shipment entry barrier is that of name brand *promotion*. This type of entry barrier is established through advertising that serves to create brand image and loyalty. It has been noted that in the initial stage of exporting manufactured goods the price received in an export market will depend more on the overall reputation of the exporting country than on the actual quality of the product sold. This was the case for Japanese goods in the 1970s which were then considered inferior but which today enjoy a quality premium. Lall argues that brand name promotion is a classic marketing barrier for developing countries, many of which face a 'negative' country image among developed country consumers. In some instances it may even become a prohibitive entry barrier. At the same time, firm efforts to upgrade the quality of their product runs in to a 'free rider' problem. Chiang and Masson (1988) note that "... information imperfections may cause consumers to practice statistical discrimination against imports from developing countries. Consumers often associate the quality of such goods with

¹¹ Survey conducted by Eric Melloul, January 1994.

their 'country of origin.'” As a result, firms that pay the full cost of investments in quality improvement receive only diluted benefits while competitors gain by free-riding.

Korea's approach to the quality problem that confronts all new exporters was one of certification and selection. The Korean government selected certain export firms to be designated as *General Trading Companies*, giving them special support, such as preferential access to credit, in turn certifying and inspecting the quality of their exports. This policy was meant to illustrate the government's credible commitment to quality, since the government put its own reputation, as well as scarce resources, at stake so that quality would be maintained in its export. However, the extent to which the General Trading Companies were important is unclear. Nor can one be sure that this approach can be fruitfully and effectively followed in a vastly different socio-political setting.

Support in overcoming pre- and post-shipment barriers may be an area where regional cooperation can play a positive role. Exports from any country may be held in low repute because there is a general belief that exports from Africa are lacking in quality.¹² This suggests that if a country acting alone improves its image, there will be a small spillover to its neighbor's growth rate, which in turn spills back over to its own growth rate. Given that most SSA countries have four or more neighbors, one might expect that spillover effects are fairly small. But if all countries, or a significant sub-set of countries, working in consort to establish a quality reputation for African products, the impact may be considerable. The question of how one can improve the quality, and the perception of quality, for SSA manufactured exports, and what role regional cooperation can play in this effort, is an issue that need to be explored.

Potential for Foreign Assistance

One difficulty in promoting exports from new producers is that most manufacturing enterprises in developing countries are unaware of how far they lag behind best current practices in advanced countries in terms of systems engineering, productivity, quality control, and other aspects of production management. Presumably the use of foreign experts should help overcome this gap. Using an Indian firm as a case example, Keesing and Singer (1991) report that foreign experts were able to double output from existing plants by reorganizing production methods, machinery layout, work flow, and other systems engineering aspects of production. They suggest that is an area in which the provision of appropriate technical assistance can make a considerable difference. But such ventures also carry risks. “One lesson that emerges ... is that as a rule manufactured exports from a developing country are a ‘co-operation game’ in which the buyers help the manufacturers learn all sorts of business skills required, and the two pool their skills and insights to obtain their overlapping goals. ... [B]ecause of the perils of the local policy and cost environment as well as the weakness of the local manufacturers in the earliest stages, often they have give up their joint efforts after losses.” [Keesing and Lall (1992) p. 186]

Bringing together foreign experts and potential local exporters is a task that requires facilitation. SSA governments may not be able to undertake such efforts either because of a

¹² Easterly and Levine (1995) develop a model to test whether policies pursued, or policy failures, in one African country affect growth in a neighboring country. For a variety of factors they find significant “neighbor spillover” effects, suggesting that regional cooperation can be important.

lack of knowledge or of funds. In such instances, providing funds and helping to develop links to foreign expertise is an appropriate task for the donors. At present the World Bank provides outright grants for such assistance, arguing that the externalities associated with the technical assistance efforts in support of exports are sufficient to justify the use of grants. Other agencies, including USAID, also provide assistance to firms in adapting their supply capabilities. An evaluation of such assistance to African exporters from all sources would be extremely useful and could provide some much needed information as to whether such assistance is more effectively provided as grants or loans.

Subsidized Export Credits

A commonly used support system is the provision of subsidized export credits. A review of such schemes by Fitzgerald and Monson (1988) reaches the conclusion that export and insurance subsidies are rarely effective and, perhaps more important, are often countervailed under GATT/WTO regulations. Some have argued that the lack of privately provided insurance is akin to a market failure and is thus an area where government intervention is justified. In fact incomplete insurance markets are not necessarily indications of market failures, nor do they justify government interventions. Proponents of subsidized export and insurance credits argue that externalities associated with exporting (for example the benefits derived from competing with stronger firms or the benefits from technology transfer) make the social benefits from exporting greater than the private ones. It is worth noting that much the same logic is claimed by proponents of import substituting activities, especially of so-called "high-technology" import substitution. But even if externalities favor the encouragement of exports, they do not make the case for export credit or insurance. Rather they suggest a need for policies that directly eliminate anti-export bias or intervention in the market where externalities arise. Banking and insurance regulatory reforms, which are often necessary parts of a macroeconomic reform package, may well overcome some of the problems that exporters face. Before one can make any sensible recommendations in regard to export and insurance credits, a clearer picture of the impediment confronting exporters needs to be developed.

C. Trade Promotion Offices:

Another approach that has been suggested as a means of overcoming market difficulties is to rely on a trade promotion organization. Typically trade promotion offices are expected to work with exporters on a number of fronts: providing information on foreign markets, on designs, on costs, and so forth. Although a number of countries have established trade promotion offices, Keesing and Singer (1991) note that while such efforts may be well intentioned "[a]ssistance to support services for exports has almost never proved effective in systematically expanding manufactured exports from developing countries that have less than fully satisfactory policies toward such exports." (p.19). This reinforces our earlier conclusion that a sound macroeconomic environment is a necessary condition for export development. But the criticism of trade promotion offices goes further. Keesing and Lall (1992) point out that "[i]n the eyes of international experts, local businessmen, and other knowledgeable observers, most of these public-sector organizations are ineffective in expanding exports." (p.187). They argue that most public officials do not have the necessary information or insights to support manufactured exports. On balance, the experience of a number of countries suggests that the

private sector is the most efficient provider of export support services. Governments can facilitate the role of the private sector while concentrating on activities in areas in which it can be cost effective and where the scope for private agents is limited.

Evidence from Asia

The issue of whether a trade promotion organization can be effective is not fully settled because the trade promotion activities in some of the leading East Asian export-oriented economies in Asia are in fact considered successful. Probably the most effective of all have been the China External Trade Development Council, started in Taiwan in 1970; the Korean Trade Promotion Corporation, and Hong Kong's Trade Development Council, launched in 1966. The World Bank (1992) identifies four reasons why the East Asian trade promotion organizations were successful. First, expenditures on TPOs were a small fraction (one-twentieth to one-tenth of a percent) of the value of manufactured exports. Second, in the successful East Asian countries there were no bottlenecks in export incentives or infrastructure. Third, the successful trade promotion organizations fostered the provision of information and support services by the private sector. And fourth, the successful TPOs were business oriented, staffed by business professionals and organizationally lean.

Yung Whee Rhee (1985) who believes that trade promotion offices can be effective, provides a very detailed description of the agencies, regulations, and procedures adopted by Korea, Hong Kong, and Singapore. Rhee describes in considerable detail how the various East Asian governments established such schemes as duty-drawback systems, created domestic L/C systems that allowed secondary exporters (i.e., suppliers of domestic inputs to exporters) to benefit from the duty drawback schemes, provided a reasonably efficient system of export financing, and helped exporters gain market information. While the lessons of Korea and the other East Asian exporters are certainly worth studying in detail, the extent to which they can be transported to SSA is another matter entirely. In fact Rhee himself writes that "... while much has been written about the success stories of the East Asian countries, the broad generalities describing these successes are of little practical use unless supplemented with explanations of specific policies and institutions that provide the foundation for export growth" [Rhee, p. 1] One can go further. Even with an understanding of the very specific institutions and policies followed by the East Asian countries, there is no guarantee that these same systems can be transferred to a different administrative environment. What is needed is not only a thorough understanding of the institutional and administrative constraints that SSA exporters confront, but also a realistic assessment of the administrative capacity to implement sound and effective supportive measures. Within that framework one can then attempt to set up a workable trade promotion.

Characteristics of Successful TPO's

As noted above, one issue is how relatively unknown and untested firms in countries that have not yet established a reputation for quality and excellence, can enter the export sphere. It is here that "trade promotion organizations" may be able to play a role. Hogan (1991) makes an obvious but telling point when he notes that exporting is initiated at home while the final transaction takes place overseas. This suggests that there has to be some mechanism to bridge the gap between the place of production and the locus of consumption. While trade promotion organizations are often ineffective under some conditions they have played a role in bridging

this gap between production and sales. A review of the few cases of successful trade promoting activities suggest that the most important success factor is the caliber of the TPO staff. Having said that, one must recognize that few SSA countries have a pool of people capable of staffing a TPO, so that it will probably be necessary to establish an appropriate training program for such staff. While such a training effort probably should have some theoretical content, the more important aspects are practical on-the-job and overseas training. Technical assistance from, or overseas training in, Korea, Japan and some other Asian countries that have had successful TPOs should be considered.

A second characteristic of all successful TPOs is that they have had adequate financing. A variety of financing sources are available for TPOs and all seem to work reasonably well. For example, Most (1969) describes in some detail the working of KOTRA (Korean Trade Promotion Corporation) and notes that it was financed by levying a small fee for literature, displays, and other promotional materials although the bulk of its income came from the government. Obviously government financing may be difficult for financially strapped African governments. The Hong Kong approach may therefore be of interest. It levied a small fee (1%) on all imports and exports which was earmarked for trade promoting activities.¹³ In the tenor of the times, consideration should be given to having the TPO run as a private profit making entity. And finally, a TPO must be able to serve as a "two way street" providing information on possible export opportunities but also serving as a ready means for buyers to seek redress for poor quality. KOTRA, for example, served as a means for buyers to register complaints about the quality of Korean exports. Complaints ranged from failure to deliver on time to such seeming minutiae as the lack of proper boxes for shoes. But even more important, when such information was received in Korea, it was acted upon. Officials would work with the producer to upgrade their product and deal with the problem or, if that turned out to be impossible, to ensure that TPO officials knew of the firm's reputation.

Levy (1994) reviews the successful technical and marketing support systems in Columbia, Indonesia, Japan and Korea, focussing on their contribution to the efforts by small and medium-scaled firms entering the export market. He concludes that at the initial market penetration phase, collective marketing efforts are important while subsequently, when the market "thickens," initiatives by foreign buyers typically become more important. Levy finds that the most effective marketing support systems were provided by decentralized organizations, such as industry associations or local government, rather than by central government institutions. Turning to the role of trade promotion organizations, Levy concludes that, at least for the small and medium-sized firms that are the focus of his study, national export agencies were not the appropriate marketing mechanism. Private markets are the dominant way in which SMEs enter the export market. This outcome may have less to do with the general poor reputation of trade promotion organizations than with the failure of many organizations, such as for example banks, to deal effectively with small sized client. If this is indeed the case, then the solution is to design the service function of the trade promotion agency so that they can effectively serve the small- and medium-scaled firms. The assumption

¹³ One possibility of course is for the TPO to charge a fee for its services. This is risky. It would introduce a bias against small exporters since larger fees would be earned from facilitating an order from large or repeat customers. Nevertheless a range of alternative financing modalities should be investigated.

is that SME can play a significant role in export diversification and growth, an assumption that, as we noted above, remains to be tested.

D. Foreign Investment and Export Development

Another solution to the quality-market penetration problem is to bring in foreign investors to set up off-shore production facilities for their own brand name products. This has happened in many of the East Asian countries which are now major producers of athletic shoes, toys, and numerous internationally branded electronic products. Attracting off-shore producers depends on many of the same factors that make exporting possible: adequate infrastructure, productive labor, etc. As the data in Table 6 shows, SSA has been noticeably less successful than other regions in this regard. Although until the mid-1970s, the level of FDI in SSA was similar to that of other developing regions, in the 1980s there was a marked decline, so that FDI now plays a smaller role in overall investment and total external resource flows. Nigeria is the only country which has attracted large sums of FDI, mainly for its natural resource sector. [Husain (1993)] Some of the reasons why the SSA countries have been less successful than Asian and Latin American countries in attracting FDI are discussed below.

Table 6: Private Long-term Net Resource Flows to Developing Regions, 1994
(Million US \$)

Developing region	Total	Net debt flows	FDI	Portfolio equity flows
Asia	84,704	21,590	44,279	18,835
Latin America and the Caribbean	49,669	15,698	20,811	13,160
Europe and Central Asia	15,581	5,285	8,362	1,934
Middle East and North Africa	4,110	323	3,681	106
Sub-Saharan Africa	4,725	878	2,987	860

Source: The World Bank: *Global Economic Prospects and the Developing Countries: 1995*, pp. 84 -85. (May 1996)

Potential Benefits of FDI

In theory if domestic producers can join with foreign investors, the technology gap can be bridged. The foreign investor would bring in the necessary machinery and technology and even help in the marketing of the output. Yet questions continue to be raised about the long-term economic benefits of foreign direct investment.¹⁴ For example, how far do such investments serve to transfer technology, or to allow local producers to supply inputs? And to what extent will foreign investors seek to adapt their production processes in the face of rising costs rather than move their investment to the next low cost destination? To what extent should foreign

¹⁴ Some also question the usefulness of foreign direct investment on social grounds, arguing that such investment is essentially exploitative in nature. We do not address this issue.

investors be given a variety of special incentives, such tax holidays, import duty exemptions, and so forth?¹⁵

One reason for giving special incentives rests on the belief that foreign direct investment has significant "spill-over" effects on local producers and the local economy. Despite this strongly held belief, little actual research has been done on this question. Aitken and Harrison [1994] find that while foreign equity participation is strongly correlated with in-plant productivity increases, they find no statistically significant evidence that foreign investment increases productivity in domestically owned plants. Indeed, they go further suggesting that productivity in domestically owned plants declines in the presence of foreign direct investment. They conclude that "... if technology transfer indeed takes place, it is overwhelmed by the negative productivity effects of joint ventures on domestically-owned firms. ... [Moreover] to the extent that domestic and foreign firms compete on national (and not local) markets, there is no evidence to support the hypothesis that technology is transferred locally from joint ventures to domestically-owned firms."

These somewhat surprisingly negative conclusions should, if they are upheld by other studies, raise concern among countries that try to induce foreign direct investment by offering a variety of incentives to foreign firms. Yet one needs to add two words of caution. First, the research conducted continues to suggest that there are benefits from foreign direct investment to the recipient firms. It is only the assumption of any externality of "spillovers" to other local firms that is in doubt. Second, despite the somewhat more limited expectation for foreign direct investment, such investment does provide a means of breaking in to foreign markets, of learning about quality production, and of establishing quality standards. As always the appropriate question to ask is whether the gains from foreign direct investment outweigh any potential costs.

V. Political and policy constraints to a more dynamic trading sector.

A. Introduction

In addition to infrastructure, physical and human, the extent to which African producers can respond to policy reforms, it is argued, also depends on the extent that potential export activities can attract new investment. Governments can promote increased investment activities by making markets work better and in particular by establishing a modern legal framework that provides investors, domestic and foreign, with the kind of stable, predictable environment that raises confidence and reduces costs. Increased investment of all sorts will also result in increased exports. To what extent does political instability and corruption deter investment? There is also some concern that while barriers to trade have been reduced,

¹⁵ The reason why foreign firms seek incentives such tax holidays and import duty exemptions, and the extent to which such incentives affect location decisions, is poorly understood. One reason foreign firms ask for tax exemptions is they want to avoid involvement with the local tax authorities who can, through the audit process, exact bribes. It is likely that a more efficient and honest tax and customs duty administration would be more attractive to foreign investors than the pecuniary gain from tax holidays or duty exemptions.

changes in trade regulations and reliance on non-tariff barriers may make exporting from SSA more difficult. It is to these issues that we now turn.

B. Politics and Growth

Democratization

Economists and political scientists increasingly recognize, or at least to pay lip service to, the idea that "good" government (or *good governance* to use the more formal term) plays an important role in the development process. The definition of "good governance" covers a host of issues including the establishment of a competent and reasonably honest civil service, the possibility of expressing dissent even to the extent of changing government through open and reasonably democratic elections, and the presence of an independent, transparent, and competent legal and judicial system. The absence of these government characteristics is said to impact negatively on growth, investment, and thus exports. Table 7 reports sample means for

Table 7. Democracy, Growth in GDP, and Primary Education in Selected Groups of Countries: 1960 - 82.

Variable	All countries	Latin America	Africa	Asia
Democracy ^(a)	2.24	2.18	2.83	2.33
Rate of growth of GDP/capita ^(b)	2.4	2.2	1.5	3.3
Primary school enrollment rate ^c	82.7	96.3	62.5	82.6
GDP/capita 1960	2,626	2,170	881	3,379
Number of countries	113	24	41	21

Notes: ^(a) A dummy variable that takes the value of 1 for democratic regimes, 2 for regimes mixing democratic and authoritarian features, and 3 for authoritarian regimes.

^(b) Average annual percent.

^c Percentage of school-age children in 1960.

Source: Alberto Alesina and Robert Perotti. "The Political Economy of Growth: A Critical Survey of the Recent Literature." *The World Bank Economic Review*. (September 1994) Vol. 8, No. 3, p. 354.

variables measuring "democracy", the rate of growth of gross domestic product, and education for selected groups of countries. It is clear from this compilation that democracy, GDP per capita, and education are highly correlated: rich countries are democratic and have high levels of education. Causality is more difficult to establish although analysis by Barro (1991) and Ozler and Rodrik (1992) suggest that a higher degree of civil liberties are conducive to growth and capital accumulation. One can tentatively conclude that there is evidence that democratic regimes grow more rapidly.

Bates [1995] is however skeptical about research that claims to show a relationship between a democratic political environment and growth, or the lack thereof. He believes an alternative explanation is possible. In his formulation, richer nations (as measured by the number of

telephones per 10,000 population in 1972) created a larger middle class, which in turn lobbied for political reform. His analysis shows that nations with larger numbers of middle class citizens were more like to have moved to democracy in the period 1975-1991. In addition, he suggests that democratic governance in 1975 could lead to better subsequent economic performance and more rapid growth of the middle-class. Given the still rudimentary stage of analysis it would seem prudent to hold off on any definitive judgment of the relationship between a democratic government and long term growth. What Bates's work is especially useful in pointing out, however, is the dearth of concrete data on governance in Africa with which to test the relationship between democracy and growth.

Political Stability

Democracy, with its focus on civil and economic rights as well as elections, is only part of the story. There is also the issue of political stability. The World Bank in its 1991 *World Development Report* [1991] noted that "political instability and other political considerations go a long way toward explaining why, in the first place, many ...[developing] countries adopted, to their economic disadvantage, the policies they did. And they underlie the difficulty many countries face in changing course swiftly." Indeed it has been argued that the political instability, as well as the poor governance that is said to characterize SSA countries, goes a long way to explaining its lackluster economic performance and helps explain the failure of SSA countries to respond more quickly to the incentives offered under various policy reform regimes [Easterly and Levine (1995)] This begs two questions. First, are the SSA countries as a group less stable and less well governed than countries in Asia and Latin America? And second, are African governments less honest, efficient, and competent than governments elsewhere? These issues are not simple to answer, in part because of the difficulty in defining political stability and in measuring the competence and honesty of the civil service.

Bates's study attempts to deal with the question political stability because as he notes "... a series of reports have pin-pointed public policy as the key factor explaining Africa's low rate of economic growth." Although Bates's study is still in its initial stage, he reaches the tentative conclusion that not only were most political reforms symptomatic more of a response to the general instability of African politics than of enduring changes, but that the change to democracy was accompanied by a general intensification of violence. Comparing the situation in 1975 and 1991, he find that

... in 1975, one quarter of Africa's states experienced violence; in 1991, slightly less than one third [did]. The number of states experiencing general civil war doubled, from two to four. More meaningfully, whereas one eights of Africa's population lived in war torn nations in 1975, nearly one quarter did so in 1991. And more meaningfully still, the data suggest that violence and reform were related. [Bates, p. 17]

Bates hopes that his research will allow an assessment of how economic performance relates to political transition because, as he notes, the evidence linking political instability and economic performance remains anecdotal.

Contrast this to Mbaku [1992], who writes that "significant research has been done to determine the relationship between political instability and economic development in Africa" Indeed

there are a series of studies [Mbaku (1988); Mbaku (1992a); Fosu (1992)] that reach the conclusion that lack of a politically stable environment is a major factor in the poor performance of many SSA countries. This is puzzling. Roemer [1994] agrees that "... [t]he first requirement for a cohesive development strategy is a stable government," also goes on to point out that many African countries have had long-lived governments without achieving rapid sustained economic growth. The problem is that the group of countries one can classify as dictatorships are not homogenous. Several, particularly in Southeast Asia, have done well in terms of growth, many others, in Africa and in Latin America, have done much less well. At best we conclude that while stable governments may be a necessary condition but they are by no means a sufficient condition.

Legal Reforms

Accompanying the call for "*good governance*" there is also a growing recognition that legal reform is an important underpinning for improved economic performance, especially in inducing investors and entrepreneurs. Without some realistic expectation that the legal system is sufficiently insulated from the locus of political authority, investors will consider the risk of legal conflict exceptionally high. Gray (1991) notes that the failure to develop a strong legal base

...discourage[s] investment by economic agents other than those share in the political authority, and restrict the circle of parties with whom they are willing to enter into other than instantaneous transactions. ... Clearly such a situation hampers efficient allocation of resources and retards economic growth. [p.3]

To what extent does political instability and lack of good governance affect *foreign* investors? Tuller [1993] suggests that a primary reason why many potential investors and businessmen ignore Africa is the high level of corruption, which they perceive exceeds levels in other developing countries. Whether this is a correct perception of the level of corruption in Africa is difficult to judge. Comparative data on corruption, and its impact on locational decisions, are notoriously difficult to come by.¹⁶ Bachmann and Kwaku[1994], report on a conference attended by top government officials, public policy makers, and private business executives, where most participants argued that policy reforms alone were not enough to overcome a reluctance by foreign investors to invest in a particular country. Rather the most important factors determining the willingness to invest were the presence of a stable political environment, an equitable and efficient legal system, and an efficient system of economic administration that is sympathetic to the needs of the private sector.

¹⁶ A recent "survey" of corruption included only one African country (South Africa) which was ranked immediately below Japan but was considered less corrupt than such stellar performers as Malaysia, Taiwan, Korea and Thailand. Indonesia was ranked as the most corrupt country covered in the survey. The lack of other African countries probably reflects fact that the survey, based on responses by foreign investors, did not collect data for most African countries rather than any indication that corruption was so low in SSA that it was not worth mentioning. [See Transparency International (1995)]

Administrative Reform

Whatever the link between "good governance" and growth, there is a feeling that despite improvements in the performance of African governments and in their stability, the perception continues to be one of an administrative and governmental failure in the region as a whole. A number of African policy makers, attending the conference referenced above, complained that the low level of foreign direct investment, even after a decade of often painful economic adjustment, reflected a lack of knowledge about Africa by potential investors. It was felt that the current views about Africa reflected more a perception about where Africa was a decade ago than reflecting current realities. This may well reflect a "neighbor spillover" effect: the negative image for some countries in Africa continues to influence the perception about all SSA countries.

Although perceptions may lag behind reality, it remains true that entrenched civil servants often continue to oppose private and especially foreign private investment activities. At the very least African governments must take a leading role in clearly enunciating why private investment is important and how it is supportive of African development objectives. But more important, there may be a need for administrative reforms. When government objectives and modalities change it may be necessary to change the implementing institutions that were created in a very different policy environment. For example the Bachmann and Kwaku [1994] survey noted that many institutions in SSA saw their role as one of *policing* foreign investment whereas governments now wanted them to provide support to foreign investors. Although there has been little research on how one changes government bureaucracies there is a growing literature that deals with changes in corporate structures that allow companies to meet the challenge of changing market conditions. The insights from such studies may inform recommendations for changing governmental structures. Another modality that should be explored is whether complete or partial privatization of key government functions, such as banking, port management, shipping, etc. can improve their operation.

Intellectual Property Protection

The strength of a country's system of intellectual property right protection has substantial impact on technology transfer as well as foreign direct investment, particularly in high-technology industries. Mansfield [1994] found that the effects of such protection on US foreign direct investment are substantial and statistically significant. Indeed he reports that "[m]any firms regard strong intellectual property protection as being more important in decisions regarding technology transfer than in decisions regarding investment." (p. 28) Intellectual property right protection is particularly important in chemicals, pharmaceuticals, electrical equipment, and machinery industries. [Mansfield (1995)] It appears that the strength of a country's system of intellectual property protection has a substantial effect on technology transfer as well as on foreign direct investment. Mansfield's results are based on survey data, interviews, and statistical analysis of foreign direct investment by American firms. The survey looked at 16 developing countries, including Nigeria, the only African country in the sample, and concluded that many firms felt that intellectual property right protection was too weak in most developing countries to allow them to invest in joint ventures with local partners or to warrant transfer of their newest or most effective technology to wholly-owned subsidiaries in most developing countries.

All of this argues that a number of factors inhibit foreign direct investment in Africa. Some of these are perceptual problems and to some extent these can be changed. Others, including public sector efficiency and property right protection, are real and require specific actions by government. Two questions remain unanswered. First, how corrupt are African countries relative to other developing countries and how poorly are legal rights protected in SSA? Admittedly corruption is a serious problem and the legal system may not be effective. But much the same can be said about other countries, including some of the rapidly growing Asian economies, who do continue to attract a substantial foreign investment. This leads to the second question: what determines the location of foreign direct investment and how seriously should one take the assumption that firms will be reluctant to invest in countries where there is a considerable measure of political stability and a lack of good governance? While a reduction in corruption and an improvement in the legal system and in good governance as a whole are undoubtedly desirable objectives, a survey of firms who have expressed an interest in Africa and who then located their plants elsewhere would be instructive. It may well be that other facts—lack of infrastructure, poor port facilities, lack of human capital—are more important than the presence of corruption. If so, such research ensure that the limited reform capacity is focussed on the most critical areas.

C. International Trade Barriers.

Tariff and Non-Tariff Barriers and the WTO

Although considerable progress has been made in trade liberalization, there is concern that the presence of tariffs and non-tariff barriers (NTBs) may prevent the growth of manufactured exports from SSA. For example Bosworth [1994] finds that “... industrialized countries have structured their tariffs to penalize efforts of the producing countries to diversify their exports by incorporating higher levels of processing prior to exports.” He concludes that “... [t]ariffs and the frequency of non-tariff barriers are far greater for processed than for primary commodities.” [Bosworth (p. 175)] Hard evidence of this is difficult to come by. Moreover the recently

Table 8: A Comparison of Industrial Economies's NTBs on Agricultural and Manufactured Exports of Industrial and Developing Economies, 1983.

Index	<u>Industrial Economies</u>		<u>Developing Economies</u>	
	Agriculture	Manufactures	Agriculture	Manufactures
Coverage ratio				
Own imports	40.5	14.5	31.2	21.3
World trade	46.1	13.2	30.5	20.5
Frequency ratio	31.9	6.7	5.6	17.4

Notes: *Own imports* uses “own country” weights; *world trade* uses “world trade” weights; while *frequency ratio* represents an unweighted measure.

Source: Julio J. Nogués, Andrzej Olechowski, and I. Alan Winters. “The Extent of Nontariff Barriers to Industrial Countries' Imports.” *The World Bank Economic Review*, Vol. 1, no. 1 (1986) p. 195.

concluded Uruguay round of trade negotiations is meant to further reduce tariffs and make substantial inroads on NTBs. Nogués, Olechowski and Winters [1986] present data that shows that NTBs are *significantly* more prevalent on imports from developing countries than from industrial economies and not "...only the relative but also the absolute extent of NTB coverage is larger in the case of developing economies' products." [Nogués (p.194)] As is shown in Table 8, NTBs are less prevalent on industrial economies' imports of agricultural goods from developing economies than on those from other industrial economies, but that situation is reversed for manufactures. "In the manufacturing sector, developing economies face more barriers than industrial ones to their large-volume exports, such as in textiles and footwear, and fewer to their small-volume ones, such as electrical machinery and vehicles." [Nogués (p.195)] The extent to which this situation still prevails today and the extent to which it specifically impacts on SSA is not clear from this analysis.

By contrast Amjadi and Yeats [1995] focus specifically on the impact of non-tariff barriers on SSA exports. They conclude that as a result of the Uruguay Round, the profile of OECD non-tariff protection Africa faces will change dramatically. Pre-Uruguay Round, about 11 per cent of all SSA exports encountered NTBs; now this ratio will fall to about two percent. That is the good news. The bad news is that the phasing out of the MFA quotas will now subject Africa countries to aggressive international competition. Whether in the face of this increased competition for markets in the developed countries, the SSA producers can maintain a viable textile and clothing export sector depends on whether they can achieve cost-cutting reforms thus improving the general competitiveness of such exports. Fortunately, the MFA liberalization is heavily "*back loaded*", with roughly half the restrictions being removed only at the end of ten years. This allows time for adjustment. Africa will also face more vigorous competition on footwear and ferrous metals, when "*voluntary*" restraints that were in place in some developing countries are lifted. However, it needs to be noted that whether a loss in market share by African exporters is also a loss in welfare depends on the degree to which such exports were subsidized. While there has been only limited research on the impact of tariff and non-tariff barriers on exports from SSA, the research that has been done appears to suggest that trade restrictions are not a major problem facing African exporters. However, the tariff reductions and the elimination of some NTBs creates, an opportunity and a challenge for African exporters. If exporters are to avail themselves of these new opportunities, the competitiveness of the SSA economies must be increased.

Regional Trade and Export Promotion

With few exceptions, the literature on the promotion of nontraditional exports ignores regional trade. How can a regional strategy assist in an export promotion program? Hamilton and Thompson [1994] point out that producers who serve a larger regional market, in addition to gearing up production for "*rest of the world*", will be able to achieve economies of scale even before they have achieved substantial export penetration. If so they can offer a lower price on the world market and more rapidly gain market share. In a similar vein Langhammer and Hiemenz [1991 (p. 3)] suggest that "... to the extent that the small size of domestic markets limits growth, regional integration is seen as a means of boosting growth by increasing market size." However, this assumes that production for the regional market will be under competitive conditions so that international levels of quality, as well as efficiency, are indeed achieved. Unfortunately, what regional integration has promoted best is trade diversion and a prolonged process of inefficient

regional import substitution. Second, regional cooperation, although not integration, in negotiations with developed countries might be helpful in facilitating access to international markets and reducing competition among countries producing the same products for the same markets. [Hamilton and Thompson (p.1387)]. Regional cooperation in the provision of research, standardization, and improvements of information flows also may be a fruitful avenue. This is especially so for the smaller SSA countries who may find the cost of such export promoting activities costly.

VI. Conclusion.

SSA economic performance over the past two decades has been disappointing: low rates of income growth, a slow transformation from agriculture to manufacturing, and a persistent failure to export manufactured products. The initial explanation blamed deficient macroeconomic policies. But more recently, a number of SSA countries who undertook and sustained a reasonable measure of macroeconomic reform have expressed disappointment in the supply response of manufactured exports. Thus it appears that a stable and credible macroeconomic regime is a necessary condition for export growth, but is clearly not sufficient. Numerous failures in a broadly defined set of export support activities may mute the export supply response by throttling investment in new productive activities. This review has focussed on a number of constraints that may impede exports: poor infrastructure, lack of appropriate human capital, export support services, and an inefficient and unresponsive civil service.

The literature provides considerable information on structural barriers to exports from Africa. Much of the evidence is fragmentary and makes the obvious, though correct, point that poor roads and telephones, a lack of engineers and computers, poor port facilities, and a corrupt civil service are likely to hinder the productivity of new investments and contribute to the inability of SSA producers to compete effectively on the world market. But in two respects the literature falls short of informing policy makers. On the one hand, the information is often so broadly cast that policy makers do not have the precise information which can persuade them of the need to improve the policy environment. On the other, there is as yet no framework that allows one to judge the relative importance of various structural barriers. The implication is that it is as important to increase telephone service and port facilities as it is to improve education and develop a transparent legal system. This, too, leaves the policy maker with little useful information since it is unlikely that all structural shortcomings are equally important and it is impossible to tackle all shortcomings at the same time.

SSA is clearly a "late comer" to export-led growth experience. Economists have argued that late-comers can grow more rapidly because they have the ability to borrow from early developers. If so, to what extent can SSA benefit from being a late comer? Or is it the case that having fallen behind, SSA will now find it more difficult to catch-up? On the one hand it is possible to argue that much of the experience from other countries should be able to inform policy in SSA. That presupposes that such experience is well understood and that one can identify elements that are transferable from one country, and indeed from one continent, to another and separate those from elements that only worked in a specific political and cultural environment. A review of the literature suggests that there is much work to be done here. For example, why have trade promoting agencies seemingly worked in some countries and failed

miserable in others? Why do some policy measures work well in some countries while the same measures seem to result in rent-seeking behavior in others? Thus properly understood, SSA should be able to learn from the experience of other countries. The emphasis should be on understanding why certain activities worked in some countries and why they failed elsewhere, and how they must be adopted to suit the African political and cultural environment.

SSA can also benefit from technological changes in the provision of infrastructure services which now seem to allow for private sector participation in areas where previously it was thought government had a significant role to play. What are the areas in which the private sector can now take a leading role and what are the conditions that will ensure that private providers of infrastructure will be relatively efficient and serve a wide range of potential users? What areas should remain largely in government hands and under what rules and regulations? And to what extent do regulations within SSA countries have to change in order to encourage appropriate private sector participation?

Human capital is also recognized as a serious constraint on the development of a modern and competitive SSA manufacturing sector. Yet there is considerable evidence that Africa has invested heavily in education. Why then have the returns been relatively low? Is it that the schooling was inappropriate and if so in what respect? Or do the labor markets fail on matching available skills to needs? To the extent that more education is needed, how should it be delivered? Skills can be created through different means - formal schooling, apprenticeship, overseas training. Which means are appropriate and what should be the balance between different forms of education?

While being a late-comer may offer SSA certain advantages, one could also argue that "catching up" may now be more difficult. World trade has grown more slowly in recent years than it did in the 1970s and 1980s. Does this make it more difficult for late comers to gain a share of world trade? And since many of the Asian countries have developed a quality reputation in the OECD and North America markets, how will SSA countries be able to overcome this quality advantage? Finally, to what extent will developing countries, which often face growing unemployment and a loss of jobs, become more aggressive in protecting themselves against imports? Even where non-tariff barriers are reduced, there is the potential to use environmental and other means to control imports. All of these factors need to be weighed in considering how rapidly SSA countries can become exporters of manufactured goods, even after they have substantially reformed their macroeconomic policies.

The literature is rich with studies that link the failure on the part of some SSA countries to respond to past macroeconomic policy reforms to structural barriers. What is less well developed is a framework that would allow policy makers to choose specific means of overcoming these structural barriers. Research that would help link specific failures to the problem of exporting and then develop specific solutions that could be considered appropriate for SSA governments would have the potential of making a contribution to economic development in SSA.

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