

**AERC RESEARCH PROJECT ON
EXPORT SUPPLY RESPONSE CAPACITY CONSTRAINTS IN AFRICA**

**RELEASING EXPORT CONSTRAINTS:
THE ROLE OF GOVERNMENTS**

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I. INTRODUCTION

Over the past two decades, developing countries have progressively increased their share of global trade from just under one-quarter to about one-third. Increased participation in world trade has been facilitated by the diversification of exports. The share of manufactures in total merchandise exports of developing countries has increased from 35.1 percent in 1985 to 65.8 percent in 2004 while the share of developing countries in world exports of manufactures increased from 14.5 percent in 1985 to 30.3 percent in 2005. Developing countries have also diversified their export markets. The share of developing country markets in total developing country exports increased from 27.8 percent in 1990 to 39.4 percent in 2004.

These bright figures hide important regional differences. In fact, Asia and particularly China account for most of the change. While developing Asia's share of total world exports increased from 11.7 percent in 1985 to 21.5 percent in 2005, Africa's share decreased from 4.3 percent to 2.9 percent of total exports over the same period. Similarly, while the share of manufactures in Chinese exports increased from 42.2 percent in 1985 to 71.4 percent in 1990 and 90.6 percent in 2004, their share in African exports increased from 19.9 percent in 1990 to 28.6 percent in 2002 only to fall back to 21.2 percent in 2005 due to the raise in the value of oil exports.

Africa's poor export performance and its failure to integrate in world trade are associated with poor economic performance and lagging development. Much has been written about the linkage between exports and growth. While there seems to be almost a consensus that export performance matters significantly to development in small low-income countries, the nature of the relation between export performance and growth is not completely clear.¹ Empirical evidence suggests that exporting firms are more productive than non-exporters but the debate over the reasons behind this observation is far from being closed. On the one hand, exporting could contribute to enhanced productivity. On the other hand, the higher productivity of exporters could reflect the self-selection of the more productive firms as exporters.

Whether one sees the economic development of Africa as export led or investment led does not make much of a difference in the end. In small, poor countries, investment in production for export markets is likely to be of greatest potential.² The challenge is thus to identify the constraints on improved export performance and to determine how they could be released. There are two types of constraints: demand side and supply side constraints. Barriers restricting access by African exporters to foreign markets may well be playing a role in the evolution of Africa's export performance. During the last two decades, however, African countries have faced relatively less constraining external market access barriers than other developing-country regions. There are thus reasons to believe that Africa's poor export performance may be due in no small part to binding export supply response capacity constraints which prevent fuller utilization of available market access opportunities. Some of these constraints are associated with underlying economic conditions while others are associated with market failures or policy obstacles. Some impede the expansion of existing exports to existing markets (growth at the intensive margin) while others prevent geographical or product diversification (growth at the extensive margin).

This paper reviews the existing literature on governments' role in releasing export supply constraints. It discusses the economic rationale for government interventions to support export development and, in the light of this rationale, examines the interventions needed to address the key factors responsible for restraining export supply response across products and countries in Africa. Section II summarizes the debate among economists on industrial development policy and export promotion, including recent results of particular relevance to the discussion of export promotion and diversification

¹ See Helleiner (2002). Söderbom and Teal (2003) find that exports were associated with income growth in nine sub-Saharan countries.

² See Helleiner (2002).

policies. It explains that the case in favour of interventions hinges upon the existence of some market failure. Economists tend to agree on the fact that permissive and functional policies can promote development but their views diverge on the need for selective policies. The controversy regarding selective policies is for the most part rooted in implementation related issues. Section III provides an overview of recent contributions which explore the factors affecting the export performance of manufacturing enterprises in African countries, using enterprise-level data from the mid-1990s. Their results point at the importance of trade policies, transportation infrastructure, energy, telecommunications, and security. They also point at the difficulties of smaller often informal firms and at the advantages of export processing zones. The role of governments in releasing those constraints is addressed in Section IV. The discussion addresses the question whether or not there is a need for targeted interventions before reviewing the lessons from past experience, including with the implementation of various types of policies.

II. INDUSTRIAL POLICY, EXPORTS AND DEVELOPMENT STRATEGIES

A. THE ROLE OF INDUSTRIAL POLICY IN DEVELOPMENT STRATEGIES

The approach to government-assisted industrial development and preferences for specific policy instruments have evolved over time as a result of changes in development thinking and the external environment. Ideas regarding the linkages between trade, development and the role of government have changed a good deal in the post-war period, influenced in part by country experiences.³

In the 1950s and early 1960s, development was equated with industrialization and import substitution was seen as the route to industrialization. The view that a more or less free market would not solve the development problem was widely accepted. Large-scale comprehensive planning was considered to be the appropriate policy instrument despite the fact that necessary data were largely missing and that neither planning nor growth were very well understood. The role of capital formation as the main source of growth was emphasized. As most capital goods had to be imported, overvalued exchange rates were seen as a means to encourage investment. But exchange rate overvaluation induced balance-of-payments pressures which were countered through a variety of trade restrictions. While protection was typically afforded mainly to consumer goods, in some large countries, domestic production of capital goods was encouraged by keeping out imports and by direct subsidies.⁴

The experience of the 1950s and early 1960s, sometimes referred to as the easy stage of import substitution, created considerable hope among economists and country leaders. Compared with the pre-war period, investment and growth rates increased as did the share of manufacturing in GDP. Life expectancy at birth and literacy rates rose and infrastructure developed. During the 1960s however, distortions became increasingly evident. Agriculture was penalized. Exports were penalized. Unemployment prevailed and, surprisingly, capital was underutilized. Two large collections of case studies published around 1970 carefully documented these distortions.⁵ At the same time, estimates of total factor productivity growth became available showing very limited improvements, if any, in developing countries. It also became apparent that poverty was not declining at a significant pace.

By 1970, economists had started having doubts regarding import substitution as a development strategy. Doubts were not only fed by the facts. Developments of economic theory also contributed. While second-best theory had provided intellectual support to import substitution, the general theory of distortions, which refined it, reinforced the case for trade liberalization. Second-best theory

³ See Winters (2000), Bruton (1998).

⁴ See Bruton (1998).

⁵ See Balassa and associates (1971) and Little et al. (1970).

suggested that trade liberalization could not be guaranteed to be advantageous in an otherwise distorted world. The general theory of distortions further developed the argument and showed that trade policy is usually neither first nor second best but rather n -th best. Another attack on the import substitution strategy came from Robert Baldwin's influential paper entitled "The case against infant industry protection" published in 1969. In his paper, Baldwin showed convincingly that infant-industry duties do not only distort consumption, they may fail to correct the market failures they are intended to address and may even result in a decrease in social welfare. If, for instance, the acquisition of the socially optimal level of knowledge requires some direct outlays, imposing tariffs is no guarantee that these socially optimal outlays will be made. He also explained that what is required to handle the special problems of infant industries is a much more direct and selective policy measure than general import duties.

Doubts regarding the import substitution strategy were further fed by the exceptional export and growth performances of the Republic of Korea and Chinese Taipei in the 1960s. Chinese Taipei and the Republic of Korea had made substantial policy changes in the late 1950s and early 1960s that encouraged firms to export. In both cases, exchange rates were unified, currencies devalued and export incentives put in place. These policies were designed to ensure that producers were no longer rewarded primarily for selling in the domestic market – returns to exporting were made at least as attractive through the removal of the anti-export bias inherent in import substitution policies. Initially, these strategies were seen as export promotion with limited government intervention. However, this view was soon disputed. It is now largely acknowledged that governments intensively promoted specific sectors in the Republic of Korea and Chinese Taipei, as well as in Japan. Whether export promotion and trade policy interventions played a crucial role in the "East Asian Miracle" is an open question.⁶ What is fairly clear, however, is that the circumstances leading to success in the Republic of Korea and Chinese Taipei were not typical. The policy instruments used were typically the same as those used elsewhere, including import quotas and licenses, export subsidies, public ownership and tax holidays. But the manner of implementing and monitoring trade policies were different. A political leadership fully committed to strong economic performance was firmly in place and government-business relationships were highly unusual. The extent to which government priorities and resources were organized around export performance in the Republic of Korea was striking.⁷

The lessons learned from the import substitution experience, and some learned from the export promotion experiences in the Republic of Korea and Chinese Taipei, contributed to the emergence in the 1980s of a new strategy relying on outward orientation with minimal government involvement.⁸ The emphasis on exports as an engine of growth was drawn from the Asian experiences, while the strong scepticism vis-à-vis government interventions was largely inspired by the import substitution experiences. Anne Krueger's work on rent seeking and difficulties associated with the implementation of sophisticated policies supported the view that government failures were more likely than market failures and that an effective market mechanism would naturally emerge if policy-induced distortions were eliminated. Over the 1980s, the World Bank and the International Monetary Fund became strong advocates of an outward orientation strategy.

In the outward orientation strategy, the suspicion of targeted trade policy interventions was rooted in a general scepticism regarding the capability of governments to deliver appropriate policies. While most supporters of outward orientation would agree that some market failures provide a case for temporary intervention, they would stress difficulties with detecting and quantifying the externality, identifying the appropriate intervention and preventing the capture of policies, as reasons not to intervene. This scepticism was itself largely based on anecdotal evidence and stylized facts.

⁶ See the detailed discussion in Noland and Pack (2003).

⁷ See Noland and Pack (2003), Bruton (1998), Rodrik (1993).

⁸ The outward orientation development strategy is sometimes referred to as the New Orthodoxy or the "Washington Consensus".

During the 1990s, the outward orientation strategy came increasingly under fire. Disappointing results in Latin America and Africa, unsatisfactory performance in the transitional economies and the financial crisis in Asia raised doubts regarding the capacity of outward orientation to promote development. Empirical work regarding the growth benefits of openness looked more promising initially, but this work has been challenged more recently on methodological grounds.⁹ Interest in the linkages between trade reforms, inequality and poverty has also revived, and results have confirmed there can be no simple general conclusion about the relationship between trade liberalization and poverty.¹⁰ The debate on the interpretation and the lessons to be drawn from the East Asian experience has intensified.¹¹ The presumption that governments typically lack the capacity to implement trade policies has also been questioned.¹²

With this background of growing doubts, new strategies have been slow to emerge. A number of trends however can be identified. First, multilateral, regional and bilateral trade agreements are imposing increasing disciplines on traditional trade-policy instruments. Tariffs are progressively being reduced, quotas are largely prohibited and subsidies are disciplined. Governments make an increasing use of new trade policy tools, in particular export promotion and FDI attraction.¹³ Second, attention has progressively shifted from import policies to export policies. The World Bank's focus, for instance, has moved from the incentive framework associated with the tariff regime to removing policy and other obstacles that prevent producers from taking advantage of new market opportunities. This has been reflected in the Integrated Framework Diagnostic Trade Integration Studies. Third, the crucial importance of institutions and learning have been recognized. This has repercussions for the design of industrial development policies. Finally, economists are more nuanced and cautious with policy advice than they were before. Most importantly, the one-size-fits-all approach has been abandoned. A better understanding of the growth and poverty effects of specific trade and industrial policy interventions is warranted.¹⁴

Considerable divergence remains in views on the role of governments in industrial development strategies. Although the need in some instances for pro-active government interventions and industrial policies has been recognized, the World Bank continues to mistrust direct government selection of promising sectors and to favour the use of indirect mechanisms to promote technological upgrading, by means of attracting FDI and developing local technological capabilities.¹⁵ At the same time, a new strand of literature is exploring novel approaches to industrial policy that take into account the traditional arguments against interventions. One approach emphasizes information externalities entailed in discovering the cost structure of an economy, and coordination externalities in the presence of scale economies, and sees industrial policy as a discovery process where firms and the government learn about underlying costs and opportunities and engage in strategic coordination.¹⁶ Another approach emphasizes the role of recent shifts in the institutional mechanism of international trade such as the emergence of production and buyer-led networks and sees negotiations with multinational corporations as the main focus of industrial policy.¹⁷

⁹ See Hallak and Levinsohn (2004).

¹⁰ See Winters et al. (2004).

¹¹ See Noland and Pack (2003).

¹² See Rodrik (1995).

¹³ See Melo (2001).

¹⁴ See Hallak and Levinsohn (2004). Moreover, given the complex and ambiguous nature of the effects of certain interventions, careful impact assessments are recommended prior to the introduction of trade reforms. Such assessments may help design complementary and compensatory measures.

¹⁵ See de Ferranti et al. (2002).

¹⁶ See Hausmann and Rodrik (2003) and Rodrik (2004).

¹⁷ See Pack and Saggi (2006)

B. THE DEBATE ON INDUSTRIAL PROMOTION

1. Targeted support

For economists the case for government interventions rests on the existence of market failures. With perfect competition, small firms and well-functioning markets, prices give producers the appropriate signals for efficient resource allocation. Government support causes resources to be used in an industry beyond what is optimal. This is all the more so if part of the subsidized output is exported and contributes to a deterioration of the terms-of-trade. In the presence of market failures, the general theory of the second best applies. This theory argues that for every market distortion, there is an optimal policy intervention that addresses the distortion most directly and does not create additional distortions. If the optimal remedy is not available to the government for some reason, other measures can be taken which indirectly address the distortion. Thus, for each market imperfection, it is necessary to identify the optimal intervention but also to consider which other measures might be available to improve efficiency.¹⁸

Lall (2002) proposes a useful typology of export promotion policies that can be applied more generally to industrial policy interventions. He first distinguishes between two groups of policies according to the nature of the market failure they are supposed to address. The first group includes "permissive policies", that is policies aimed at removing distortions created by policies that deter exporting or more generally the development of new activities. The second group includes "positive policies" to overcome structural market deficiencies in the creation of new advantages. The first group includes mainly policy reforms aimed at reducing macro policy mismanagement and uncertainty, make exporting profitable and minimize transaction costs to producers. Permissive policies are fairly uncontroversial.

Positive policies aim mainly at encouraging new activities. They can be subdivided into *functional* and *selective* interventions. Functional interventions are market friendly interventions aimed at addressing market failures without directly modifying resource allocation between specific activities. Examples of functional policies would include improvements in physical infrastructure, human capital or the functioning of capital markets, or the provision of information and technical support to potential exporters. Functional policies are also relatively uncontroversial. Selective interventions are the most controversial. They intend to influence resource allocation, through specific subsidies or protection, credit direction, creation of specific skills or technologies, promoting large firms or attracting specific investors, etc.

The mainstream view of development, often termed the "market friendly" view, would accept the need for *permissive* and *functional* interventions but reject the use of *selective* interventions.¹⁹ In the mainstream view, only the failures that call for functional interventions should be addressed. Failures that require selectivity are either unimportant or cannot be remedied. In other words, either the cost of selective market failures is low enough not to matter, or it is lower than the cost of government failures. This view has been criticized on the one side by those who think that getting the prices right is sufficient for an economy to reach optimality and that neither functional nor selective measures are justified, and on the other side by those who think that market failures are important and pervasive, that effective remedies can be devised and who see a crucial role for governments including through selective interventions.²⁰

¹⁸ See Grossman (1990).

¹⁹ See Noland and Pack (2003) for a recent restatement of the mainstream market-friendly position.

²⁰ A "strong" neo-classical position would accept only permissive interventions while a structuralist or revisionist view would support certain selective interventions.

The main arguments that have been put forward to justify selective government interventions in developing countries involve information and coordination problems. Informational barriers to entry and learning spillovers among producers lie behind the most familiar variant of the classic infant-industry argument. This is the case where productivity gains resulting from learning-by-doing accrue partly to firms other than the one that actually undertakes the manufacturing. More recently, spillovers associated with learning about the suitability of local conditions for production have drawn considerable attention in relation to diversification. Information problems faced by consumers have also provided arguments for interventions in support of infant industries. When consumers have imperfect information on foreign products, a firm's investment aimed at building reputation will benefit others.²¹ Finally, information problems faced by lenders on capital markets have played a prominent role in the infant industry debate. Because of information asymmetries, equities markets do not finance much new investment. Credit mechanisms then become the primary vehicle for raising capital. But credit markets are often characterized by credit rationing.²²

Coordination problems, which may justify an intervention, could arise in the presence of interdependent investments related to vertical linkages, large-scale economies and restrictions to trade. Entry by a new producer may be inhibited by the lack of a purchaser or of a low-cost producer for an important input.²³ More generally, markets play a central role in coordinating economic activities through the price system. But information is also conveyed to economic agents by various other institutions that are relatively well developed in the rich countries. Institutional arrangements for cooperation and information exchange are typically weaker in developing than in developed countries. Hence there may be a greater role for governments to create institutions and facilitate coordination.²⁴

Other arguments for selective industrial policy interventions that have been considered but could be seen as less specific to development, relate to situations where research and development generate knowledge spillovers or where imperfect competition allows governments to pursue strategic trade policies. These cases will not be examined in this paper.

The first infant-industry proponents at the end of the eighteenth century stressed that production costs for newly established industries within a country are likely to be initially higher than for well-established foreign producers of the same product, who have greater experience and higher skill levels. That alone, however, would not justify a government intervention for efficiency purposes. If costs are expected to fall sufficiently during the learning period to generate a discounted surplus of revenue over costs after a reasonable period of time, firms should be able to raise the funds they need to cover the losses incurred during the learning period in the capital market. If this is impossible, it is likely to be because of some failure of the capital market, a case that is considered below.

The infant industry argument must rest on the existence of knowledge spillovers or externalities associated with the learning process.²⁵ The theoretical case for government intervention in the presence of knowledge spillovers that arise from learning-by-doing is fairly straightforward. Such spillovers arise when the new producer who incurs costs in order to discover the best way to produce a particular product, cannot appropriate all the productivity gains that are generated. If information becomes freely available to potential competitors, competition will raise factor prices or compress the product's price to a point where the initial firm cannot recover its total costs. Without government intervention, individual entrepreneurs will not have adequate incentive to invest in knowledge acquisition. When private marginal costs of production exceed social marginal costs, because other firms benefit from a given firm's output, then an output subsidy is the policy instrument of choice.

²¹ See Grossman and Horn (1988) for instance.

²² See World Bank (1993).

²³ Lall (2002).

²⁴ See World Bank (1993).

²⁵ See Noland and Pack (2003) for a list of externalities related to the learning process.

Trade policies are next best, as they promote learning but also introduce a negative volume of trade effect.²⁶

The controversy over this variant of the infant-industry argument does not centre on analytical issues but rather on empirical and practical matters. One question relates to the pervasiveness of such situations. While learning-by-doing spillovers are often assumed to be pervasive, available evidence is relatively scarce and does not provide a very clear picture. The small existing body of work on the estimation of learning effects suggests that the importance of such spillovers might differ among industries. There is evidence that learning spillovers are present in nuclear power plant construction, wind-turbine production, the production of various memory chips and the chemical processing industry.²⁷ On the other hand, evidence suggests that there were little or no spillovers in Japanese steel in the 1950s and 60s and across American shipbuilding yards.²⁸ Another empirical study, which examined learning-by-doing in the early American rayon industry shows that there can be considerable differences across firms in their ability to benefit from other firms' learning-by-doing.²⁹ Evidence regarding less developed countries is even more difficult to interpret. Based on their review of research in less developed countries, Bell et al. (1984) found little support for the claim that firms entering a new activity can learn costlessly from the experience of others, while Tybout (2000) in a similar but more recent review, notes that the best documented case of spillovers in less-developed countries is the Green Revolution in Indian agriculture.

The second matter of controversy relates to the administrative and fiscal feasibility of the policy interventions, their informational requirements, and their political economy consequences. These issues are addressed below.

Information problems faced by consumers have also provided arguments for interventions in support of infant industries. If industry pioneers have already developed their reputations among consumers, potential competitors offering similar quality products at similar or even lower costs may not be able to penetrate the market. The argument that information barriers might preclude efficient entry would seem to have relevance for a number of manufacturing and services industries.³⁰ Depending on their assumptions, different analyses have strikingly different policy implications. Under the assumption that firms do not choose the level of quality of their products, subsidies can be shown to improve domestic welfare.³¹ However, under the assumption that firms can choose their products' attributes, output subsidies, which affect only the price that a firm receives for its product, will not solve the market failure. This is because subsidies reward reputable firms and fly-by-nights equally, and do not alter the incentives that firms face in choosing among these strategies. In such a case, policies that provide a differential incentive for firms to produce goods of higher quality such as minimum quality standards would be preferable.

Coordination failures have long been seen as an argument for government intervention.³² Recent research suggests that coordination failures in taking the necessary actions to increase sector-wide productivity may seriously hamper development as they impede the emergence of activities where industry-specific local externalities are important.³³ Because production and investment decisions in the upstream and downstream parts of industry are often interdependent, in the absence of

²⁶ See Grossman (1990).

²⁷ See Zimmerman (1982), Hansen, et al. (2003), Neij et al. (2003), Irwin and Klenow (1994), Gruber (1998), Lieberman (1984).

²⁸ Ohashi (2004) finds little intra-industry knowledge spillovers in Japanese steel in the 1950s and 60s while Thornton and Thompson (2001) find strong learning effects but small spillovers across shipbuilding yards in the US.

²⁹ See Jarmin (1994).

³⁰ See Grossman and Horn (1988).

³¹ See Bagwell and Staiger (1988) or Mayer (1984).

³² See World Bank (1993) for instance.

³³ See Rodriguez-Clare (2005).

coordination, profitable new industries can fail to develop. Building an airport in a region that has no hotels would not lead to any traffic, but hotels without a regional airport may not be profitable either. Similarly, a large scale irrigation project would not be profitable if there are only few farms using modern technologies, but using such technologies is profitable only if there is adequate irrigation.³⁴ Two conditions are necessary for coordination failures to arise: new industries must exhibit scale economies and some of the inputs must be non-tradable or require geographic proximity.³⁵ Under certain circumstances, coordination can be achieved without government intervention but a government role may be required in some cases.

The most efficient intervention in the presence of coordination failures is not a production subsidy. There is no need for production subsidies because all the investments, if they are made, are profitable. The purpose of the government's intervention is to ensure that all interrelated investments are made. This can be achieved through pure coordination or through *ex-ante* subsidy schemes. Examples of such *ex-ante* subsidies include investment guarantees or implicit bail-outs. One problem is that measures like these induce moral hazard and are prone to abuse.³⁶ Note that because all industries in principle have characteristics that could generate clusters, but at the same time many industries can operate in the absence of clusters, the appropriate policy should not be targeted on particular sectors but rather be targeted at the activity or technology that would contribute to solving the coordination failure.

Capital market imperfections are often seen as an obstacle to industrial development. Capital markets take on a critical role in the process of entry into a new industrial activity. They first intervene in one of the versions of the infant industry argument. In the presence of learning-by-doing, so this argument goes, a producer who could make profits in the long run may not enter the market due to higher costs in the early years than those of incumbent firms. Over time, profits would cover the initial losses but in the absence of well-functioning capital markets, the producer would not have access to the funds he needs. Economic theory tells us that the first best solution in this case is to correct the credit market imperfections directly. For instance, equity injections through venture capital firms would be preferable to protection or production subsidies.³⁷

Capital market imperfections have also been used to justify credit subsidies and subsidized credit insurance, in particular for exports. The process of entry into a new industrial activity can only be efficient if producers can borrow funds at rates that reflect social cost plus a reasonable premium related to the risk associated with the new activity. However, capital markets are among those most affected by information problems. Equity markets are often weak or absent in developing countries, while credit is often rationed and seldom allocated to the highest bidder. The reason for this is that bidders are bidding promises while lenders are interested in the actual rather than the promised return. As a result, capital is allocated by a screening and evaluation process which is quite different from the one that would be associated with perfect markets. If for some reason the private cost of capital is higher than its social cost, the argument goes, governments must subsidize credits. If on the other hand, some information failure prevents a correct evaluation of the risk associated with new activities, the government should provide subsidized credit insurance.

In many countries government agencies exist to assist domestic companies in financing the export of domestic goods and services to international markets. These agencies include the Italian SACE, the French COFACE, the US Ex-Im Bank, the Japanese NEXI and the German EULER HERMES. They

³⁴ Rodriguez-Clare (2005) provides several other examples of national and sector level coordination failures.

³⁵ See Rodrik (1996). The cluster approach to development is based on a similar idea. See also the discussion of those conditions in Pack and Saggi (2006).

³⁶ Moral hazard is defined as an insurance-induced alteration of behaviour that makes the event insured against more likely to occur.

³⁷ Stiglitz (1993) discusses the role of governments in financial markets.

provide, for instance, working capital guarantees (pre-export financing); export credit insurance; and loan guarantees and direct loans (buyer financing). In many instances these activities result in the provision of subsidized insurance of export credits and/or the provision of credit finance at subsidized interest rates.

From a theoretical point of view, this argument is not completely straightforward. Consider first the case for subsidized insurance. The case for intervention would need to rest on potential insurers' irrational aversion to risk or their systematic overestimation of the risk associated with new activities. It would also rest on the assumption that the government is better able than the private sector to assess risk. Economists do not see this case as very compelling.³⁸ Even the more sophisticated arguments, where the absence of an insurance market is explained by moral hazard or adverse selection, are not regarded as compelling because governments are not deemed to have a particular advantage over the market in dealing with those informational problems.³⁹

Similarly, in the case of credit subsidies, it has been argued that so far no compelling case for such subsidies has been articulated.⁴⁰ Grossman (1990) examines the precise market interactions that might give rise to a divergence between private and social discount rates. He shows that it may be difficult if not impossible for the government to know *ex ante* whether to encourage or discourage investments in some new activity to compensate for the biases stemming from imperfections in private capital markets. His conclusion is that a cautious policy response to alleged capital market imperfections seems advisable.

2. Exports

(a) Export spillovers

The arguments discussed so far do not apply specifically to export industries. In principle, market failures may impede the development of any type of industry. In reality, industrial policy interventions have increasingly been targeted at export industries and have increasingly been aimed at improving export performance notably through diversification. This subsection focuses on the reasons for targeting specifically exports industries.

Traditionally, economists have argued that more open economies grow faster. This idea was largely based on the argument that openness improves resource allocation. However, realising that in models of international trade, opening up generates a static improvement in output but does not generate additional growth, economists looked for other arguments. Theoretical models and macroeconomic, mainly cross-sectional, empirical evidence so far failed to provide a definite and positive answer to the question of the linkage between trade and growth.

In the 1990s, another line of research emerged which uses newly collected plant level data to explore the specific channels by which trade may influence economic growth. The main finding of this strand of research is that exporters are more productive than non-exporters.⁴¹ This finding raised considerable interest among researchers who started investigating the causality link between exporting and higher productivity. Overall, the results of the plant-level data based studies provide stronger support to the idea that firms self-select into the export markets than to the learning-by-exporting hypothesis. All of the 16 studies surveyed by Lopez (2005) find that firms self-select. A subset of

³⁸ See Grossman (1990) and Panagariya (2000).

³⁹ See Panagariya (2000).

⁴⁰ See Panagariya (2000) and Grossman (1990).

⁴¹ See Lopez (2005), Greenaway and Kneller (2005), Wagner (2005) and Clarke (2005) for a discussion of the new micro-evidence on trade and growth. See more specifically Mengistae and Pattillo (2004) and Bigsten et al (2004) for evidence on Africa.

those simultaneously supports both hypotheses but in a majority of cases the support for learning-by-exporting tends to be weak.

The two studies that examine African firms find evidence consistent with both self-selection and learning-by-exporting. Analyzing a panel of manufacturing firms in 9 African countries, Van Biesebroeck (2005) finds that while self-selection matters, feedback from exporting to productivity is important too and that this may reflect the special economic conditions that prevail in African economies, including small domestic markets and poorly functioning credit markets. The data show that exporting firms are more productive and that exporters increase their productivity advantage after entry in the export market. African exporters do not only have higher post-entry productivity levels, but also higher post-entry rates of productivity growth. This result, which supports the learning-by-exporting hypothesis, is robust to the choice of econometric methodology. Whatever the methodology used, exporting is found to raise productivity by between 25 and 28 percent. Half of this effect seems to be attributable to economies of scale. Because of the small size of their domestic markets, exporting is crucial for African firms to exploit economies of scale. The results are also consistent with the hypothesis that exporting allows African firms to learn about production technologies used in the rest of the world. Again, this may be particularly important for African firms given the significant lag with which best practice production technologies are adopted in Africa.

The micro-evidence on the export / growth linkage discussed so far does not provide a strong case for targeted export promotion. Whether firms learn by exporting or self-select is not determinative. Only if there were reasons to believe that without government intervention the number of exporters is sub-optimal, would there be a case for government intervention. The fact that firms learn-by-exporting does not justify government support in itself. As discussed, if costs are expected to fall sufficiently during the learning period, firms should be able to raise the funds they need to cover the losses incurred during the learning period in the capital market. If this is impossible, it may be because of some failure of the capital market. A similar argument would apply if self-selection plays a significant role in driving export market entry. Lopez (2005) argues that self-selection may be "conscious" in the sense that firms may increase their productivity because they plan to enter export markets. In this case, any policy that affects the decision to engage in exports may simultaneously influence firm-level productivity.

A case for targeted support to some export industry must rely on the presence of a market failure.⁴² For instance, in the presence of spillovers from exporting, producers will be reluctant to start exporting in the absence of government interventions. An export subsidy granted to pioneer exporters may improve upon the market outcome. Other than direct export subsidies, this argument has been used to justify programs to subsidize and coordinate the exploration of foreign markets.⁴³ This argument in favour of export promotion however is very controversial. One source of controversy relates to the existence of export spillovers. Empirical evidence is thus of crucial importance.

Most of the evidence relates to potential technological and information spillovers from exporting. Aitken et al. (1997) examine whether locating near other exporters increases the probability of exporting, using data on 2,104 Mexican plants over the period between 1986 and 1990. They find that the probability that a domestic plant exports is positively correlated with the proximity of other exporters, but only if the latter are multinationals. As a consequence, the authors highlight the importance of the presence of multinational enterprises in export processing zones. Greenaway et al. (2004) and Ruane and Sutherland (2004) find similar results. Clerides et al. (1998) find that the costs of breaking into foreign markets are negatively related to the number of firms that have already done so. However, Bernard and Jensen (2004) and Barrios et al. (2003) do not find any evidence that export activity increases the probability of exporting.

⁴² See Panagariya (2000).

⁴³ See Rodriguez-Clare (2004).

A few studies also looked for productivity spillovers from exporting. Most of them focus on foreign-owned exporters and on intra-industry aspects of spillovers.⁴⁴ Clerides (1998), for instance, using Colombian data, finds that high export activity is not, in general, associated with lower production costs. Alvarez and Lopez (2006) is the only study that focuses on inter-industry or vertical spillovers through forward and backward linkages. Using Chilean data, these authors find evidence of positive productivity spillovers from exporters to their suppliers and of intra-industry productivity spillovers. They do not find, however, evidence of forward spillovers. When they distinguish between foreign owned plants and domestically owned plants, they find that foreign affiliates generate forward, backward and intra-industry spillovers while domestic plants generate backward spillovers and possibly some intra-industry spillovers.

(b) Discovery and diversification

One strand of recent theoretical and empirical research on industrial development policy focuses on a particular information market failure that is slightly different from the ones discussed so far. It is related to informational externalities in the entrepreneurial process of discovering new profitable investment opportunities.⁴⁵ In open economies, new profitable investment opportunities would almost naturally involve export products. Diversification and the discovery of new opportunities for profitable production or export are closely linked to development. Empirical work by Imbs and Wacziarg (2003) shows that the relation between diversification and development has the shape of an inverted U. Diversification first increases with development but there exists a point, relatively late in the development process, where countries start specializing again. It is not clear whether the discovery activity simply occurs with economic growth or if it is a driver of subsequent growth.⁴⁶ There is also a considerable body of policy literature that emphasizes the benefits of export diversification.⁴⁷

Diversification of the productive and export structure requires learning what one is good at producing, which itself involves the "discovery" of an economy's cost structure. Producers must experiment with new product lines. They must discover whether it is cut flowers, soccer balls or computer software that can be produced at low cost. The problem is that this activity has a great social value but that the entrepreneur who makes the discovery can only appropriate a small part of its social value. If the entrepreneur fails in his venture, he bears the full cost of his failure. If he succeeds, others will follow and he will have to share the value of his discovery. It is important to distinguish discoveries as defined in this paragraph from innovation and R&D. What is involved here is not inventing new products or new processes but "discovering" that a certain product, already well established in world markets, can be produced at home at low cost.⁴⁸ This typically involves technological tinkering to adapt foreign technology to domestic conditions.⁴⁹

In the presence of informational externalities of the type just described, laissez-faire leads to underprovision of "discovery" and governments need to play a dual role. They need to encourage entrepreneurship and investment in new activities *ex-ante*, but impose discipline and stop unproductive activities *ex-post*. A comparison of various types of interventions suggests that trade protection is not an efficient way of promoting self-discovery, while both export subsidies and government loans and guarantees have benefits and costs.⁵⁰ Export subsidies increase the returns to success while government loans and guarantees lower the losses in case of failure. Export subsidies

⁴⁴ See Alvarez and Lopez (2006).

⁴⁵ See Hausmann and Rodrik (2003).

⁴⁶ On this last point, see Klinger and Lederman (2004).

⁴⁷ See the introduction by G.K Helleiner in Helleiner (2002).

⁴⁸ See Hausmann and Rodrik (2003) and Hoff (1997).

⁴⁹ In their survey of technological transfer, Evenson and Westphal (1995) list adaptations such as "technological efforts related to raw material control, product and process quality control, production scheduling, repair and maintenance, changes in production mix, etc."

⁵⁰ See Hausmann and Rodrik (2003).

do not discriminate between innovators and copycats, while government loans and guarantees do. But loans and guarantees distort risk assessment.

Hausmann and Rodrik (2003) provide indirect empirical evidence in support of the argument that inadequate incentives to invest in learning what one is good at producing hamper the development of non-traditional activities. They provide support from the literature on international trade, technology transfer and economic history for three separate propositions. The first proposition is that there is a large element of uncertainty about what a country will be good at producing, beyond broad aggregates such as "labour-intensive manufactures". Second, there are significant difficulties entailed in importing technology off-the-shelf and successful local adaptation requires considerable domestic tinkering. Third, domestic imitation often proceeds rapidly when the first two difficulties are overcome, bidding away the rents of the early incumbents.

3. Implementation issues

Much of the discussion regarding the merits of industrial development policies has focused on the administrative and fiscal feasibility of government interventions, their informational requirements, and their political economy consequences. Economists typically agree on the theoretical case for government intervention in the presence of market failures, such as those discussed above, although there is some disagreement regarding the empirical relevance of the cases that have been identified. However, as already mentioned, there is a clear divergence of views on the feasibility issue, which is closely related to the divergence in the interpretation of the East Asian success stories and other experiences. This subsection considers the feasibility issue while the next one summarizes the debate on the lessons to draw from existing experiences.

Various arguments against selective interventions have been discussed in the literature. Among the main arguments are that developing countries lack the competent bureaucracies to render such interventions effective, that governments cannot pick the winners and that interventions are prone to political capture and corruption. The following paragraphs discuss these arguments in more detail.

First, the implementation of selective interventions requires a considerable amount of information and skill.⁵¹ As discussed, domestic market failures should be corrected by domestic policies aimed directly at the source of the problem. Governments thus need to have fairly detailed information about the nature and the location of market failures that need to be addressed. For instance, governments would need to identify industries where domestic producers would have a comparative advantage but where learning spillovers prevent the development of a local industry. However, market failures such as learning spillovers or coordination problems are typically hard to identify precisely, so that it tends to be difficult to be sure about the appropriate policy response. There is no reason to assume that the government is well informed or even that it is better informed than the private sector. Moreover, it has been shown that the administration of export subsidies in particular tends to be "organizationally demanding".⁵² Technical and administrative skills are needed to understand and design strategies and interventions, to implement and improve them over time, to communicate with the private sector and to ensure that agency problems are overcome.⁵³ Such skills are often in short supply in developing countries.

Various authors consider that information and skills problems should not be exaggerated. In their view, governments have to decide upon which path they set the economy, but they do not need to assess the costs and benefits of different outcomes. More importantly, they believe that even good

⁵¹ See Pack and Saggi (2006).

⁵² See Levy (1993).

⁵³ See Lall (2002).

decision-making by governments necessarily involves errors.⁵⁴ According to Rodrik (2004), the key is to make sure that the State and the firms work together. Public officials need to be able to elicit information from the business sector on an ongoing basis about opportunities, constraints, technological and market parameters and local capabilities. The problem is that, as discussed below, with increased proximity between the government and private interests the risk of capture increases.

Second, industrial policy is open to political capture, corruption and rent-seeking. The neo-classical political-economy literature on trade policy shows how government intervention is likely to produce inefficiencies. Decision-makers in the public sector are modelled as individuals who maximize their welfare and not necessarily the welfare of society. Several conclusions emerge from this type of analysis.⁵⁵ Because discretionary behaviour by government officials comes at a cost, a rules-based policy regime which entails high degrees of pre-commitment is advantageous. Moreover, policy stability and predictability help coax the desired response from the private sector. Finally, policies that create rents also create rent seekers. Bureaucrats thus have an incentive to create rents. These conclusions lead to an obvious conclusion: policy interventions should be avoided and the role of the government should be minimized, but in any case, private groups should be kept at arms' length from the government. The risk of political capture is even higher for selective interventions with all the difficulties associated with their implementation. As regards the infant industry argument, political economy models suggest that while the infant industry argument is typically an argument for temporary interventions, policies tend to get captured by special interests and become permanent.

While most economists would agree that the results from these "public choice" models are useful to understand the effect of industrial policies, they would not all agree with the broad policy conclusions that have been derived from those models. The latter are that government capabilities can be improved, that the degree of selectivity can be adapted to the level of capabilities, and that governments can be helped to intervene efficiently.⁵⁶ Rodrik (1993) suggests that academic economists' views on state capabilities is superficial and that there is much to be learned by undertaking systematic analytical studies of state capabilities. Rodrik (2004) goes one step further and proposes an institutional framework for "redeploying industrial policy in a more effective manner". The principal-agent model, with the government as the principal and the firms as its agent does not work well, notwithstanding the articulation of an optimal policy that aligns the firms' behaviour with the government's objectives at least cost. Ideally, one would need a more flexible form of strategic collaboration between the public and private sectors, designed to elicit information about objectives, distribute responsibilities for solutions, and evaluate outcomes as they appear.

There are also reasons to believe that from the point of view of implementation, export promotion has some advantages compared with import substitution. Panagariya (2000), while generally in favour of *laissez-faire*, points to two reasons to prefer export promotion to import substitution on political economy grounds. The first is that chances to pick an industry where the country has a comparative advantage are better and the second is that the costs of subsidies, which show up in budgets, are more transparent than those of tariffs. Along similar lines, Noland and Pack (2003) come to the conclusion that the use of export performance to measure success rather than the provision of open-ended protection for inefficient sectors explains why Asian industrial policies have a better record than import substitution experiences elsewhere. They note that as a purely practical matter, performance in world markets was probably the criterion least amenable to rigging by the firms or their bureaucratic counterparts.

Two further points have been raised against the use of selective policies. One is that most interventions, and in particular subsidies, use scarce resources.⁵⁷ Yet the opportunity cost of industrial

⁵⁴ See Stiglitz (1996).

⁵⁵ See Rodrik (1993) and Shapiro and Taylor (1990).

⁵⁶ See Lall (2002).

⁵⁷ See Noland and Pack (2003).

policy interventions and the deadweight loss often imposed on other sectors by taxes used to pay for subsidies are typically not taken into account in policy assessments. This is a very general argument but not necessarily one that would condemn all selective interventions. Clearly, resource costs should be taken into account. The other point is that multilateral disciplines restrict the use of some selective interventions. And more generally, in the case where interventions have a negative impact on third parties, the risk of retaliation should be taken into account.

4. Empirical evidence

Policy-makers in developing countries often consider subsidies a useful tool to develop certain industries, with industries in this context referring to activities in the agriculture, manufacturing or services sectors. This objective has often been linked to the infant industry argument, i.e. the view that in the presence of more developed countries, less developed countries cannot develop new industries without state intervention. It has been argued that many of today's industrialized countries successfully applied infant industry promotion policies in early stages of their development. The role of government intervention in East Asia's industrial success has also received a lot of attention in the literature. Critics argue that the most impressive development records are related to a *laissez-faire* approach, keeping government intervention to the minimum. This subsection will survey the relevant literature and present examples illustrating both sides of the argument.

As already mentioned, the experiences of East Asian economies with industrial policy and the issue whether they might teach any lesson to other developing countries figure prominently in the debate about the role of government intervention in development policies. Given the prominent role played by subsidies in East Asian export promotion strategies, these experiences are particularly relevant. This subsection does not survey the wealth of literature on this topic – others have done it – but rather presents the main arguments in the debate.⁵⁸ Some of the principal results in the literature concerning other, more recent experiences are also presented.

Early explanations of the growth performance of the Republic of Korea and Chinese Taipei emphasized the importance of getting the fundamentals right and outward orientation with few price distortions. In the 1980s, however, several scholars pointed out that these two economies had also used selective interventions, such as incentives to individual sectors, restrictions on trade and inward FDI and tight control of the financial sector. In 1993, in a Report entitled "The East Asian Miracle", the World Bank proposed a compromise interpretation. It acknowledged the important role of both getting the fundamentals right and export-push strategies. The Report suggested that in Japan, the Republic of Korea and Chinese Taipei, incentives were neutral on average, with export incentives offsetting substantial remaining protection. Firm-specific export targets were also part of the Republic of Korea's export promotion strategy, but actual exports often exceeded the targets. Governments made efforts to promote specific export industries. They also gradually reduced protection, and provided institutional support to exporters and a duty-free regime for inputs used in exports. The World Bank found that "... in some instances, government interventions resulted in higher and more equal growth than otherwise would have occurred. However, the prerequisites for success were so rigorous that policymakers seeking to follow similar paths in other developing economies have often met with failure." The Report mentions two prerequisites: institutional mechanisms which allowed the setting of clear performance criteria for selective interventions and to monitor performance, and mechanisms that prevented the costs of interventions becoming excessive. The benefits from using exports as a performance yardstick are strongly emphasized in the report.

Partly catalyzed by the publication of "The East Asian Miracle", an enormous amount of empirical research on the effect of selective industrial policy has since been conducted. Noland and Pack (2003) survey this research and conclude that, on balance, the weight of the evidence derived from

⁵⁸ See Hernandez (2004), Noland and Pack (2003) and Lall (2002).

both econometric and input-output studies indicates that industrial policy made a minor contribution to growth in Asia. Empirical work on Japan, the Republic of Korea and Chinese Taipei fails to find links between interventions and sectoral productivity growth or trade performance. Available evidence also fails to prove that the rate of productivity growth in "neglected" sectors was increased indirectly by the growth of the favoured sectors. Evidence suggests, however, that in both Japan and Chinese Taipei the pattern of interventions was driven more by political economy considerations, such as sectoral employment, the presence of large firms, or the degree of sectoral concentration, than by dynamic comparative advantage.

The main factors that contributed to the "Asian Miracle" were good macroeconomic policy, including limited government deficits, low rates of inflation, and very stable real exchange rates.⁵⁹ These factors were conducive to high rates of saving and investment, which played a critical role in the growth story. Another critical component was the bias towards exporting. Noland and Pack mention four other reasons why the East Asian experience should not be seen as a justification for selective interventions. First, the policies deployed were exceptionally complex and were implemented under conditions of political stability by highly competent bureaucracies. Second, the financial crisis in the late 1990s should be factored into the assessment of the policies. Third, the tightened rules of the multilateral system would make it more difficult to use some of the instruments that were used by Japan, the Republic of Korea and Chinese Taipei. Fourth, the experiences of Hong-Kong, China and Singapore show that there are alternatives to selective interventions.

Rodrik (2004) has a different interpretation of the East Asian experience. He argues that industrial policies have played a role in most non-traditional export success stories around the world, notably in East Asia. The fact that the literature provides numerous examples of success and failure stories of individual projects fits very well with his argument that even under optimal incentive programmes, some of the investments that are promoted will turn out to be failures. Optimal cost discovery requires equating the social marginal cost of investment funds to the expected returns of projects in new areas. The realized return on some of the projects will necessarily be low or negative, to be compensated by the high return on the successes. Lall (2002) discusses various indicators of the performance of East Asian Tigers and loosely relates them to the policies they pursued. He argues that the export success of the Tigers suggests that they "did something right" in mounting their selective interventions. However, he also discusses extensively the conditions that made this success possible and notes that selective interventions could work so well only because the institutional setting was appropriate. His conclusion is that "when all is said and done, there does remain some scope for the use of selective policies to promote exports, but its exact scope still has to be delineated."

Chang (2002) also supports the use of activist industrial policies. He examines the experiences of a range of now developed countries including Britain, the United States, Germany, France, Sweden, Belgium, the Netherlands, Switzerland and Japan and considers what kinds of industrial, trade and technology policies they used in the early stages of their development. He shows that almost every one of those countries used infant industry protection and other activist industrial policies when they were catching-up economies. There was a considerable degree of diversity among those countries in terms of their policy mix. Other tools that were used include export subsidies, tariff rebates on inputs used for exports, conferring of monopoly rights, cartel arrangements, directed credits, and support for R&D. Chang, however, does not provide evidence regarding the effect of activist policies on economic performance.

Evidence concerning the effects of export subsidies and other export promotion measures is also mixed. There is evidence that selective governmental intervention in support of particular forms of non-traditional exporting activity – both through special incentives and through other types of encouragement and support, including specific training and research, credit, and marketing assistance

⁵⁹ See Noland and Pack (2003).

– were important to the development of non-traditional exports in Chile and Costa Rica.⁶⁰ In Costa Rica and to a lesser extent in Chile, active policies to encourage FDI into "priority" sectors played a role.

In other regions, export promotion policies were less successful. Ndulu et al. (2002) describes export promotion programmes in Tanzania and assesses their impact. In the post-1984 period, a combination of macro-policy incentives and specific policies led to an initial swift response and general upswing in non-traditional exports. For various reasons related to difficulties with the implementation of the measures and more general supply-side constraints, however, the momentum was not sustained. Implementation problems were also identified in other African countries. Reviewing the system of export incentives in 13 African countries, Hinkle et al. (2003) conclude that no sample country came anywhere close to international best practice for export incentives.

Panagariya (1999) reviewed cases of export subsidies in Asia and Latin America where scanty results did not seem to warrant the costs incurred during decades of export subsidization. Conversely, he found that as soon as trade liberalization and sound macroeconomic policies were pursued, good progress on exports was made despite a simultaneous and sharp reduction of export subsidies. Nogues (1989) reviewed a large number of country experiences and concluded that the diversification of exports towards manufactures occurred when policies of more open import regimes and relative stability in real exchange rates were pursued. In contrast, the provision of export subsidies was not a common element among successful countries. He found that subsidizing countries faced large opportunity costs and an additional waste of resources through rent-seeking activities induced in the private sector.

III. EVIDENCE ON AFRICAN MANUFACTURING EXPORTERS

Section II examined the arguments in favour and against government interventions in support of specific activities from an economic point of view. It explained that the case in favour of such interventions hinges upon the existence of some market failure. It also argued that economists tend to agree on the fact that permissive policies and functional policies can promote development but that selective policies are controversial. It finally showed that part of the controversy regarding selective policies relates to implementation related issues. This section considers the case for supporting African exporters in the light of the discussion in Section II.

The section examines the factors that prevent African firms from entering export markets. A number of recent studies using firm-level data analyze firms' export behaviour, providing useful information on factors impeding export development. The section starts with a discussion of diversification which compares different views on the determinants of Africa's comparative advantage. The second subsection surveys firm-level evidence on the decision to export while the third focuses on export supply response capacity constraints.

A. DIVERSIFICATION

There seems to be a consensus among development specialists that growth involves the introduction of new, higher value added activities and products rather than simply the expansion of old ones. They all see diversification as key to Africa's development.⁶¹ Diversification of exports is seen as equally

⁶⁰ See the essay by Agosin (2002) on Chile and the essay by Rodriguez (2002) on Costa Rica in Helleiner (2002).

⁶¹ See Eifert et al. (2005), Helleiner (2002) World Bank (2000).

vital given the need for export receipts and the size of African economies.⁶² The dominant view is that in the initial stages, diversification involves the relative contraction of low-productivity agriculture and a rise in the share of higher productivity activities. As already mentioned, economists tend to equate diversification with the expansion of manufacturing activities. The question then is what has impeded the development of manufacturing exporters in Africa. This is the focus of this Section. Note that the focus on the manufacturing sector in particular in the work using firm-level data is sometimes too narrow. Resource based activities such as agro-processing, fisheries, forestry, livestock, mining, and tourism, whether or not they correspond to proper diversification may also contribute their share to export growth. More attention should probably be paid to the role of those activities in future research.

There are various views about the determinants of Africa's comparative advantage for manufactured exports. A first view is that Africa cannot have a comparative advantage in labour-intensive manufactured products because of its higher endowment of natural resources compared to human capital.⁶³ This resource based view has been challenged by a number of scholars. Their views are based on the idea - elaborated in the 1980s as part of the new trade theory - that comparative advantage also depends on productivity and cost differences that do not derive from relative factor endowments. One approach contends that Africa's resource base is weaker than usually admitted and focuses on the role of geography. It argues that there is huge unexploited potential for coastal African countries for the growth of exports of labour-intensive manufactures, provided they concentrate economic activities along their coasts.⁶⁴ Another approach emphasizes institutional factors. It sees unusually high, and policy-induced, transaction costs as the main cause of Africa's comparative disadvantage in manufactured exports.⁶⁵ Yet another approach combines institutional, geographical, and other characteristics in the concept of "business environment". It emphasizes the importance of business environment related losses in depressing the productivity of African firms relative to those in other countries.

Elbadawi et al. (2006) find some empirical support for the second and third views. They estimate a firm level structural exports equation and its reduced form on observations on over 1400 manufacturing establishments sampled from 188 cities in 18 developing countries. Ten of the 18 countries and 61 of the 188 cities are African. The structural equation has two transmission mechanisms for the effect of economic geography on firm-level exports. One is an index of the cost at which firms acquire inputs and the other is a proximity weighted measure of the size of export markets. The results show that average exports per establishments are smaller for African firms than for businesses in other regions because African firms face more adverse economic geography and operate in a poorer institutional setting. African firms are located too far from wealthier international markets and they face steeper input prices.

Eifert, Gelb and Ramachandran (2005) criticize the results of previous studies which suggested that while factory floor productivity is relatively low in many African countries, it is more than compensated by lower wages and so does not explain the continent's weak manufacturing competitiveness. Their view is that the focus on factory floor productivity and labour costs is too narrow. They provide interesting evidence that indirect and business environment related costs are depressing productivity in the African manufacturing sector relative to other countries. Their story is that high indirect costs and losses lower the return to labour in production and thus depress labour demand and real wages. The concept of business environment is key to this approach. It can be defined as "the nexus of policies, institutions, physical infrastructure, human resources, and geographic features that influence the efficiency with which different firms and industries operate." It

⁶² See also the discussion of the linkage

⁶³ See for instance Wood and Mayer (1998).

⁶⁴ See for instance Bloom and Sachs (1998).

⁶⁵ See Collier and Gunning (1999).

affects the firm's costs of production and is often related to market structure and competition at the industry level.

Comparing firms' cost structures across countries and regions, Eifert, Gelb and Ramachandran (2005) find that in most African countries, energy and indirect costs account for 20 to 30 percent of total costs, often dwarfing labour costs. In comparison, they note that in strong performers such as China, India, Nicaragua, Bangladesh, Morocco and Senegal, the combination of energy and indirect costs represents 13 to 15 percent of total costs, around half the level of labour costs. A breakdown of indirect costs for each country shows the relatively large burden of infrastructure and public services – energy, transport, telecom, water, and security costs – that together account for more than half of all costs listed. These cost breakdowns do not capture all factors that affect competitiveness. Transport costs for instance are much higher in Africa than in Asia and Latin America which may bias the productivity estimates in upwards or downwards.

B. THE DECISION TO EXPORT

A number of studies using firm-level data have analysed the decision to export. The decision to export is typically modelled using a probit model with firm size, firm age, and various other firm characteristics as explanatory variables. One of the common findings is that in Africa as in other low and middle income countries, large enterprises are more likely to export than smaller enterprises.⁶⁶ Reasons for this could be the large fixed costs associated with setting up an international distribution or service network and the easier access to finance of larger firms. This finding corroborates the result discussed in Section II above that exporting is associated with higher productivity. The role of firm age is somewhat less clear. Using RPED data for Kenya, Söderbom (2004) finds an inverted U relationship between exporting to regional markets and firm age. Firm age however has no significant effect on exporting to non-African countries. This finding can be interpreted as evidence that general experience gained in the Kenyan market is more useful for regional than for international exports. The result that foreign owned enterprises are more likely to export than domestically owned enterprises in Africa seems fairly robust.⁶⁷ Foreign owned enterprises might have an easier access to international marketing and distribution networks and to finance.

Regression results also provide interesting evidence regarding regional and sectorial effects. Both Söderbom (2004) for Kenya and Rankin et al. (2002) for Ghana find relatively strong sector effects. For Kenya, the likelihood of exporting is highest among firms in the textiles, furniture and paper, all other factors held constant. For Ghana, firms in the wood sector and the machinery sector are much more likely to export than those in other sectors. These results should be interpreted with caution knowing that one of the most striking results of the work on firm data is that there is a large variation in performance within sectors and countries. Söderbom (2004) finds significant location effects in Kenya in 2003. The likelihood of exporting is highest in Nairobi, followed by Nakuru, Monbasa, Eldoret and lastly Kisumu. Rankin et al. (2000) however do not find significant location effects in Ghana.

There is some indirect evidence of the fact that entry costs might be relatively high in Africa. Using firm-level data from Ghana, Cameroon, Kenya and Zimbabwe from the early 1990s, Bigsten et al. (2004) find that past export status has a significant effect on the propensity to export.⁶⁸ For a non-exporting firm with the average characteristics, entering the export market raises the probability that this firm will export in the next period from less than one in five to more than one in two. Van

⁶⁶ See Clark (2005), Bigsten et al. (2004), Söderbom (2004), Söderbom and Teal (2003), Rankin et al. (2002).

⁶⁷ See Clark (2005), Söderbom (2004).

⁶⁸ Data collected as part of the World Bank's Regional Program for Enterprise Development (RPED).

Biesebroeck (2005) finds a similar result for a larger sample of 9 African countries. Söderbom (2004) finds that the most significant factor impacting on international exports, whether regional or to non-African countries is firm size. He interprets this as a reflection of the fact that firms face significant fixed costs to entering the export markets. Note however that firm size is positively correlated with productivity. The size variable may in fact capture the effect of productivity on the level of exports. Evidence such as the result in Bol (1995) that 80 percent of a sample of surveyed Tanzanian firms failed to export due to limited knowledge of export possibilities goes in the same direction.

What do we know about entry costs ? First, such entry costs are not specific to Africa. Roberts and Tybout (1997) for instance found similar indirect evidence of the presence of relatively high entry costs for Colombia. Second, there is no direct evidence on entry costs. It seems reasonable to think that firms which enter export markets need to undergo bureaucratic procedures, to set up a marketing department to investigate marketing channels, meet export orders, etc.⁶⁹ Also, there are reasons to believe that entry costs depend on the quality of the investment climate.

Bigsten and Söderbom (2005) see two major policy implications from the existence of high entry costs. The first is that with a fixed cost of entry, once firms have started exporting, they are likely to remain in the market for some time. The second is that with large entry costs, some firms that would potentially be internationally competitive will not enter the export market.

C. CONSTRAINTS

The overall picture of the African manufacturing sector that emerges from the firm-level evidence collected in the 1990s and early 2000s is one where a large number of very small and informal firms operate side-by-side with a small number of large-scale factories.⁷⁰ This size distribution of firms is often characterized as one with a “missing middle”. Careful examination of the relation between firm size, age and growth suggests that few small firms ever grow up to become large.⁷¹ This is of particular concern knowing that, as mentioned above, size is typically found to be the main determinant of the decision to export. Moreover, a large share of the small and micro firms in Africa is informal. In Kenya for instance, over the last fifteen years, the informal sector has experienced a rapid growth. Recent estimations show that this sector has grown 11% per year between 1998 and 2002. The share of the informal sector in total employment outside small-scale agriculture increased from 21.3% in 1989 to 75% in 2003, while that of formal employment declined from 76.2% to 23.6% over the same period.⁷² In fact, the size of the informal economy in Africa relative to the formal economy is the highest in the world and in large parts of Africa, informal employment as a percentage of non-agricultural employment is about three quarters.⁷³ This adds to the concern expressed above as investments in informal firms are generally modest and the sector hardly exports at all.⁷⁴

The business environment figures prominently among the factors that explain the structure of the African manufacturing sector. The size distribution of firms, with a large number of small firms and a small number of large firms results from two opposite processes. On the one hand, scarcity of local capital forces indigenous firms to start small and grow horizontally. On the other, foreign direct investment and capital intensive technologies allow some firms, usually foreign to start large and remain so. Various factors explain the absence of middle-sized firms. Small firms do not want to grow to avoid excessive regulation. Because of the low income level, demand is skewed towards simple items (baked goods, apparel, basic furniture, etc). Lack of credit is a problem for small firms.

⁶⁹ See Bigsten and Söderbom (2005).

⁷⁰ See Bigsten and Söderbom (2005).

⁷¹ See Bigsten and Söderbom (2005) and the references therein.

⁷² See Bigsten et al. (2004), Were (2006).

⁷³ See Söderbaum (2006).

⁷⁴ See Bigsten et al. (2004).

Wages increase significantly with the size of the firm.⁷⁵ The transport infrastructure is poorly developed, which creates pockets of demand that tend to generate small-scale localized producers.

Informality raises a number of specific problems. Investments in informal firms are generally modest and informal firms do not export, they pay low wages and do not contribute much taxes. While there is a growing body of research on business environment and investment climate, there has been relatively less specific work on barriers to formalization. Based on a review of the literature and of donor experience, USAID (2005) identifies seven categories of barriers to formalization: (i) regulatory barriers, (ii) administrative barriers, (iii) fees and financial requirements, (iv) corruption in public administration, (v) socio-cultural attitudes, (vi) lack of key business services, and (vii) criminality. Ishengoma and Kappel (2006) survey evidence regarding the factors hindering the growth of informal enterprises in Africa. They distinguish between internal factors such as limited human capital, lack of working capital, the utilization of obsolete technology or poor location; external factors, including limited access to financial services, limited access to business development services, limited market, poor supply of economic infrastructure and public services and complex and burdensome government regulations; and inter-firm factors which include limited and exploitative linkage relationships, and weak business associations. Bigsten, Kimuyu and Lundvall (2004) compare the benefits of informality with the costs and risks associated with operating outside the rule of law. They come to the conclusion that in the existing business environment, it can be rational for African entrepreneurs to stay informal, since it reduces their costs without having a detrimental effect on productivity. Using available evidence to compare the costs of formalization with the costs of informality Ishengoma and Kappel (2006) come to the same conclusion.

All the constraints that restrict investment, that impede the growth of small firms, that encourage informality also restrict the supply response of African manufacturing firms. As discussed, a number of those constraints relate to the business environment. Firm-level evidence sheds some light on key characteristics of the business environment in Africa. Bigsten and Söderbom (2005) summarize the main lessons regarding the high risk faced by entrepreneurs in Africa, the credit constraints, the high price of skilled labour and the small size of domestic markets. An important point that comes out of their overview is that uncertainty, which is closely related to poor governance, is a major factor in explaining why investment among African manufacturing firms has been low over the last decade. Widespread market failures imply that firms face a lot of holes in important markets, such as those for insurance and credit.

Beyond these more general constraints, the recent work on firm-level data also provides some evidence on more specific export constraints, which is surveyed below.

1. Macro and trade policy related constraints

Clarke (2005) shows that despite significant reductions in tariff and non-tariff barriers, government policies, including restrictive trade and customs regulations and poor customs administration continue to discourage exporting. Using enterprise-level data for eight African countries, he finds that whereas about 40 percent of enterprises involved in exporting claimed that customs and trade regulations were a serious obstacle in the eight African countries only 28 percent of exporters did the same in Asia.⁷⁶ Another finding is that non exporters were less affected than exporters with only 33 percent of them claiming that customs and trade regulations were a serious obstacle. Many surveyed companies reported that they had had to obtain import licenses during the two years preceding the survey. In

⁷⁵ See the discussion in Bigsten and Söderbom (2005).

⁷⁶ The data are from Investment Climate Surveys of manufacturing enterprises conducted by the Regional Program on Enterprise Development unit of the World Bank, in collaboration with local partners within countries. The surveys which were conducted in 2002 or 2003 cover Ethiopia, Kenya, Mali, Mozambique, Senegal, Tanzania, Uganda and Zambia. Firms from eight industries were included.

most countries the average delay to get a license was about one week and in some countries it was close to two weeks. Informal payments or gifts were often requested.

Clarke (2005) also presents evidence suggesting that export procedures can be burdensome. In Zambia, the only country in the sample where questions regarding export licenses and permits were asked, about half the exporters reported that they needed export licenses, most of the times for each consignment. About half the enterprises also reported that their exports were subject to special regulations. According to Nathan Associates (2002), exporters in Mozambique need to obtain a certificate of origin, a certificate of quality, a sanitary and phytosanitary certificate and an export license before each export transaction

Clarke (2005) also discusses evidence on the effect of duty drawback schemes. For the two countries where questions were asked about such schemes, Ethiopia and Zambia, exporters had to wait 74 and 93 days respectively between filing and receiving the funds. Similarly, delays for VAT refunds are sometimes very long averaging 44 days in Mozambique and 113 days in Zambia.⁷⁷

Bigsten et al. (1999) find no significant effects on exports of changes in the Dollar index, which measures the degree to which the domestic prices of non-tradable goods are above or below normal international levels controlling for the country's income level.⁷⁸

2. Deficiencies of trade related infrastructure

In Kenya's RPED survey, infrastructural inadequacies with respect to transportation, water, electric power, waste disposal, security and telephones as well as availability of secure, reasonably priced storage and warehousing facilities at ports were ranked among the main constraints affecting exporters.⁷⁹

Clarke (2005) argues that improving the quality of domestic transportation infrastructure and the reliability of transportation services might also improve exports despite the weak support he finds for this assertion in his econometric work. He also argues in favour of measures aimed at improving access to the internet despite doubts regarding empirical support in favour of this measure. His result that enterprises that use the internet to communicate with customers and suppliers are considerably more likely to export than other enterprises may be biased by endogeneity problems.

Eifert, Gelb and Ramachandran (2005) find that a substantial portion of the variance in measured productivity between China and several African countries can be attributed to infrastructure and logistics-related losses rather than their intrinsic capabilities. They report that in Kenya, losses from power failure amount to 6 percent of sales for the median firm, compared to only 1 percent of sales in China. Arnold, Mattoo and Narciso (2006) show that inadequate access to essential producer services hurts African firms by undermining their productivity. Good access to telecommunications inputs, reliability of electricity provision and an efficient banking system are associated with higher performance of manufacturing firms.

3. Inefficiencies of key trade related inputs and services

Using data from Investment Climate Surveys, Clarke (2005) shows that the number of days it takes for exports or imports to clear customs on average in the eight African countries in his sample is almost double the average for the three Asian countries he uses for comparison purposes. And these averages may underestimate the relatively poor performance of African customs administration as the

⁷⁷ Subramanian and Matthijs (2007) also point at the inefficiency of the Kenyan VAT rebate system.

⁷⁸ If the index is higher than 100, the export sector is at a disadvantage through overvaluation. If the index value is smaller than 100, the export sector is favoured through under-valuation.

⁷⁹ See Mwega (2002)

figures for Asia tend to include port delays while those for African countries, many of which are landlocked, typically do not include port delays. Differences between countries however can be quite significant. The number of days needed for exports to clear customs ranges from 2.2 in Zambia to 11.7 in Tanzania. For imports, the number ranges from 4.8 days in Zambia again to 18.5 in Tanzania.

In Kenya's Regional Programme on Enterprise Development (RPED) survey, eighty percent of firms mentioned lack of costs of financing their operations and expansion as a moderate to major obstacle.⁸⁰ According to Mwega (2002), "lack of access to external markets arising from ignorance, lack of agents abroad, the high cost of operating in foreign markets, lack of interest to sell abroad given the availability of a fairly protected domestic market and the poor quality of products" represent the third most important constraint after lack of financing and infrastructural inadequacies.

IV. RELEASING EXPORT CONSTRAINTS: THE ROLE OF GOVERNMENTS

Governments have a number of reasons to focus their attention on exports. First, in small, poor countries, investment in production for export markets is likely to be of greatest potential as it will make it possible to exploit economies of scale. Second, evidence supports the idea that African firms can learn from exporting. Third, exports provide foreign exchange which is needed to import useful inputs. The question that arises then is how best to promote exports. The overview of the industrial policy literature in Section II provided a useful typology, distinguishing between permissive, functional and selective interventions. Section III then examined the situation of the African manufacturing sector as described in a number of recent studies using firm-level data. These studies identified a number of factors which impede the development of African manufacturing exports. This Section discusses the measures African governments could take to promote the development of manufactured exports.

A. IS THERE A NEED FOR TARGETED POLICIES ?

Söderbom (2004) concludes his examination of productivity, exports and firm dynamics in Kenya by noting that "if firms could grow, exports would too." Apparently, this contrasts with the idea that exports promote growth through learning and other effects. In reality however there is both evidence of the fact that African manufacturing firms learn by exporting and that the small size and scale of firms is a major obstacle to exports. The best strategy to promote exports may thus be to facilitate productivity growth and investment while at the same time taking measures that are specifically targeted at exports. Moreover, several authors make a case for enclave growth and the creation of export processing zones. These arguments are discussed below.

Most of the constraints identified in Section III can best be handled with measures of the "permissive" or "functional" type.⁸¹ Permissive policies are those aimed at removing distortions created by policies that deter exporting or more generally the development of new activities. Trade facilitation measures figure prominently in this category. As shown by Clarke (2005), in many African countries customs administration can be improved, trade and customs regulations could be made less trade restrictive and duty drawback and similar schemes could be improved.⁸² The pursuit of a sound and credible macroeconomic policy for an extended period of time would also belong in this category. Bigsten and Söderbom (2005), see the reduction of the level of risk which could be achieved through improved

⁸⁰ See Mwega (2002)

⁸¹ Ndulu et al. (2002) provide some evidence that horizontal policies are more important than targeted measures. They show that the constraints ranked as the most severe in three studies of the relative importance of such constraints are credit constraints, bureaucracy and infrastructure, which are all of a horizontal nature.

⁸² See also de Wulf and Sokol (2004).

macro-policy management as top priority. Evidence suggests that uncertainty is a major factor explaining the low level of investment in the African manufacturing sector.

A number of other measures that address the constraints identified in Section III would typically fall into the category of functional interventions, i.e. market friendly interventions aimed at addressing market failures without directly modifying resource allocation between specific activities. Several authors emphasize the need to improve infrastructure and the business environment. For Eifert et al. (2005) reducing the most severe indirect costs faced by firms is crucial. In most countries, availability and reliability of power is a clear priority. Transports and logistics related losses and costs are high in some countries, while telecommunications and security costs are high in others. Arnold et al. (2006) suggest that political constraint significantly contribute to the deficiencies in services provision in African countries and that getting services policy right is crucial. Subramanian and Matthijs (2007) examine how Sub-Saharan Africa could fully engage in global network trade in particular by taking advantage of the growing Asian markets.

Among the constraints identified in the studies reviewed in Section III those related to informality figure prominently. Improving infrastructure and the business environment would certainly make informality less attractive and thus induce the "formalization" of a number of informal businesses. As mentioned however there is a case for using specific measures to accelerate the formalization of informal enterprises. Such measures would include initiatives aimed at reducing regulatory and administrative barriers to formalization and initiatives aimed at increasing services to business. Given however the size of the informal sector, it is likely to remain important for a long time to come. Governments should thus also create the conditions for improved performance of informal firms in their current environment. This could involve capacity building efforts and alternative procedures for the provision of credit.⁸³

The importance of reducing the cost of doing business is now well understood among policy makers and development practitioners. Also recognized is the fact that reforms need to be credible and sustained over time for private firms to respond by increasing investment and production. What is much less understood however is how to manage such reforms. Reforms of the investment climate are difficult to manage for several reasons. First, there is a long list of reforms and thus a need for priorities and sequencing. Second, the political economy of the reforms is crucial. Third, reforms can be institutionally challenging. Subsection B below discusses implementation issues.

This notwithstanding, several specialists of the African manufacturing sector suggest that where sweeping countrywide reforms are stalled by political resistance and weak capacity, a staged approach may be preferred. The business environment can be improved in limited, high-profile areas such as export processing zones. EPZs have been regarded in the literature as a useful stepping stone from a closed economy to a fully open and integrated economy.⁸⁴ Enhancing the investment climate for companies engaged in exporting levels the playing field with respect to competitors abroad. The improved business environment in EPZs can thus be seen as a stepping stone towards the provision of a high quality environment in the entire economy.

The incentives provided in EPZs differ in nature and can change over time. One might consider the bulk of these measures as indirect subsidies, as direct cash payments are typically avoided. In most cases, a special legal infrastructure is provided at the outset. Most EPZs offer a combination of three types of incentives to companies established in the relevant area. First, many EPZs are characterized by a transport and telecommunication infrastructure that is superior to the one generally found in the country. A number of services may also be provided by the government at below cost to firms established in the zone. Second, import and export duties are typically waived on the trade flows

⁸³ See the discussion of formalization in Kenyon (2007), Ishengoma and Kappel (2006), USAID (2005), Bigsten, Kimuyu and Lundvall (2004).

⁸⁴ See the discussion of EPZs in the WTO's World Trade Report 2006.

between the EPZ and foreign countries. Third, profits from EPZ activities tend to be exempt from income and/or corporate tax for a number of years.

As mentioned in Section III, permissive and functional policies are relatively uncontroversial from an economic perspective.⁸⁵ Moreover, most of the measures discussed so far, with the exception of some incentive schemes offered in EPZs, would not violate WTO disciplines. Selective interventions are the ones that are controversial and the most likely to fall under WTO disciplines. They intend to influence resource allocation, through specific subsidies or protection, credit direction, creation of specific skills or technologies, promoting large firms or attracting specific investors, etc. The question then is whether there is a need for selective measures and in particular for sector specific support. The main arguments which may justify selective interventions from a theoretical point of view have been presented in Section III. The first such argument involves the presence of spillovers from learning-by-doing. Unfortunately, besides scant and relatively inconclusive information on spillovers from exports, there is very little evidence on industry specific learning-by-doing spillovers.

Hausmann and Rodrik's (2003) "cost discovery" approach provides another argument in favour of a positive role for governments in shaping the production structure. Building on the cost discovery idea, Hausmann, Hwang, and Rodrik (2005) argue that not all goods are alike in terms of their consequences for economic performance and that specializing in some products will bring higher growth than specializing in others. They provide some evidence in support of this idea using a quantitative index that ranks traded goods in terms of their implied productivity and another one that measures the productivity level associated with a country's specialization pattern. The country productivity level index is shown to be a strong and robust predictor of subsequent economic growth.

Hausmann and Klinger (2006) provide an interesting application of the Hausmann and Rodrik (2003) approach. Hausmann and Klinger use three fundamental characteristics of products to evaluate South Africa's future prospects for structural transformation as well as the sectoral priorities of the South African government's draft industrial strategy. The first one is the strategic value of a product, which reflects its potential contribution to future structural transformation. Some products use capabilities that are easily deployed to a wide range of other goods, and therefore successfully producing them would create capabilities with significant value for future structural transformation. Other products are in a lesser dense part of the product space or in a part of the product space where South Africa has already achieved comparative advantage. Producing those products would offer little in terms of future structural transformation. The second dimension is the density of a product which measures the likelihood that the country will export this good in the future. A higher density indicates that the country has achieved comparative advantage in many nearby products. The last dimension is the direct attractiveness of a product, which reflects its level of sophistication. This measure, developed by Hausmann, Hwang and Rodrik (2005), is the weighted average of the GDP per capita of all the countries that export the good where the weights correspond to the relative share of good in the export basket.

Hausmann and Klinger (2006) advocate an "open-architecture" industrial policy where the government institutes a "general window" based on the principle of self-selection by interested parties. While they acknowledge that in principle the best approach remains the adoption of a sector-neutral promotion strategy that aims at addressing market and government failures, Hausmann and Klinger argue that the government is condemned to choose because it is most of the times not in a position to identify and provide all the complementary inputs that it should provide, at least instantaneously. In order to avoid the problems associated with ex-ante selection, they favour a principle of self-selection. The window would receive suggestions for interventions in areas where they might be required. The government should have clear principles about what it is willing or not to

⁸⁵Certain functional policies, such as investment in transport infrastructure, may be relatively uncontroversial from an economic perspective, but controversial from an environmental perspective.

do and how it will assess its intervention.⁸⁶ The evaluation methods presented in the paper would just represent one of the tools that should be used to screen private sector requests for sector-specific coordination and public goods.

B. LESSONS FROM PAST EXPERIENCE

1. Diversification and non-traditional export promotion policies

Before turning to issues relating to the implementation of horizontal policies, it may be useful to briefly examine past experiences with diversification and non-traditional export promotion policies in Africa. A number of those experiences are discussed in more detail in Helleiner (2002).

Mwega (2002) shows that real exchange rate and trade liberalization have not significantly influenced the growth of traditional exports in Kenya. One of the explanations for this may be that trade liberalization efforts in the 1980s were not credible and were characterized by reversals.

Dabee (2002) sees the heavy concentration of production in the textile and clothing sector as one of the constraints facing the growth of the Mauritian EPZ's exports. In the 1990s, the Mauritian government reacted to this problem and announced that it would encourage investment in new areas such as jewellery, printing and publishing and light electronics. These areas were emphasized during investment promotion campaigns and specific training programs for workers in these areas were offered. These measures however did not produce the expected results. Dabee sees two main reasons for this. One is that the size of those sectors was too small and the second is that the level of skill was not sufficient for foreign investors.

Ndulu et al. (2002) discuss post-1984 export promotion measures in Tanzania. The policies, both macro and specific, led to a swift response and general upswing in non-traditional exports. The momentum however, was not sustained in terms of consistency in the range of products after the initial upswing. Ndulu et al. mention several problems with the implementation of export promotion measures, such as the unawareness of export incentives in operation and the fact that some of the incentive schemes did not work. Even the best known and utilized incentive schemes – export retention and duty drawback – did not benefit all potential exporters and the duty drawback scheme was in arrears as far back as ten years.

Survey based estimates by Lederman, Olarreaga and Payton (2006) suggest that while on average export promotion agencies have a strong and statistically significant effect on exports, they don't seem to have an impact in Sub-Saharan Africa. Their estimates suggest that while one dollar spent in the EPA budget generates \$490 of exports in Latin America and \$227 in Asia, the estimates for Sub-Saharan Africa (\$137) and the Middle East and North Africa (\$96) are not statistically different from zero.⁸⁷ Results also show considerable heterogeneity across levels of development. In countries with a GDP per capita below \$982, the effect is negative but insignificant. Above this threshold, the impact is positive but it only becomes statistically significant in countries with a GDP per capita above \$2790. Some lessons may be drawn from experience in other countries. In particular, the study shows that EPAs should have a large share of their executive board in the hands of the private sector, but a large share of their budget should be publicly funded. The proliferation of small agencies within a country leads to an overall less effective program. EPAs are more effective when focusing on non-traditional exports or when they have a broad sector focus. They should focus their activities on large firms which are not yet exporting. EPAs also seem to be more efficient when export promotion activities are shared with other activities such as investment promotion or export financing

⁸⁶ Hausmann and Klinger (2006) provide a list of eight principles that should ensure an efficient and legitimate self-selection process.

⁸⁷ The sample of EPAs covers a total of 88 agencies of which 18 are African.

and when they focus on on-shore export support services rather than country image or marketing and market research activities.

While EPZs have triggered a rise in exports, job creation and income generation in some cases, the literature suggests that they have frequently not fulfilled the expected role of "engines of industrialization and growth" as some proponents had anticipated.⁸⁸ Helleiner (2002) notes that in Kenya, South Africa, Tanzania, and Zimbabwe EPZs were not important contributors to non-traditional export success. But EPZs played a critical role in the case of Mauritius. The five studies of African countries in Helleiner's work also show that FDI has not as yet made a particularly important contribution to African non-traditional export expansion. In the Mauritius EPZ experience, however, FDI was critical to get things started even if domestic investment was dominant.⁸⁹ Subramanian and Roy (2001) compare the Mauritian success with the failures of EPZs in other countries and link the difference in impact with differences in implementation. Madani (1999) compare different EPZ experiences in the world and conclude that they can play a dynamic role in a country's development under certain conditions – including an appropriate setup and good management – and this only as a transitional step in an integrated movement toward general liberalization of the economy. Watson (2001) examines the reasons why attempts to use EPZs as an instrument for development in Africa have, with the obvious exception of Mauritius, been significantly less successful than in some other regions of the world. He concludes that, while lack of adequate infrastructure and services to support the business community, timidity and ignorance of investors or the lack of indigenous entrepreneurs are important, attitudes and culture have also played an important role, that is, the issue is as much a socio-political one as an economic one.

2. Horizontal reforms

The overview of the industrial policy literature in Section II and the discussion of the Hausmann and Klinger (2006) application of the cost-discovery approach to South Africa emphasized the crucial importance of implementation issues for industrial policy. Most of the debate about targeted interventions centres around the political economy and implementation of such measures. However, even the implementation of horizontal reforms may not necessarily be straightforward. This subsection discusses the lessons from past experience.

While there is a broad understanding among policy-makers and development specialists that improving the investment climate is key to enhancing Africa's non-traditional export performance, implementation and management issues are far less understood. As discussed, there are not so many success stories to learn from. Business environment usually improves slowly but it seems that in Africa it improves even more slowly than elsewhere.⁹⁰ A number of studies discuss the reasons why reform tends to be difficult and slow in Africa. Eifert, Gelb and Ramachandran (2005) examine the political economy of business-related reforms. They argue that reforms will need to confront the presence of long-established rent-seeking arrangements that benefit both the political and private sector elites. African business sectors are segmented on the basis of ethnicity, ownership and firm size. Large, foreign and minority firms typically have much higher factory-floor productivity and export more than their smaller indigenous counterparts. There is a perception that reforms primarily benefit minorities or foreigners.⁹¹

According to Eifert et al. (2005): "the risk is that Africa will remain locked in a slowly evolving low-equilibrium, characterized by rent-seeking behavior on the part of the public sector, quiet

⁸⁸ See the references in World Bank (2004).

⁸⁹ See also the case study of Kenyan horticulture exports in English, Jaffee and Okello (2006).

⁹⁰ Eifert et al. (2005) provide anecdotal evidence of the slow pace of reform in Africa based on World Bank experience.

⁹¹ Eifert et al. (2005) present interesting evidence, mainly drawn from public attitude surveys that Africans are sceptical that the private sector will deliver broad-based growth.

acquiescence on the part of the private business sector, slow entry, continuing sparseness of firms and entrepreneurial activity, and limited gains from competition and conglomeration." They argue that in order to accelerate reform, alliances between the private sector elite and the political elite must be broken. Creating new opportunities for the private sector while progressively eroding rents through partial reforms may help convince the private sector elite that there could be benefits from moving to a more open economy. Among the measures that Eifert et al. (2005) recommend, several address political economy constraints. For instance, in order to build political support for private sector development, changing the perception that reforms benefit only minorities and foreigners is crucial. To change this perception may require improving the performance and capacity of indigenous firms, which could be achieved through the extension of benefits from which they are currently excluded to small indigenous firms.⁹² Another recommendation is to use successes for example in an enclave to generate demonstration effects. A third recommendation is to implement innovative instruments to increase the visibility of business related reforms. A fourth measure is to explicit the linkage between private sector development and the reduction in donor dependence to hasten the implementation of reforms.

Another interesting contribution in this area is Kikeri et al. (2006) which draws the lessons from the literature and from 25 case studies, mostly developing countries, on reforming the investment climate. Kikeri et al. (2006) consider the political economy aspects of reforms but they also discuss the institutional challenges associated with coordination and changes in organization, and the technical challenge related to figuring the right priorities and sequencing. According to these authors, there is no standard process for reform but there are some lessons that can be drawn from past experience. A number of lessons support the recommendations made by Eifert et al. (2005). Demonstration effects for instance and the generation of new and specific benchmarking information are also seen as useful. With regard to setting priorities and sequencing, the authors point at a growing body of new analytical tools and information that can be used to identify priorities.⁹³ They see some support for the idea that political change and crisis can be important catalysts for reforms. Another force that can drive change in their view is growing competition from global integration and rapid technological change. They thus see trade and product market reforms as a good place to start with investment climate reforms. With regard to implementing and sustaining reforms, key measures are strengthening incentives and capacity of the national and local officials and agencies responsible for implementing new regulations, improving the monitoring of results and creating oversight mechanisms to sustain reform.

Governments have been looking to public-private partnerships as a way to improve infrastructure networks and enhance service delivery in their countries. Public-private partnership is a development finance model where the state shares the risk and responsibility with private firms but ultimately retains control of the assets. It could in principle bring the efficiency of business to public service delivery, while avoiding the politically contentious aspects of full privatisation. Farlam (2005) presents a representative sample of eight case studies of public-partnerships implemented in Africa between 1995 and 2005 and explores some of the issues raised by such partnerships in various sectors: transport, telecommunications, water and sanitation, power and eco-tourism. The report shows that the record of private-public partnership in Africa is mixed, that the process is complex, and that governments should not expect public-private partnerships to be a "magic bullet". Those partnerships that have proved most successful in Africa have been characterised by thorough planning, good communication, strong commitment from both the public and the private partners, and effective monitoring, regulation and enforcement by governments. A number of very concrete recommendations drawn from the case studies and from collective experience of successful and failed public-private partnerships are provided in the report.

⁹² Examples of such measures would include programs to mitigate political risk which are currently available only to foreign investors or tax incentives which are restricted to large firms. Capacity building for the private sector is another example. See Eifert et al. (2005).

⁹³ Hausmann, Rodrik and Velasco (2005) compare different approaches to setting reform priorities and advocate an approach that consists in identifying and eliminating the most binding constraints.

There is no consensus on best practice regarding the formalization of informal enterprises. Ishengoma and Kappel (2006) draw the lessons from past approaches and identify a number of measures that address formalization from various different angles. The list includes the reduction of entry costs, the simplification of the national tax system, the straightforward registration of property rights, training, as well as the provision of business development services and financial services. Governments should also encourage the creation of informal-formal sector forward linkages. According to USAID (2005), evidence suggests that regulatory barriers, administrative barriers, fees and financial requirements and corruption have the most direct influence on the formalization decision. Increasing business services supply has not been correlated empirically with reducing the size of a country's informal economy. USAID (2005) notes that so far, few donor projects sought specifically to encourage the informal economy to formalize. Donor interventions generally aimed at creating an enabling environment for micro, small and medium enterprises with the belief that the results would help both the formal and the informal enterprises. Those donor projects that focused on informal firms typically included training for entrepreneurs, provision of business services, facilitating access to finance, granting property rights and addressing market access issues, rather than removing of regulatory and administrative barriers. Kenyon (2007) draws on the literature in political science and on experience in Africa to hint at some solutions. He discusses four mechanisms that should contribute to the success of formalization policies. Those include complementary government interventions that link the compliance decision to access to markets for finance and skills, private business associations that include formalizing firms and exclude non-compliant ones, coordination across government agencies to improve monitoring and enforcement, and measures that limit the scope for predatory behaviour among government officials. One of his main conclusions is that it is very difficult to formalize enterprises that are not already themselves organized in some fashion. He also underlines that regulatory simplification is likely to be insufficient, points at the importance of the credibility and consistency of government policies and gives examples of programs that failed because governments did not provide sufficient information about the benefits of participation.

A number of studies are narrower in scope and examine one specific project. Söderbaum (2006) for instance examines how the formal and the informal economy interact with each other in the context of the Maputo Development Corridor (MDC). He draws attention to the fact that development policies in the MDC have not been designed to utilize and unlock the human potential and entrepreneurship of the vivid informal economy along the corridor. In his view the MDC strategy engenders "jobless growth" and is particularly devastating for the agents in the informal economy since there are no mechanisms of integrating them into the project.⁹⁴ Verner and Verner (2005) use econometric techniques to carefully assess the economic impacts of professional training in the informal sector in Côte d'Ivoire.⁹⁵ Results show a positive impact for some but not all groups. The authors draw a number of lessons such as for instance the fact that an effective outreach program is key or that lack of complementary inputs (water, credit, equipment, markets) tend to limit the impact on beneficiaries.

V. SUGGESTIONS FOR FUTURE RESEARCH

For many years now, African governments, sometimes with the support of donors, have conducted policies aimed at developing their exports. As this paper has shown, some of those interventions have been reviewed and assessed. Such assessments are key to a better understanding of how governments can usefully contribute to export development. Even where the results of government interventions have fallen short of expectations, useful lessons can be drawn. Lessons learned in one country however may not necessarily be relevant in other countries. In the area of supply side policies, one size does not fit all. A critical number of country case studies is needed to allow any kind of

⁹⁴ Similar critiques of existing policies towards the informal sector are expressed in War on Want (2006) or Devey et al. (2006).

⁹⁵ Haan (2001) proposes a broader review of training programmes for the informal sector.

generalization. There is thus a strong case for undertaking further country case studies of past supply side policies.

Our review of the literature points at a number of critical questions that country case studies could explore. First, there is a broad understanding among policy-makers and development specialists that improving the business environment is key to enhancing Africa's export performance. Improving the investment climate however has been difficult. The literature suggests that one of the reasons why it has been so difficult relates to implementation and management issues. Those issues are not well understood and deserve more attention. The studies surveyed in Section IV and in particular those by Eifert et al. (2005) and Kikeri et al. (2006) point at directions for research. Second, there are reasons to believe that informality significantly constrains productivity growth, the growth of firms and their participation in trade. It is not clear however whether specific formalization policies can play a role in promoting exports or whether policies aimed at improving the investment climate should be designed so as to benefit both formal and informal firms. What seems to be clear is that further research is needed that will shed light on the best possible way to release the constraints that impede the growth of informal firms. Again, the studies reviewed in Section IV can help ask the right questions. They also propose a range of methodologies that can be used. Third, specialists of the African manufacturing sector suggest that where sweeping countrywide reforms are stalled by political resistance and weak capacity, a staged approach may be preferred that could take the form of special economic zones or EPZs. The lessons from past experience with EPZs in Africa are mixed. Further careful assessments of EPZ experiences could provide useful guidance. Similarly existing evidence concerning EPAs suggests that they have not been successful in sub-Saharan Africa. Here again, case studies could be useful.

Fourth, the idea that export diversification is key to improving export performance seems to command broad support. The literature tends to focus on product diversification which is no doubt important. Geographical diversification however can also contribute its share to export growth. With regard to product diversification, the focus is often on diversification towards non-traditional export products which in the literature is often equated with industrial development. A number of practitioners however, while recognizing the potential importance of textiles and other manufacturing activities argue that Africa's comparative advantage is likely to be in resource-based activities such as horticulture, fisheries, forestry, livestock, mining, and tourism, all activities which may not necessarily enter a narrow definition of manufacturing. Diversification may arise spontaneously if all markets work perfectly. However, because of the presence of certain market failures governments may have a role in supporting diversification. It may be worthwhile analyzing separately the factors that impede geographical diversification and those that impede product diversification. Recent research has focused on product diversification and measures that can be taken to support the discovery process. Along those lines, it might be interesting to test the approach proposed by Hausmann and Klinger (2006) (see Section IV) or an evolution thereof on other countries than South Africa to assess their prospects for structural transformation as well as the sectoral priorities of the government's industrial strategies.

References

- Aitken, B., Hanson, G. and Harrison, A. (1997) 'Spillovers, Foreign Investment and Export Behaviour', *Journal of International Economics* 43 (1-2): 103-132.
- Alvarez, R. and R. Lopez (2006) Is exporting a source of productivity spillovers ? *CAEPR Working Paper* 2006-012, Bloomington: Indiana University.
- Arnold, J.M., A. Mattoo and G. Narciso (2006) Services inputs and firm productivity in Sub-Saharan Africa – Evidence from firm-level data, *Policy Research Working Paper* No 4048, Washington DC: World Bank.
- Bagwell, K. and Staiger, R.W. (1988) 'The role of export subsidies when product quality is unknown', *Working paper* N. 2584, National Bureau of Economic Research.
- Balassa, B. and associates (1971) *The structure of protection in developing countries*, Baltimore: Johns Hopkins U. Press for the World Bank and the Inter-American Development Bank.
- Baldwin, R. (1969) 'The case against infant-industry protection', *Journal of Political Economy* 77: 295-305.
- Bell, M., Ross-Larson, B. and Westphal, L.E. (1984) 'Assessing the performance of infant industries', *Journal of Development Economics* 16: 101-128.
- Bernard, A.B. and J.B. Jensen (1999) Exceptional exporter performance: cause, effect or both ? *Journal of International Economics*, 47(1), pp. 1-25.
- Bernard, A.B. and J.B. Jensen (1999) Exporting and productivity, *Working Paper* No 7135, Cambridge: National Bureau of Economic Research.
- Bernard, A.B. and Jensen, J.B. (2004) 'Why some firms export', *Review of Economics and Statistics*, 86(2): 561-569.
- Biggs, T. and M.K. Shah (2006) African small and medium enterprises, networks, and manufacturing performance, *Policy Research Working Paper* No 3855, Washington, DC: World Bank.
- Bigsten, A. and M. Söderbom (2005) What have we learned from a decade of manufacturing enterprise surveys in Africa ? *Policy Research Working Paper* no 3798, Washington, DC: World Bank.
- Bigsten, A., P. Kimuyu and K. Lundvall (2004) What to do with the informal sector ? *Development Policy Review*, vol. 22(6), pp. 701-715.
- Bigsten, A., Collier P., Dercon S., Fafchamps M., Gauthier B., Gunning J.W., Oduro A., Oostendorp R., Pattillo C., Söderbom M., Teal F. and A. Zeufack (2004) Do African manufacturing firms learn from exporting? *The Journal of Development Studies*, Vol.40, No.3, pp.115-141.
- Bigsten, A., Collier P., Dercon S., Fafchamps M., Gauthier B., Gunning J.W., Habarurema J., Isaksson A., Oduro A., Oostendorp R., Pattillo C., Söderbom M., Teal F. and A. Zeufack (1999) Exports of African manufactures: macro policy and firm behaviour, *The Journal of International Trade and Economic Development*, vol. 8(1), pp. 53-71.
- Bloom, D and J. Sachs (1998) Geography, demography, and economic growth in Africa, *Brookings Papers on Economic Activity*, 2.

- Bol, D. (1995) Winners and losers of trade liberalization? Tanzania's non-traditional exports, in M.S.D. Bagachwa and F. Limbu (eds) *Policy reform and the environment in Tanzania*, Dar Es Salaam: DUP.
- Bruton, H.J. (1998) 'A reconsideration of import substitution', *Journal of Economic Literature* 36: 903-936.
- Clarke, G.R.G. (2005) Beyond tariffs and quotas: why don't African manufacturers export more ? *Policy Research Working Paper* No 3617, Washington DC: World Bank.
- Clerides, S., Lach, S. and Tybout, J. (1998) 'Is learning by exporting important? Micro-dynamic evidence from Colombia, Mexico and Morocco', *Quarterly Journal of Economics* 113: 903-947.
- Collier, P. and J.W. Gunning (1999) Explaining African Economic Performance, *Journal of Economic Literature*, vol. 37 (1), pp. 64-111.
- Dabee, B. (2002) The role of non-traditional exports in Mauritius, in Helleiner, G.K. (ed) *Non-traditional export promotion in Africa – Experiences and Issues*, Helsinki: UNU/WIDER and London: Palgrave.
- De Ferranti, D., Perry, P., Lederman, D. and Maloney, W. (2002) *From natural resources to the knowledge economy - trade and job quality*, Washington DC: World Bank.
- De Wulf, L. and J.B. Sokol (eds) (2004) *Customs modernization handbook*, World Bank Trade and Development Series, Washington DC: World Bank.
- Devey, R., C. Skinner and I. Valodia (2006) *Second Best? Trends and Linkages in the Informal Economy in South Africa*, Development Policy Research Unit Working Paper 06/102, University of Kwazulu-Natal.
- Eifert, B., A. Gelb and V. Ramachandran (2005) Business environment and comparative advantage in Africa: evidence from the investment climate data, *Working Paper* No 56, Washington DC: Center for Global Development.
- Elbadawi, I., T. Mengistae, and A. Zeufack (2006) Market access, supplier access, and Africa's manufactured exports: an analysis of the role of geography and institutions, *World Bank Policy Research Working Paper* No 3942, Washington DC: World Bank.
- English, P., S. Jaffee and J. Okello (2006) Exporting out of Africa – the Kenya horticulture success story, in: Fox, L. and R. Liebenthal (eds) *Attacking Africa's Poverty*, ed., World Bank.
- Evenson, R. and Westphal, L.E. (1995) 'Technological change and technology strategy', in Behrman, J. and T.N. Srinivasan (eds) *Handbook of Development Economics*, vol. 3A, Amsterdam: North Holland.
- Farlam, P. (2005) *Working together, assessing public-private partnerships in Africa*, Nepad policy focus series, Pretoria: South African Institute of International Affairs.
- Greenaway, D. and R. Kneller (2005) *Firm heterogeneity, exporting and FDI: a survey*, Globalization, Productivity and Technology Research Paper 2005/32, Nottingham: The University of Nottingham
- Grossman, G.M. (1990) 'Promoting new industrial activities: a survey of recent arguments and evidence', *OECD Economic Studies* No 14, Paris: OECD.

Grossman, G.M. and Horn, H. (1988) 'Infant-industry protection reconsidered: the case of informational barriers to entry', *Quarterly Journal of Economics* 103: 767-787.

Gruber, H. (1998) 'Learning by doing and spillovers: further evidence for the semiconductor industry', *Review of industrial organization* 13(6): 697-711.

Haan, H.C. (2001) Training for work in the informal sector: new evidence from Eastern and Southern Africa, Occasional Paper, Geneva: International Training Centre of the International Labour Organization.

Hallak, J.C. and Levinsohn, J. (2004) 'Fooling ourselves: evaluating the globalization and growth debate', *Working Paper* 10244, Cambridge, MA.: National Bureau of Economic Research

Hansen, J.D., Jensen, C., and Madsen, E.S. (2003) 'The establishment of the Danish windmill industry – Was it worthwhile?', *Review of World Economics* 139(2): 324-347.

Hausmann, R. and B. Klinger (2006) South Africa's export predicament, *Faculty Research Working Paper 06-040*, Cambridge MA: John F. Kennedy School of Government, Harvard University

Hausmann, R., J. Hwang and D. Rodrik (2005) What you export matters, *Faculty Research Working Paper 05-063*, Cambridge MA: John F. Kennedy School of Government, Harvard University

Hausmann, R., D. Rodrik and A. Velasco (2005) Growth diagnostics, mimeo (revised March 2005) Cambridge MA: John F. Kennedy School of Government, Harvard University

Hausmann, R. and Rodrik, D. (2003) 'Economic development as self-discovery', *Journal of Development Economics* 72: 603-633.

Helleiner, G.K. (2002) (ed) *Non traditional export promotion in Africa – Experience and Issues*, Helsinki: UNU/WIDER and London: Palgrave.

Hoff, K. (1997) 'Bayesian learning in an infant industry model', *Journal of International Economics* 43: 409-436.

Imbs, J. and R. Wacziarg (2003) 'Stages of diversification', *American Economic Review* 93(1): 63-86.

Irwin, D.A., and Klenow, P.J. (1994) Learning-by-doing spillovers in the semiconductor industry, *Journal of Political Economy*, vol. 102(6), pp. 1200-1227.

Ishengoma, E.K. and R. Kappel (2006) Economic growth and poverty: does formalization of informal enterprises matter, Working Paper No 20, Hamburg: German Institute of Global and Area Studies.

Jarmin, R.S. (1994) 'Learning by doing and competition in the early rayon industry', *Rand Journal of Economics* 25(3): 441-454.

Kenyon, T. (2007) A framework for analyzing enterprise formalization in developing countries, FIAS concept note, Washington DC: World Bank.

Kikeri, S., T. Kenyon and V. Palmade (2006) Reforming the investment climate: lessons for practitioners, *Policy Research Working Paper* No 3986, Washington DC: World Bank.

Klinger, B. and Lederman, D. (2004) 'Discovery and development: an empirical exploration of "new" products', *Policy Research Working Paper* No 3450, Washington, DC: World Bank.

- Lall, S. (2002) 'Selective policies for export promotion: lessons from the Asian Tigers', in Helleiner, G.K. (ed) *Non-traditional export promotion in Africa: Experiences and issues*, Helsinki: United Nations University [published by Palgrave].
- Lederman, D., M. Olarreaga and L. Payton (2006) Export promotion agencies: what works and what doesn't, *Policy Research Working Paper* No 4044, Washington, DC: World Bank.
- Levy, B. (1993) 'An institutional analysis of the design and sequencing of trade and investment policy reform', *World Bank Economic Review* 7(2): 247-262.
- Lieberman, M.B. (1984) 'The learning curve, and pricing in the chemical processing industries', *Rand Journal of Economics* 15: 213-228.
- Lopez, R. (2005) Trade and growth: reconciling the macroeconomic and microeconomic evidence, *Journal of Economic Surveys*, vol. 19 (4), pp. 623-648.
- Little, I., Scitovsky, T. and Scott, M. (1970) 'Industry and trade in some developing countries', London: Oxford University Press for the OECD.
- Madani, D. (1999) A review of the role and impact of export processing zones, *Policy Research Working Paper* 2238, Washington DC: World Bank.
- Mayer, W. (1984) 'The infant-export industry argument', *Canadian Journal of Economics* XVII: 249-269.
- Melo, A. (2001) 'Industrial policy in Latin America and the Caribbean at the turn of the Century', *IADB Research Department Working Paper* No 459, Washington, DC: Inter-American Development Bank.
- Mengistae, T. and C. Pattillo (2004) Export orientation and productivity in Sub-Saharan Africa, *Staff Papers*, vol. 51(2), pp. 327-353, Washington DC: International Monetary Fund.
- Mwega, F.M. (2002) Promotion of non-traditional exports in Kenya, 1980-1996, in Helleiner, G.K. (ed) *Non-traditional export promotion in Africa – Experiences and Issues*, Helsinki: UNU/WIDER and London: Palgrave.
- Nathan Associates (2002) Mainstreaming trade: a poverty reduction strategy for Mozambique, Washington DC: US Agency for International Development.
- Ndulu, B., J. Semboja and A. Mbelle (2002) Promoting non-traditional exports in Tanzania, in Helleiner, G.K. (ed) *Non-traditional export promotion in Africa – Experiences and Issues*, Helsinki: UNU/WIDER and London: Palgrave.
- Neij, L., Andersen, P.D., Durstewitz, M., Helby, P., Hoppe-Kilper, M., and Morthorst, P.E. (2003) 'Experience curves: a tool for energy policy assessment', *IMES/EESS Report* No. 40, Lund, Sweden: University of Lund, Department of Technology and Society, Environmental and Energy Systems Studies.
- Noland, M. and Pack, H. (2003) "Industrial policy in an era of globalization, Lessons from Asia", Washington, DC: Institute for International Economics.

- Ohashi, H. (2004) 'Learning by doing, export subsidies, and industry growth: Japanese steel in the 1950s and 1960s', *CIRJE Discussion Paper* No. F-280, Tokyo: Center for International Research on the Japanese Economy. (Forthcoming in the *Journal of International Economics*)
- Pack, H. and Saggi, K. (2006) 'The case for industrial policy: a critical survey', *Policy Research Working Paper* N° 3839, Washington, DC: World Bank.
- Panagariya, A. (2000) 'Evaluating the Case for Export Subsidies', *Policy Research Working Paper* No 2276, Washington, DC: World Bank.
- Rankin, N., M. Söderbom and F. Teal (2002) *The Ghanaian Manufacturing Enterprise Survey 2000*, *mimeo*, Centre for the Study of African Economies, Oxford: University of Oxford.
- Roberts, M.J. and J.R. Tybout (1997) The decision to export in Colombia: an empirical model of entry with sunk costs, *American Economic Review*, vol. 87, pp. 545-564.
- Rodriguez-Clare, A. (2004) 'Microeconomic interventions after the Washington consensus', *Working Paper Series* 524, Research Department, Washington DC: Inter-American Development Bank.
- Rodriguez-Clare, A. (2005) Coordination failures, clusters and microeconomic interventions, *mimeo*, Washington DC: Inter-American Development Bank.
- Rodrik, D. (1993) 'Trade and industrial policy reform in developing countries: a review of recent theory and evidence', in Behrman, J. and T.N. Srinivasan (eds) *Handbook of Development Economics*, vol. III, Amsterdam: North Holland.
- Rodrik, D. (1995) 'Taking trade policy seriously: export subsidization as a case study in policy effectiveness', in Deardorff, A., J. Levinson, and R. Stern (eds.) *New Directions in Trade Theory*, Ann Arbor: University of Michigan Press.
- Rodrik, D. (1996) 'Coordination failures and government policy: a model with applications to East Asia and Eastern Europe', *Journal of International Economics* 40(1-2): 1-22.
- Rodrik, D. (2002) 'Trade Policy Reform as Institutional Reform', in B. Hoekman, A. Mattoo and P. English (eds.), *Development, Trade, and the WTO*, Washington, DC: World Bank.
- Rodrik, D. (2004) 'Industrial policy for the twenty-first century', *CEPR Discussion Paper* No. 4767, London: Centre for Economic Policy Research.
- Rosen, A.K. (2005) 'The Foreign Service and Foreign Trade: Embassies and Export Promotion', *CEPR Discussion Paper* 4953, London: Centre for Economic Policy Research.
- Seringhaus, F.H.R. and Botschen, G. (1991) 'Cross-National Comparison of Export Promotion Services: The Views of Canadian and Austrian Companies', *Journal of International Business Studies* 22,1: 115-133.
- Shapiro, H. and Taylor, L. (1990) 'The State and industrial strategy', *World Development* 18(6): 861-878.
- Söderbaum, F. (2006) Blocking human potential: how formal policies block the informal economy in the Maputo corridor, in Guha-Khasnobis, B., R. Kanbur and E. Ostrom (eds) *Linking the formal and informal economy, concepts and policies*, UNU-WIDER Studies in Development Economics, Oxford: Oxford University Press.

- Söderbom, M. (2004) Productivity, exports and firm dynamics in Kenya 1999-2002, *mimeo*, Centre for the Study of African Economies, Oxford: University of Oxford
- Söderbom, M. and F. Teal (2003) Are manufacturing exports the key to economic success in Africa ? *Journal of African Economics*, vol. 12(1), pp. 1-29.
- Stiglitz, J. (1993) 'The role of the state in financial markets', in *Proceedings of the World Bank Annual Conference on Development Economics*, 1993, Washington DC: World Bank.
- Stiglitz, J. (1996) 'Some lessons from the East Asian miracle', *World Bank Research Observer* 11(2): 151-177.
- Subramanian, A. and D. Roy (2001) "Who can explain the Mauritian miracle: Meade, Romer, Sachs or Rodrik ?" *Working Paper No 01/116*, Washington DC: International Monetary Fund.
- Subramanian, U. and M. Matthijs (2007) "Can Sub-Saharan Africa leap into global network trade", *Policy Research Working Paper No 4112*, Washington DC: World Bank.
- Tybout, J. (2000) 'Manufacturing firms in developing countries: how well do they do and why?', *Journal of Economic Literature* 38(1): 11-43.
- USAID (2005) Removing barriers to formalization: the case for reform and emerging best practice, Washington DC: USAID.
- van Biesebroeck, J. (2005) Exporting raises productivity in sub-Saharan African manufacturing firms, *Journal of International Economics*, vol. 67, pp. 373-391.
- Verner, D. and M. Verner (2005) Economic impacts of professional training in the informal sector: the case of the labor force training program in Côte d'Ivoire, World Bank Policy Research Working Paper No 3668, Washington DC: World Bank.
- Wagner, J. (2005) "Exports and productivity: a survey of the evidence from firm level data", *HWWA Discussion Paper No. 319*, Hamburg: Hamburgisches Welt-Wirtschafts-Archiv.
- War on Want (2006) Forces for change, informal economy organizations in Africa, <http://www.waronwant.org/downloads/informaleconomy.pdf>.
- Watson, P.L. (2001) Export Processing Zones: Has Africa Missed the Boat? Not yet! Africa Region Working Paper Series No 17, Washington, DC: World Bank.
- Were, M. (2006) Export-orientation and employment patterns in Kenya's manufacturing sector: firm-level evidence, *mimeo*, Dar-es-Salaam: University of Dar-es-Salaam.
- Winters, L.A. (2000) 'Trade policy as development policy: building on fifty years' experience', paper presented at the UNCTAD X High-level Round Table on Trade and Development: Directions for the Twenty-first century, Bangkok, 12 February 2000.
- Winters, L.A., N. McCulloch and A. McKay (2004) 'Trade liberalization and poverty: the evidence so far', *Journal of Economic Literature* 42: 72-115.
- Wood, A. and J. Mayer (1998) Africa's export structure in comparative perspective, Africa's Development in Comparative Perspective Study No 4, Geneva: UNCTAD.
- World Bank (2004) *World Development Report*, Washington, DC: World Bank.

World Bank (2000) Can Africa claim the 21st century ? Washington DC: The World Bank.

World Bank (1993) 'The East Asian miracle – Economic growth and public policy', *World Bank Policy Research Report*, Washington, DC: World Bank and Oxford University Press.

Zimmerman, M.B. (1982) 'Learning effects and the commercialization of new energy technologies: the case of nuclear power', *Bell Journal of Economics* 13: 297-310.