



WORLD BANK GROUP

AFRICA REGION, PRIVATE SECTOR UNIT

Summary of

Business Environment and Comparative Advantage in Africa: Evidence from the Investment Climate Data

Introduction

This note is based on the paper entitled “Business Environment and Comparative Advantage in Africa: Evidence from the Investment Climate Data,” by Benn Eifert, Alan Gelb, and Vijaya Ramachandran, presented at the Annual Bank Conference on Development Economics held in Dakar, Senegal in January 2005. The analysis delivers the clear message that high indirect costs and losses are dampening the productivity and competitiveness of manufacturers across Africa. The paper focuses on three direct messages. First, costs in Africa are higher than in comparator countries relative to income and productivity. These conclusions are based on macro evidence. Second, using firm-level data gathered in the investment climate surveys, the authors confirm that costs are high at the firm level as well. These data specifically identify indirect costs and business-related losses as higher in Africa relative to comparator countries. These costs are degrading profitability for the region’s manufacturers. Third, cleavages exist along ethnic lines and firm size in the private sector across Africa. The investment climate survey evidence confirms that firm size and foreign ownership are highly correlated. Large firms and those with foreign ownership tend to be more productive and have formed alliances with political elites to reduce competition and the likelihood that dynamic economies of scale will develop as firm density remains sparse. Based on these clear findings, the authors recommend a series of six reforms that are intended to weaken the alliances between private sector and political elites, erode the potential rent seeking that fuels these collusive relationships, convince private sector elites that higher profits can be enjoyed in a more open market, and finally encourage new entrants into the market, which will increase density and eventually fuel dynamic economies of scale.

High Cost in Africa (Macro Analysis)

When examining Africa’s inability to develop a more robust manufacturing sector, one must consider the theory of comparative advantage. The authors evaluate three separate approaches to comparative advantage. First, Chenery and Syrquin (1975) put forth the theory that development and structural change are closely associated, so that growth largely involves the introduction of new, higher-value-added activities and products rather than simply the expansion of old ones. Trade theory is central to understanding economic structure and structural change because countries will tend to export goods that they can make most cheaply and efficiently relative to other countries.

Second, Wood and Berge (1997) and Wood and Mayer (2001) compare Africa’s factor endowments with those of other regions. They show a strong relationship with the relative endowments of skills and land (resources) and composition of exports. Thus, countries with greater skills and land per capita export more manufactured goods than primary goods. However, these theories alone do not fully account for Africa’s low income level.

The third theory, advanced by Paul Krugman (1980, 1981, 1983), demonstrates that comparative advantage not only may arise from relative factor abundance but also is a function of differences in productivity and costs. The effects of this theory are demonstrated through two basic approaches: business environment factors and dynamic economies of scale. The business environment is 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. Its impact is more heavily felt in traded sectors that are not natural-resource intensive. Even efficient manufacturers can be driven out of business by a poor business environment. The second approach is that of dynamic economies of scale. Such economies of scale are generated

by learning processes, network effects, and industry specific spillovers that go beyond classical production and trade theories. However, individual firms do not internalize the benefits of these effects when making entry or investment decisions, and so quality of the business environment drives decisions on entry, investment, and expansion.

With these three theories setting the context, we will reconsider why most African firms are not productive enough to export manufactured goods. Their factor endowments are consistent with competitiveness in a variety of labor-intensive, natural-resource processing industries. Most African countries, however, have been unable to take even this step toward higher value-added processing. Using Krugman's approach to comparative advantage, the authors evaluate the cost level in Africa to determine if Africa's inability to develop a robust manufacturing sector may be linked to high costs rather than factor endowments.

With the caveat that purchasing power parity (PPP) conversion factors are imprecise, they do help to evaluate aggregate price levels across comparator countries. As shown in Table 1, Africa's poor economies have only four-fifths the income of South Asia and one-half that of East Asia; their costs, however, are 75 percent and 35 percent higher, respectively, than these two regions. When considering predicted costs (based on a Balassa trend line relating income level to PPP ratios), Africa's poor countries have higher actual costs than predicted, and China and South Asia have lower costs. When evaluating country-level data, the best performing countries (including South Africa and Mauritius, which have shifted from primary to manufactured exports) have costs that are close to predicted values and higher export levels. The poor performing countries, including many in Sub-Saharan Africa, have costs higher than predicted values and negligible export levels. If costs facing many African firms are close to these estimates, competitiveness will be affected.

High Cost in Africa (Micro Analysis)

Having the established macro-level analysis, it is important to evaluate the question at the micro level. Firm data collected by the World Bank's investment climate firm surveys from 2001 to 2004 are used. The authors focus their analysis on technical efficiency. They first estimate Total Factor Productivity (TFP). These estimates support the contention that TFP is lower on average in most African countries than in higher-performing competitors in the developing world. The analysis is then taken a step further by broadening the measure of productivity. A measure for net TFP is developed by netting out known indirect costs. As high indirect costs inherent in a poor business environment can degrade comparative advantage, netting out the impact of poor power infrastructure or poor transport infrastructure should provide a more accurate measure of firm productivity controlling for the business environment. For the sample used, most of the African countries (excepting Morocco and Senegal) have the highest indirect costs as a share of the cost structure, ranging from 15 percent to nearly 30 percent. These cost structures are demonstrated in Figure 1.

These high indirect costs squeeze profits for firms that are operating in the countries and serve as a barrier to entry for those considering new investment. Figure 2 shows that even moderate reductions in indirect costs would increase the viability of African manufacturing firms, by pushing them out of the red and making those firms that are profitable even more so.

Figure 3 presents several alternative scenarios juxtaposed against actual profitability. The first scenario depicts a 13 percent reduction in indirect costs. With the exception of Zambia, all comparator countries in this scenario would have positive profit levels, bringing Ethiopia, Nigeria, and Bolivia out of the red. In this scenario, both Mozambique

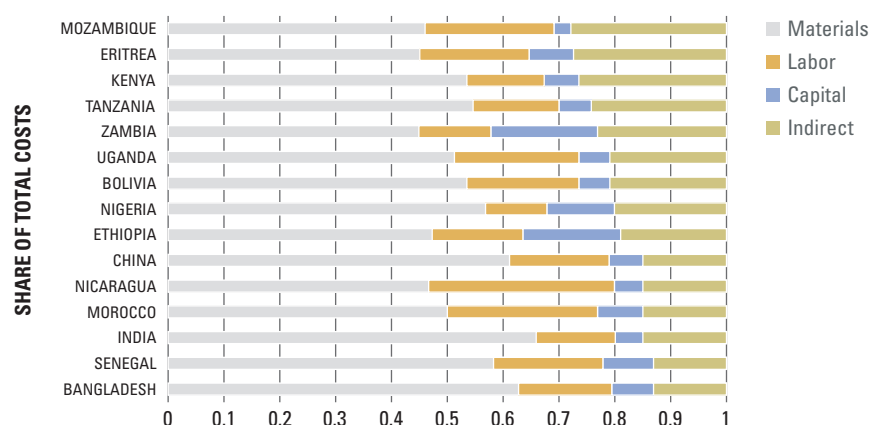
Table 1: Ratio of Exchange Rate to PPP Conversion Factor, by Region, 1993–96

	OECD	LAC			MENA	ECA	EAP			SSA	
		South Am.	Central Am.	Caribbean			All	China	SAR	All	Poor ^a
<i>Costs</i>	1.19	0.64	0.46	0.55	0.42	0.42	0.29	0.23	0.22	0.37	0.31
<i>Ratio of costs to predicted costs*</i>	1.07	1.16	0.93	1.07	0.93	0.90	0.91	0.80	0.87	1.07	1.28
<i>Income per capita (market prices)</i>	26,500	4,000	2,850	3,200	2,200	2,450	750	550	375	550	300

a. Excluding Botswana, Cape Verde, Mauritius, Namibia, and South Africa, all of which are middle-income well-managed countries.

b. A value of 1 implies that cost levels are equal to those predicted by the Balassa trend line relating income level to PPP ratios. Regions with costs or prices higher than predicted have values above 1

Figure 1: Cost Structures, Firm-Level Average by Country



and Tanzania would have profit margins on par with China. With the exception of Morocco and Senegal, a one-third reduction in indirect costs would have a greater impact on profit margin than would a one-third reduction in the cost of labor. For most African countries, achieving an indirect cost level equal to Senegal would have a greater impact on profit margins than halving labor costs. This comparison demonstrates that high indirect costs in Africa are acting as a damper on economies with much potential.

Cleavages in the African Private Sector

Political analyses of Africa describe twin problems of slow growth and only partially successful reforms. Both Tangri (1999) and Van de Walle (2001) find that minority communities within the private sector tend to be closely aligned with the political elite. The political elite implement partial reforms with little impact on the private sector and their way of doing business. Thus, their alliances with the minority groups within the private sector remain undisturbed. Although the World Bank and other donors focus their dialogue on technical solutions to private sector development, such as better roads, more power generation, and reduction of the regulatory burden, dialogues in the domestic African press focus on the proposition that the persistence of the private sector elite (whether foreign, ethnic minority, or Black) has prevented economic empowerment of the majority of Black Africans. The long-standing rent-seeking arrangements that have benefited the private sector and political elites must be confronted for true reform to take place.

The firm-level surveys support this perception of cleavages within the African private sector. In almost all countries, there is a strong relationship between foreign ownership and firm size, but in Africa, this relationship also extends

to ethnic minority ownership. These large, foreign, and minority-owned firms tend to have higher productivity than indigenous firms and tend to export more than their smaller indigenous counterparts. On average, small to medium enterprises in China have productivity levels at about 80 percent of larger firms. In Africa, the ratio is closer to 50 percent. These firms all face some of the same constraints related to business environment, yet the share of large firms with access to credit is much higher than that of small firms. Large firms also have

more interaction with the government, which may provide opportunities to exchange favors, although rent seeking here is also likely. The role of networks in the African private sector is crucial in understanding the nature of the cleavages. Biggs and Shah (2004) link access to credit and other performance variables to ethnicity in their research. These often ethnic networks help firms to overcome the limitations of markets but also function to exclude outsiders. Small, sparse industrial sectors dominated by a few firms with high market share are likely to see less dynamic competition arising. Without competition, fewer incentives arise for these networks and entrenched business interests to push for better regulation and business services.

Policy Reforms

The main message of the paper is the importance of including losses and indirect costs in firm-level analysis. By evaluating net TFP, rather than gross TFP, a broader evaluation of firm costs can be considered, which allows for a more accurate comparison of firm productivity. Based on the findings in this analysis, six reforms are put forth:

1. *Reduce most severe indirect costs:* As demonstrated by the scenarios of reduced indirect costs, firm-level profitability can be seriously enhanced by improvements in the business environment. For most African countries, power, transport, and telecommunications are of greatest concern.
2. *Level the playing field:* Extend to indigenous firms programs such as tax incentives and training that are already benefiting minorities and foreigners.
3. *Encourage enclave growth to increase business density:* Because improving services countrywide may be diffi-

cult and costly, creating enclaves for business, such as the export processing zones (EPZs) of Mauritius and Madagascar, may be more feasible. They can also help to attract new entrants.

4. *Build constituencies for reform:* Demonstration effects can weaken old perceptions. Business enclaves can serve this purpose, as well as advertising the gains achieved in other countries.
5. *Enhance the profile and credibility of reforms:* Business-related reforms should receive the same attention as social sector reforms. Focusing on measurement may help to enhance the profile and credibility of these reforms.
6. *Capitalize on the concern over donor dependence:* Some African countries are beginning to discuss the need to lessen dependence on the donor community. Linking development in the private sector to reduction of donor dependence may increase support for reforms.

Figure 2: Cost Structures and Profits in Manufacturing

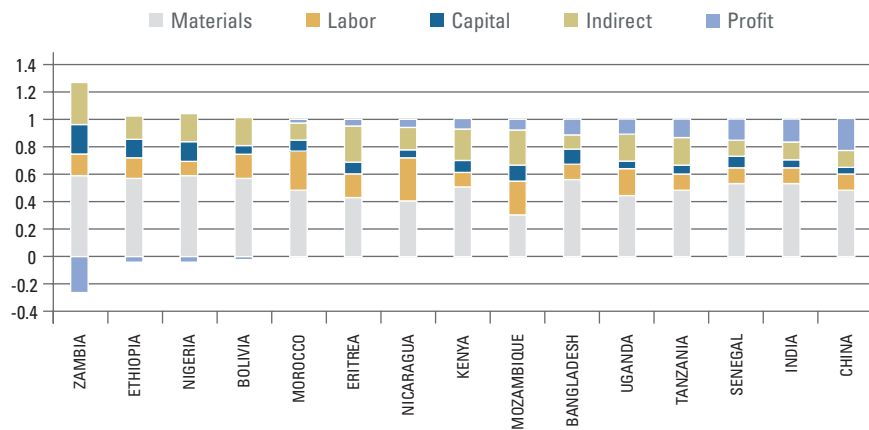
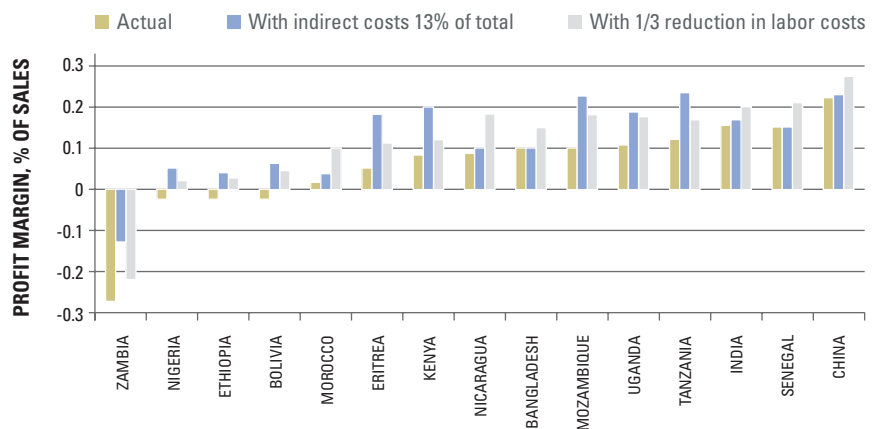


Figure 3: Profitability, Actual and Counterfactual



This note is part of a series of summaries of analytical work of the Africa Private Sector Unit. The note is authored by Michael Igram based on a paper entitled *Business Environment and Comparative Advantage in Africa: Evidence from the Investment Climate Data*, by Benn Eifert, Alan Gelb, and Vijaya Ramachandran, presented at the Annual Bank Conference on Development Economics held in Dakar, Senegal in January 2005. The views contained in this paper are the authors' own and do not necessarily represent the views of the institutions that they are affiliated with. For more information, contact Vijaya Ramachandran via email at vramachandran@worldbank.org. A copy of the report is also available from www.worldbank.org/afr/aftps