

**Uganda's Policy Reforms,
Industry Competitiveness and Regional Integration:
A comparison with Kenya**

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Abstract

The main objective of this study is to examine the competitiveness and comparative advantage of manufacturing industries in Uganda and to compare them with corresponding industries in Kenya. This comparison is important in view of the renewed commitment of the two countries, together with Tanzania, to integrate further the economies of the East Africa region. The important question for many manufacturers in Uganda is whether they are sufficiently competitive to survive and prosper in a context of regional free trade. A further objective is to analyse the main sources of competitiveness and, in particular, to evaluate the impact of economic policies on the costs of manufacturing, especially trade policy changes, management of the exchange rate and measures that influence the cost of capital.

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Introduction

Uganda and Kenya are at a critical stage of economic development. While Kenya has experienced an uninterrupted process of industrialization since independence (and before), Uganda's industrial sector has suffered a lot from years of political instability and civil war. Its present government has adopted, like that of Kenya, a liberal philosophy of trade and industrial policy. Pursuing this strategy, it has moved rapidly towards the elimination of most non-tariff trade barriers and has just concluded a regional cooperation agreement with its East-African neighbours, Kenya and Tanzania. The region is now becoming a free-trade area and is supposed to transform into an economic union. At the same time, all three countries are facing a world-wide tendency of globalisation and liberalized trade. The important question that the Government of Uganda (GoU) faces is how to design future trade and industrial policies that make the country benefit from liberalized trade and economic integration without losing, and even enhancing, its industrial sector.

The concepts of competitiveness and comparative advantage are of great importance in the design of such policies. A government that wishes to enhance the flow of resources into sectors of comparative advantage, rather than letting imperfect markets do this job, needs to understand not only the concept of comparative advantage, but also its determinants and sources. In order to promote sectors with a potential for comparative advantage it needs to detect such potential. This approach is based on the modern view that comparative advantage is not immutable, but can be generated through human capital investment, research and development, and appropriate incentives.

The present study investigates the international competitiveness of manufacturing industries in Uganda, compares them with Kenyan industries and attempts to derive conclusions on future trade flows and industrial growth in the two countries. It uses a method of analysis designed by Siggel & Cockburn¹ and applied previously in another EAGER project in Mali and Côte d'Ivoire², as well as with Indian data³. This method is the result of a marriage between incentive measurement of standard trade theory and social cost benefit analysis. It consists of the computation of competitiveness indicators and their decomposition according to the major sources of competitiveness. The analysis is carried out with Ugandan and Kenyan data of 1996 to 1998, but mostly from 1997. The study compares the competitiveness of 21 Ugandan firms in 12 industries with that of similar firms in the same industries in Kenya.

The present report examines in the first section the policy environment facing Uganda's manufacturing sector. In the second section, the method of analysis is explained, as well as the database and assumptions necessary in the analysis. The third section contains the results of the analysis, starting with the measured levels of competitiveness and comparative advantage and focusing then on the sources of competitiveness. For more detailed industry results the reader must be referred to the full-length report on the project (Siggel, Ssemogerere, 1999). In the final section we attempt to derive policy conclusions.

¹ A more detailed exposition of the method is contained in Siggel & Cockburn (1995), Cockburn & Siggel (1995).

² Cockburn, Siggel, Coulibaly and Vezina (1999).

³ Siggel (1999).

1 The policy environment of manufacturing in Uganda

The policy environment facing Uganda's manufacturing sector can be described as a generally business-friendly (conducive, enabling) environment, without a specific sector focus. While the highest priority is attributed to agriculture, given its relative importance and potential for equitable growth, manufacturers are competing for scarce resources with the rest of the economy. The present account begins with a historical review of policies affecting manufacturers since the beginning of the new regime, i.e. since the mid-1980s, and examines then several policies with regard to their impact on industry competitiveness.

1.1 Historical perspective of policies affecting manufacturing

By the beginning of Uganda's new regime, and following a 15-year period of civil unrest and dictatorship, the manufacturing sector had been reduced from its former size of 12% to a mere 3.5% of GDP in 1986. The installed capacity was not only under-used, but also obsolete, with little chances to receive proper maintenance and replacement. The scarcity of foreign exchange made the purchase of foreign raw materials and spare parts all but impossible. This led to shortages of essential commodities, which the sector could not meet without rapid and substantial financial assistance.

Under the **Emergency Relief and Rehabilitation Programme** of 1986, the policy thrust was to revive production of essential commodities, to relieve immediate shortages and meet the needs of the populations displaced by civil war. The programme, which injected US\$23m for the purchase of raw materials and spare parts, gave priority attention to the production of cement, leather and footwear, foam mattresses, matches, mineral water, textiles, edible oil and soap, paper products, cables and roofing iron sheets.

The **Economic Recovery Programme** (ERP, 1987/88-1991/92), focused more widely on inflation reduction, general rehabilitation of productive capacities, including those of manufacturing, restoration of infrastructure and social services, and the achievement of external balance by reducing the repressed demand for imports. For manufacturing, the programme provided special allocations of foreign exchange through a series of sub-programmes, in particular assistance to nine specific sub-sectors (steel, textiles, tobacco beverages, sugar, cement, edible oil & soap, salt and phosphates), Industrial Sector Development Loans, Special Import Programmes and Open General Licensing Programmes, totaling US\$ 950 m. The criteria used for the selection of industries and firms were diverse, such as foreign exchange saving or earning, employment generation, provision of essential commodities, contribution to tax revenue and the formation of linkages. In general, deserving industries were those whose impact on industrial growth was expected to be greatest. In spite of some emphasis on foreign exchange earnings, nearly all establishments revived under the ERP were producing import substitutes for the domestic market.

In the following years, the policy emphasis shifted from inward orientation to **Structural Adjustment**, which was charted in two policy documents (The Way Forward I: Macro-economic Strategy 1990/95, and The Way Forward II: Medium-term Sectoral Strategy 1991/95). This programme was designed to reduce internal and external disequilibria and to re-orient the

economy towards private sector-led growth. In particular, it focused on the mobilization of domestic and foreign resources for investment, as well as on price stability. Besides targeting a single-digit rate of inflation, domestic resources were to be mobilized by prudent budgetary administration, allowing the GoU to repay arrears to the banking system, rather than financing deficits from domestic sources. The spending increases were to be financed by foreign transfers, as well as by more efficient tax collection through the newly established Uganda Revenue Authority (URA). Foreign resources were to be mobilized by introducing a market-based exchange rate in 1993, merging the parallel and official rates. Exports were promoted by dismantling the Coffee, Lint and Produce marketing boards. The repeal of the Industrial Licensing Act of 1969, led to free entry of investment into industry, save for minor restrictions imposed by the Investment Code 1991. Import and export procedures were also simplified by the repeal of dual licensing, which required exporters to bring back imports of equal value to export receipts. In addition, price controls were abolished, in particular those of the petroleum price.

The **Investment Code** of 1991 created investment incentives by granting exemptions from tariffs on imported raw materials and from profit taxes. Although not specifically targeting the manufacturing sector, the Code attracted private investments into the sector and thereby qualified as an industrial policy. The instrument remained problematic, however, in that special incentives were not tied to external economies or potential comparative advantage.

The Way Forward also included liberalization of the financial sector by decontrolling the interest rate and gradually liberating the capital account. On the whole, it amounted to a reform programme based on a market-oriented development strategy. The government's role was to be limited to the provision of public sector services and, in addition to the policy-making and implementing role, to continued stimulation of investment in various sectors, including those in which private enterprise would be expected to dominate. The Action Plan for Public Enterprise Reform and Divestiture provided a framework for privatization as well as for reform of public enterprises, with the goal of reducing the burden such enterprises represent for the public purse. Sector-specific investment targets were defined as 35% for social infrastructure, 19.6% for transport and communications and 16% for manufacturing. Given the emphasis on private sector development, the latter proportion is surprising, but it can be explained as a potential catalyst for private investment in areas where private firms seek government backing.

One area that deserves particular mention is the question of ownership of expropriated industrial properties, which were formerly owned by departed Asian entrepreneurs. The Expropriated Properties Act of 1983 provided a legal framework for returning such properties to their former owners, and the GoU made it one of its objectives to implement more vigorously this law in order to improve the climate for foreign investment.

The programme also includes a number of objectives whose consistency with the philosophy of a level playing field is somewhat ambiguous. Under the heading of "building an independent, integrated and self-sustaining economy", it proposes to promote (a) inter-sectoral linkages, (b) efficient import-substitution, (c) efficient and sustained investment in export-oriented industries, (d) a viable, resilient banking sector and capital market, and (e) indigenous technology plus a programme of research and technology transfer. It is not quite clear to what extent all these

objectives can be reached with the instruments the GoU was prepared to engage. For their realization, the main impetus must come from private sector investment, with the GoU avoiding red tape and other disincentives.

In 1996/97, the GoU took stock of the achievements under the Way Forward and reported the following developments: Government revenue rose from 6.2% of GDP in the preceding reference period (1986/87-1991/92) to an average of 9.7% up to 1994/95 and to 11.7% up to 1998/99. This enabled the government to finance its recurrent expenditure and to contribute to the development budget. Inflation was reduced from over 100% in the reference period to less than 10% in the following two sub-periods, which, together with a competitive exchange rate and gradual liberalization of the capital account, led to increased confidence of domestic and foreign investors. Private investment increased from 6.6% of GDP in the reference period to 9.0% and 14.0% subsequently. The growth of real GDP accelerated from 5.2% to 8.0% and 6.4%, respectively.

The manufacturing sector grew at an annual average rate of 12%, making it the fastest growing sector in the economy. Contributing 9.5% to real GDP, 5% to total employment and 4% to export earnings, it remains relatively small, but these numbers tend to under-state the sector's importance as a supplier of vital products, such as processed food, tobacco and beverages, textiles, paper products, building materials and household goods, as well as industrial inputs, for the import of which the available export earnings would have been insufficient. The structure of the manufacturing sector can be seen in the following table, considering the weights, which the nine sub-sectors carry in the Index of Industrial Production.

Table 1: Index of Industrial Production (1987 = 100)

Sub-sectors	Weight in Index	1998 value of Index
1 Tobacco & beverages	26.10	451
2 Food processing	20.70	479
3 Textiles & clothing	16.30	118
4 Chemicals incl. Paint	12.30	929
5 Timber, paper, printing	9.00	554
6 Steel & metal products	5.30	518
7 Bricks & cement	4.30	1147
8 Footwear & leather	2.30	234
9 Miscellaneous	3.70	551
10 Total sector	100	503

Source: Republic of Uganda, Background to the Budget, 1999/2000

Two areas of concern are the uneven utilization of capacity and the sector's inward orientation. First, the **Background to the Budget** (Ministry of Planning and Economic Development, 1998/99) reports average capacity utilization rates for 15 product groups, of which nine have increased between 1987/91 and 1995/98 and six have decreased. More disturbingly, in the six product groups with declining rates the average is only 13% (down from 35%), whereas the average rate in the nine increasing groups is 77.2% (up from 23.6%). Declining rates can result

from high investments outpacing the growth of demand, thus creating a problem of high costs and reduced competitiveness in the short run. It is puzzling, however, that the reported rates are so strongly diverging, which suggests that the incentive structure may have been very distorted.

The second concern, is precisely the incentive structure as measured by the tariff rates and rates of protection. A study by Maxwell Stamp (1993) reports that the tariff structure was biased against exports, at a rate of 12%⁴. Tariff rates varied between zero and 175%, with high rates encouraging various forms of avoidance (exemptions) and evasion (under-invoicing and smuggling). The average collection rate was low at 6.5%, which manufacturers consider as inadequate protection. Nonetheless, most of the investment projects implemented under the Investment Authority between 1991 and 1993 (27.2% in manufacturing) were oriented towards the domestic market, 51% import-substituting, 40% in non-tradables, and only 9% export-oriented. Elimination of the anti-export bias was, therefore, one of the objectives pursued in subsequent policy reforms, notably the 1997 Tax Act.

In pursuit of a more uniform incentive structure, and following pressure by the World Bank (Background Study to Structural Adjustment Credit III, 1996), the Investment Code of 1991 was revised in 1997. The main change was to abolish tax holidays and to replace them by rapid depreciation allowance: 50-75% on new machinery for the first year for Kampala and up-country investors, and 40-45% for the subsequent years on the outstanding balance. At the same time the role of the Investment Authority (UAI) in selecting and licensing projects was questioned, which ultimately led to a limitation of its functions in 1999.

While the government's general approach towards development has been one of neutrality of incentives, the GoU commissioned or published several studies and policy documents (Industrialization Policy and Framework, 1994; Indicative Industrial Plan, 1995; Report of the Sessional committee on Trade, Industry and Information on the 1997/98 Budget, 1997), which seem to invoke an industrial strategy. Four sub-sectors were singled out as activities with potential comparative advantage and as deserving special attention: agro-processing, steel and fabricated metal products, wood products and non-metallic minerals. It is not clear on what criteria this selection is based, or how these activities would benefit from special attention. Since natural resources are the most common sources of potential comparative advantage, one also wonders why the cotton textile industry is not included in the list of priority sub-sectors, unless it qualifies as agro processing. It would certainly meet the criteria of backward linkage to agriculture and labour intensity, since Uganda's cotton is of good quality and could be expected to be a source of comparative advantage in cotton textiles.

1.2 The most recent policy framework

There are three recent policy documents that can be considered to reflect the present philosophy of the GoU towards industrialization and development in general. First, the Draft Poverty Eradication Action Plan of 1997, finalized in 1999/2000 and running up to the fiscal year 2016/17, sets the tone for future budget allocations: All public expenditure programmes are to have a poverty eradication focus. Second, the Medium-Term Budget Framework 1997/98, introduces

⁴ This is taken to mean that the nominal protection of import substitutes exceeds that of exports by 12%.

sectoral hard budget ceilings to reflect the national expenditure priorities. The sectors with expenditure priority are primary education, primary health care, water and environmental sanitation, agricultural extension service to smallholders, as well as roads construction and maintenance. Also, the administration of public services was decentralized. The primary objectives in these policy documents remain (a) high growth of GDP at 7% annually, (b) macroeconomic stability (inflation at 5%, sustainable balance of payments position with reserves of at least 5 months of imports), (c) a competitive exchange rate and (d) private-sector-led and broad-based growth that eradicates poverty.

The manufacturing sector is affected in several essential ways by the policy framework: First, the emphasis on macroeconomic stability can be expected to reassure investors. Second, the elimination of the anti-export bias should contribute to increased efficiency by reducing price distortions. Third, accelerated privatization should contribute to increased availability and efficiency of utilities, in particular telecommunications and electricity. Fourth, increased public expenditure in transportation, primary health care, water and sanitation should increase productivity. And finally, legal reforms and the enforcement of standards are needed to reduce the risk of doing business and to improve the general business climate.

The third recent document, a Draft Medium-term Policy Agenda for Private Sector Development (1999) is still being negotiated between the private sector, donors and the GoU. The draft contains more direct measures for the manufacturing sector, such as the implementation of an effective exports strategy, including export financing schemes and institutional support, as well as a competitiveness strategy over the long term, including linkages and appropriate technology.

1.3 Major policies affecting industry competitiveness

It is obvious that international competitiveness and openness of the economy go hand in hand, and that the former follows from the latter. But trade openness can also lead to the simple absence of industries that have either never seen the day, or have disappeared due to foreign competition after trade liberalization. Competitiveness under the protective umbrella is also possible, in the same way as monopolistic firms can be competitive in spite of charging higher than competitive prices. Next in importance to the trade regime, among policies affecting competitiveness, are the exchange rate, the tax regime, financial policies and services, public services and utilities. Let us briefly examine how the Ugandan government's performance in these areas is likely to affect the competitiveness of its industries.

1.31 Exchange rate management

The high rates of inflation, exchange rate controls and foreign exchange allocation of the 1970s and early 1980s had resulted in a huge parallel market premium over the official exchange rate, which stood at 207% in 1987. As reported earlier, the parallel rate was legitimized and thereby unified with the official rate in 1993. Since then, the rate is market-based and may be expected to reflect the true purchasing power of the currency. It is well known, however, that even floating rate regimes can produce wide swings away from purchasing power parity. Not surprisingly, critical voices (some of which are reported in the UIA Survey, 1994) have argued that the Uganda

shilling appreciated in real terms, leading to some degree of over-valuation. This, in turn, has been of great concern to manufacturers and especially exporters, as it erodes competitiveness and countervails protection provided by the trade regime.

According to current work at the Bank of Uganda (Atting-Ego et al., 1999), the exchange rate was over-valued up to over 20% for certain periods between 1993 and 1998. These periods of over-valuation coincided with a decline in non-traditional exports. The reasons for such misalignment can be found in changes in two major determinants, the terms of trade and foreign exchange inflows. Over the period 1993/95, the terms of trade improved due to the coffee boom, during which the nominal exchange rate appreciated, as expected. In the subsequent period up to 1997, when no further terms of trade improvements occurred, capital inflows may have prevented nominal depreciation, which would have been necessary to accommodate inflation. Official foreign exchange inflows from grants and loans and private unrequited transfers increased between 1992/93 and 1997/98, the latter from US\$ 450 m to 878 m, exceeding slightly total export earnings. These private transfers were related to the return of former owners of business in the Asian community. When official and private transfers dropped from US\$ 878 m in 1997/8 to US\$ 594 m in 1998/99, the nominal exchange rate started to depreciate rapidly from 1069 Ush./US\$ (annual averages) in 1997 to 1237 in 1998 and 1450 in 1999. Since inflation was also brought down to about 5%, the over-valuation may have disappeared by 1999. Our study, which uses the rate of over-valuation of 20% in 1997, shows how this distortion affects the unit costs and competitiveness of various industries.

1.32 The Investment Code

Investment Codes, which have been used in many countries to promote domestic and foreign investments, have usually the effect of distorting the structure of prices or incentives. When the benefits of such codes include exemptions from import duties, this usually leads to greater disparities in effective protection. When exemptions from direct taxes are involved, prices and costs may be unaffected, but the incentive structure gets distorted, nevertheless. Very few incentives can be shown to be non-distorting. For instance, manpower training may be encouraged, by exempting the firms that do provide training, from a training levy that all others have to pay. Some degree of distortion can also be justified when investment projects generate external benefits. For instance, a strong financial sector provides benefits to the economy that exceed the profits to its owners. Therefore, special incentives to strengthen this sector can be justified.

The history of Uganda's Investment Code is not spared by controversy about who should be licensed and what kinds of benefits are admissible. As we saw earlier, some of the original (1991) stipulations have changed, in particular, tax holidays were replaced by accelerated depreciation allowance. But another serious problem is that the UIA in charge of administering the incentive scheme lacks the capacity to monitor adequately the benefits to the economy that the Code is expected to obtain from the licensed firms. Four kinds of benefits were to be gained: employment and training of local labour, development of linkages through the purchase of local rather than imported inputs, introduction of advanced technology or upgrading of existing technologies, and actions taken to preserve the environment. In none of these areas was it possible for the UIA to

monitor the realization of these benefits. The only incentive schemes that were more easily monitored are the Business Uganda Development Scheme (BUDS), administered by the Private Sector Foundation, for gains in competitiveness, and the APEX financing scheme for export promotion, administered by the Bank of Uganda.

1.33 Financial liberalization and the cost of credit

Since 1994, Uganda's financial sector can be considered as liberalized, so that there is no financial repression. The interest rate, although freely moving, is widely split into a low deposit rate of 11.8% and a high lending rate of 21.4% in 1997 (IMF, IFS Yearbook 1999), and even lower in most commercial banks. This wide wedge between deposit and lending rates is symptomatic of the financial sector's fundamental weakness. Since the beginning of financial sector restructuring in 1993, six commercial banks have been closed and three have been taken over and administered by the Central Bank. Analysts found that the banks either lend to insiders, keeping too narrow a loan portfolio, i.e. lending to few types of businesses like coffee exporters only, or lend the government. The GoU, however, cannot be accused of excessive borrowing, since it has retired most of its debt vis-à-vis the banking sector. As banks run out of liquidity and face disciplinary action, they ration credit, or suspend lending altogether.

Further characteristics of the banking sector in Uganda are its oligopolistic market structure and the scarcity of product types (lending instruments). The GoU has recently attempted to tighten bank supervision, and to encourage new credit schemes, such as APEX, and to enforce the honouring of cheques and a loan repayment culture. These reforms are yet to bear fruits.

As a consequence of the scarcity and high cost of credit, bank loans represent only 17% of investment financing, while 41% are financed by retained earnings, 20% by personal savings and 22% by other unspecified sources, according to Uganda Firms Survey (1998) of 256 firms. The present study measures the strong impact of the cost of credit on comparative advantage and competitiveness.

1.34 Public services and utilities

Among the obstacles to competitiveness that are most often mentioned by manufacturing firms are the costs of transport, electricity and communications. For transportation, the state of the roads is generally considered unsatisfactory by the firms interviewed in this project. It must be said, however, that the complaints and critique of government action in this regard are much less critical vis-à-vis the government than they are in Kenya, where the road infrastructure has deteriorated substantially in recent years. The policy documents surveyed above also give the impression that the GoU is well aware of the necessity to upgrade road conditions. One particular problem is the absence of efficient rail transport from Kampala to the Kenyan border, as well as into the regions of Uganda.

As to electricity, many firms complain about high rates as well as frequent service interruptions, which contribute to increased costs of production. The rates charged were found to be in line with long-run marginal costs at US\$0.07 per kWh, according to a study by the World Bank (ESMAP,

1996, p.26). The service interruptions have led to arguments between users and the Electricity Board (UEB); load shedding is a necessity, according to the UEB, given the presently installed capacity, but unacceptable to many firms, who cannot easily reschedule their work periods into night shifts. The answer to this problem lies in the expansion of generating capacity, which requires very large investments. As the ESMA study concludes, “neglect of the energy sector, like all areas of infrastructure, is a legacy of nearly 15 years of political turmoil, civil strife and economic decline.”

In telecommunications, the problem is similar to that in transportation, as far as comparisons with Kenya are concerned. The complaints are milder than those in Kenya, since the telephone system seems to be more functional than the one in Kenya. It has also been accepted by the GoU that accelerated privatization of the telephone company may help to improve the service.

1.35 The tax regime

Uganda’s tax regime has undergone several changes in recent years, as discussed earlier. Concerning import duties, the outcome is lower tariff rates and a generally more uniform rate structure, which is expected to increase payments compliance. Tax exemptions were practically eliminated in 1997. The corporate tax of 30% applies now to all investors, but different accelerated depreciation rates apply. The value added tax of 17% was introduced in the 1996/97 FY to broaden tax coverage without distorting the resource allocation.

The change of the corporation tax regime from one with exemptions to one of accelerated depreciation deserves some attention, as it tries to make the regime more equitable. A recent World Bank study (Chen et al., 1999) has shown, however, that the marginal effective tax rate on capital (METR) in new investments depends not only on the tax rate but also on the capital structure of assets. Since manufacturing industries are less capital-intensive, but more inventory-intensive than, for instance, agro-processing, its METR is higher at 35.8% than that of agro-processing at 23.4%. It also follows that the marginal effective tax burden has increased since 1991 and shows a greater inter-sectoral variation than in 1991.

The main complaint, frequently expressed by interviewed industry officials, is the persistence of smuggling. It not only deprives government of public revenue, but also reduces the actual protection of local producers below that implied by the statutory tariff rate. This conclusion is puzzling because the Uganda Revenue Authority had been endowed with appropriate means to deal with the problem, for instance by higher salaries of its officials and a state of the art computer system. Now, the GoU has established a Special Revenue Police Service, in order to curb smuggling.

1.36 Regional integration

It would exceed the present framework to recount the history of regional integration in East Africa. The break-up of the East African Community in 1977 implied a loss of regional demand for Ugandan exports, but also a loss of industrial supplies, mainly from Kenya and some from Tanzania. Uganda’s manufacturers could have turned this loss to their advantage by developing

more import-substituting capacities, but this did not happen due to the political and economic instability of the following ten years. In recent years, regional integration was discussed again, first at the wider basis of the PTA and then COMESA, and these discussions led to the signature, in November 1999, of a new cooperation agreement between the three East African nations. The treaty foresees harmonization of fiscal and monetary policies, free trade and factor movements between the three partners and a common external tariff.

2 The method of analysis, data and research procedure

The concept of competitiveness is frequently used by economists, politicians and business leaders, but there is little agreement about its precise meaning, and even less about the methods of measuring it. While politicians and some economists tend to use the term in an economy-wide sense, we only use the microeconomic version of the concept, and more particularly the one of cost competitiveness. At the enterprise or industry level, producers are deemed to be competitive if their unit costs of production are inferior or equal to those of their competitors. This can be the case in the domestic as well as in international markets. International competitiveness is of particular importance when markets are open or being opened to international competition, such as is the case under trade liberalization. Since a survey of the literature on competitiveness and comparative advantage would exceed the present framework, the reader may be referred to a recent symposium 'International Competitiveness', (Oxford Review of Economic Policy, 1996) and a survey of the literature (Siggel, 1997a). Only studies dealing with competitiveness in Uganda are being surveyed briefly in the following section.

2.1 Competitiveness and comparative advantage in Uganda

The literature on competitiveness in Uganda has received several recent additions, such as EPAU (1997) examining the government's 'Investment and Export Promotion Strategy', IFO (1997) studying the 'Impact of East African Regional Integration on the East African Economy', and UNDP (1996) focusing on 'East African Open Borders Potential Trade Impact on the Uganda Economy'.

The findings, on which there is agreement in these studies, are that Ugandan industries are disadvantaged, in comparison to Kenya, by their smaller domestic markets, by higher transport cost of imported inputs, by higher costs of utilities and by stronger incentives provided by the Kenyan government. Policy conclusions vary and range from the provision of technical and marketing information, and improved access to financing, to the request of increased protection. None of the studies, however, approaches the distinction between comparative advantage and competitiveness in a systematic manner.

At the international level, The African Competitiveness Report (1998), with Application to Uganda in the Uganda Country Competitiveness Analysis (1998), Sections I, II and IV, applies the methodology of the World Competitiveness Report (1997), which consists of a weighted index measuring the quality of the business environment in a large number of countries. The main aspects featuring in this index are political and economic stability, openness to trade and investment, legal and institutional enabling environment, financial infrastructure and institutions, human resources development and technology, and economic & social infrastructure. The fact

that Uganda scores well on most of these indicators is a reflection of recent policy reforms surveyed above. The report and competitiveness index, however, are limited to the concept of economy-wide competitiveness, which does not allow to evaluate and rank single industries or firms.

The firm-level analysis of competitiveness as proposed by Porter (1990) and Fairbanks and Lindsay (1997), although not yet rigorously applied to Ugandan firms, has left its imprint on a recent policy document already mentioned earlier, the Medium-term Policy Agenda for Private Sector Development, which includes the Draft National Competitiveness Strategic Plan.

2.2 An indicator of competitiveness and comparative advantage

The indicator of competitiveness used in the present study is a unit cost ratio (UC), defined as total cost (TC) divided by the value of output (VO), which in turn equals output quantity times the ex-factory price. For domestic sales, the ex-factory price is the domestic market price (Pd), which is typically higher than the international price of a similar imported product by a margin equal to the nominal rate of protection. For export sales, on the other hand, the ex-factory price is equal to the international (fob) price (Pw).

This particular definition of the unit cost ratio serves a double purpose. First, it helps to overcome the differences in product mix and quality that make inter-firm comparisons always problematic. We assume that the output price is usually proportionate to the quality attributes of products. Therefore, when two firms have the same total cost, but one produces a higher-quality product with a higher price and total output value, its unit cost ratio would be lower, implying that it is deemed to be more competitive than the other firm. Second, it makes the unit cost indicator independent of the data of an international competitor, whose cost we would otherwise need for comparison. We assume, therefore, that the international price (Pw) corresponds to the unit cost of a typical international best-practice producer. The fact that Pw is measured as the border price (cif) means that the benchmark for international comparison includes the transport cost to the border and therefore a margin of natural (geographic) protection. Our criterion for international competitiveness or export competitive advantage is then

$$(1) \quad UC_x = TC/(Q P_w) \leq 1$$

meaning that a firm is deemed to be competitive if its cost per unit of output is less or equal to the free-trade price of an equivalent import. This concept of cost competitiveness is multilateral, as opposed to a bilateral firm-to-firm or country-to-country comparison, but it allows bilateral comparison as well. For instance, if $UC_{X_U} > UC_{X_K} > 1$, then neither the Kenyan, nor the Ugandan firm, is export competitive, but the Kenyan firm is more competitive than the Ugandan firm. It may be able to export to Uganda in regional free trade if the Ugandan external tariff is higher than the difference between UC_{X_K} and 1.

In addition to the notion of international competitiveness, we are also interested in domestic competitiveness, which means a cost advantage under protection. In this case the denominator of unit cost is the output value at domestic prices ($VO_d = Q P_d$), so that the criterion of domestic competitive

advantage becomes

$$(2) \quad UCd = TC/(Q Pd) \leq 1.$$

For those firms that export part of their output, P_d of the exported output equals P_w .

This measure of domestic competitiveness corresponds to the profitability of the firm. Since total cost (TC) includes the opportunity cost of capital, taken as the capital stock times the interest rate, it exceeds unity if the rate of return is lower than the interest rate, and it is less than one if the rate of return is higher. Clearly, the indicator sets a high standard of competitiveness, because the criterion implies that the firm is able to replace its total capital stock by borrowing at the current interest rate. In times of high interest rates, this may be difficult even for otherwise truly competitive firms. The indicator has, therefore, this long-run characteristic.

The most important distinction, however, and the hallmark of our method of analysis is the one between competitiveness and comparative advantage. While competitiveness is understood as a cost advantage based on market prices including various price distortions, subsidies and penalties, comparative advantage corresponds to a cost advantage at equilibrium prices.⁵ In order to measure comparative advantage we have to replace all prices, in output as well as all inputs, by shadow prices. A firm or industry has then comparative advantage if the unit cost ratio in terms of shadow prices does not exceed unity:

$$(3) \quad UCs = TCs/(Q Ps) \leq 1$$

where TCs is total cost in shadow prices and Ps is the shadow price of output. For tradable goods, the shadow price is usually equal to the international price (P_w), but adjusted for any distortion of the exchange rate. TCs is the sum of all cost components adjusted for all price distortions and subsidies.

It is now evident that our concept of competitiveness differs from the one of comparative advantage only by including the sum of all price distortions. When UCd is smaller than UCs , the price distortions act as subsidies; when UCd exceeds UCs they act as penalties. Since price distortions exist on the input and output sides, appearing in the numerator and denominator, they have the opposite effect on the input and output sides. A tariff on output lowers the unit cost ratio (i.e. increases domestic competitiveness), whereas a tariff on tradable inputs raises it and thereby lowers competitiveness. This shows that in the protected domestic market a producer is more competitive than under free trade, as production tends to be more profitable under protection. But comparative advantage, which is the real core of competitiveness, is not affected by the existing price distortions. However, under protection and other distortions, input coefficients may be affected as well. In other words, cost-lowering price distortions may lead to lower efficiency in the longer run.

Finally, total cost is broken down into four components, tradable inputs, non-tradable inputs, labour cost and capital cost, and the distortions are calculated and deducted from the costs at market prices according to the following schema:

⁵ This proposition is demonstrated in Siggel (1993), see also Dornbusch, Fisher, Samuelson (1979).

(4)	VITs/Vos	(Shadow unit cost of tradable inputs)
	+VINs/Vos	(Shadow unit cost of non-tradable inputs)
	+LCs/VOOs	(Shadow unit cost of labour inputs)
	+KCs/Vos	(Shadow unit cost of capital inputs)
	<hr/>	
	=TCs/Vos=Ucs	(Total unit cost at shadow prices)
	+dpe	(Exchange rate distortion of output)
	+dpj	(Tradable input price distortion)
	+dpje	(Exchange rate distortion of tradable inputs)
	+dw	(Wage rate distortion)
	+dpk	(Capital goods price distortion)
	+dr	(Interest rate distortion)
	+ds	(Direct subsidy, negative)
	<hr/>	
= UCx	=TC/VOw	(Total cost per unit of output at international prices)
	+dpp	(Output price distortion)
	<hr/>	
=UCd	=TC/VOd	(Total unit cost at domestic prices)

In other words, total unit cost in shadow prices (indicator of comparative advantage), augmented by all cost distortions, adds up to unit cost per output value at free-trade prices (indicator of export competitiveness), and adding the output price distortion leads to unit cost in domestic prices (indicator of domestic competitiveness). This accounting framework serves us to identify, with some limitations, the sources of competitiveness. The distortions are all expressed as proportions of unit costs so that the highest proportions indicate the strongest influence on unit costs. For the factors of production, on the other hand, this procedure is not applicable and is replaced by a statistical approach, as explained later. While the cost components of tradable and non-tradable inputs are straightforward, the measurement of the distortions deserves special attention. Besides the distortion categories listed above, we also distinguish sub-categories such as energy cost distortions as part of the tradables, and transport and communications distortions as part of the non-tradables. Before dealing with true distortions, the particular problem of border prices in landlocked countries must be discussed.

2.3 Transport cost and Uganda's landlocked geography

Unit cost ratios are comparable among different countries only if the border prices, on which the output values (VOw and VO) are based, are the same. In order to assure that this is the case for landlocked countries like Uganda, it is not sufficient to divide the domestic output value (VOd) by the nominal protection coefficient, which in the absence of quantitative restrictions and other price distortions, equals one plus the tariff (t). The denominator in this division has to include a transport cost margin equal to the proportion by which Uganda's border prices exceed Kenya's border prices. For some goods that are flown in and out by air cargo, this margin may be zero, but for the majority of traded goods, the transport cost from the port of Mombasa through Kenya to the border point of Malaba is substantial. This transport cost margin can be as high as 50% of the value of goods, depending on the relationship of weight and bulkiness to the value of the product. It tends to raise the Ugandan border price significantly above the border (cif) price of Kenya. Accordingly, the indicators

UCx and UCd are adjusted in the following way for Uganda:

$$\begin{aligned} & (4) \quad UC_x = TC_d / VO_w = TC_d / VO_d * (1 + t + tr) \\ \text{and} \quad & (5) \quad UC_s = TC_s / VO_s = TC_s / VO_d * (1 + t + tr) * (1 + REO), \end{aligned}$$

where tr is the proportion of transit cost to the value of output, and REO is the rate of exchange rate overvaluation. Although this transit cost margin is treated like other distortions in the computations, it is not a distortion in the same sense, particularly not a policy-induced distortion. It is the cost for being landlocked and it provides a measure of protection to domestic producers in the landlocked country, although it also raises their costs of traded inputs.

2.4 The measurement of distortions

On the output side, the only price distortions to be considered here are the nominal rate of protection (NRP) and the exchange rate misalignment. In the absence of quantitative restrictions, the NRP is normally equal to the tariff plus port charges and the transport cost from the port to the factory location. Price margins stemming from monopoly power are unlikely to be substantial in a trade regime regulated only by the tariff. On the cost or input side, there are, however, a number of distortions that need to be discussed, in addition to import tariffs on tradable inputs, such as interest rate distortions, wage distortions, energy price and quantity distortions, as well as transport and communications cost distortions.

2.41 Output price distortions

The most important distortion impinging on unit cost (UC) is the nominal rate of protection (NRP). More precisely, this distortion is the difference between the domestic ex-factory price (P_d) and the cif border or free-trade price of comparable imports (P_w), and it is known as the **implicit NRP**, as opposed to the NRP strictly based on the tariff. In order to capture this distortion adequately we have attempted to compare the prices of products with those of comparable imports. Unfortunately, this exercise did not lead to consistent and reliable results. In many cases the firms were not able or willing to provide this information. Therefore, we had to resort to the use of the tariff (collection rate), i.e. the actually paid duty divided by the value of imports. This procedure fails to take into account the impact of smuggling and other evasive practices, but the error made by ignoring smuggling seemed to be less serious, in the end, than some of the price comparisons provided by firms, which seemed to ignore the differences in quality between domestic and imported products.

The impact of output price distortions on the unit price ratio is usually cost-reducing (for positive protection), because the output price affects the unit price ratio by being in the denominator. Several firms in our sample have used the argument of dumping to justify allegedly negative rates of protection. But the term dumping is not always used in its technically correct sense, so that we were not totally sure about the correctness of dumping charges. In cases like textiles, where, in addition to the problem of second-hand imports, a lot of imports are allegedly entering the domestic market without duties and with values that are below the free-trade prices of comparable products, the question of dumping should be investigated more thoroughly.

2.42 Tradable input price distortions

Since the number of material inputs is usually large, it is difficult to deflate them one-by-one for distortions caused by tariffs and other policy-induced measures. Rather than estimating the price distortions of individual intermediate inputs we have divided the total duty paid on imported inputs by their net value and taken this average rate as the distortion factor. It corresponds in principle to the tariff collection rate used for outputs, except that it is firm specific. Not all tradable material inputs are imported, however. Many are purchased locally, in which case firms are typically unable to estimate their distortions from free-trade prices. For these inputs one could assume that their distortions are similar to those of the imported ones. The fact that they are purchased locally rather than imported suggests that there is a cost advantage in buying locally. Therefore, we have treated them as nearly non-distorted by applying only a small distortion factor reflecting their transport cost distortion and an average tariff rate of 5%. This may over- or under-state their shadow value, but the rate is in line with those received by firms, where the nature of the input is known.

2.43 The exchange rate distortion

Currency misalignment is somewhat difficult to argue when the exchange rate is market-determined, as it has been the case in Uganda in recent years. It is known, nevertheless, that Central Banks can influence the exchange rate by various kinds of intervention that are sometimes referred to as “leaning towards a higher or lower rate”, depending on the nature of interventions. In Uganda, firm officials in the manufacturing sector have repeatedly argued that the going rate over-stated the value of the Ugandan shilling by an undefined margin. In particular, firms interested in exports argued that they felt penalized by the going exchange rate. We have examined this argument critically by using the purchasing power parity approach and data on prices in Uganda and the OECD, and concluded that in 1997 the shilling was overvalued by about 20%. In addition, we have collected the prices thirty standard goods and services forming a household budget of \$75, including food, clothing, hygiene, housing and transport, and compared the price of this budget with its price in Kenya, which was about 20% lower. This comparison led us to the conclusion that our estimate as on the low side, since in Kenya we also observed some over-valuation in the order of 10%. The estimate of 20% was also confirmed by recent unpublished work at the Bank of Uganda (Atting-Ego et al., 1999).

The effect of this margin of over-valuation on our unit cost ratios is twofold. On the output side it raises the shadow value of output above its value at international free-trade prices, and thereby lowers the unit cost ratio UCs. In other words, once the penalty of overvaluation is eliminated, comparative advantage of industries is enhanced, or comparative disadvantage is diminished. On the cost side, the opposite effect occurs for tradable inputs. In the distortions reported in the following sections the exchange rate distortions of output and input prices are summed up and shown only as the net effect on unit costs.

2.44 Energy cost distortions

Utilities, consisting of electricity and water, have been treated, together with fuel, as tradables under the heading of energy costs, although at least water has the characteristics of a non-tradable service. Two kinds of distortions can be distinguished, price distortions and distortions in the quality of the service. For electricity and water, firms were asked to state not only the total expenditure and price per unit of output, but also to estimate by how much their costs exceed the "normal" level. Abnormal costs have often been mentioned in the questionnaires and in interviews, and they usually take the form of service interruption forcing the firms to either rely on own generators or pumps in case of blackout, or to shut down the production process. For some industries the irregular (interrupted) supply of electricity and water are a major cost factor impinging on their competitiveness. Since the quantitative responses of firms to the question of how important the energy cost distortions are, were incomplete, we have supplemented our data with the findings of a recent study by the manufacturers' association consultancy (UMACIS, 1998), which quantifies the extra cost of electricity due to irregular supply as an average of 90 days of production. For electricity, this information was taken as a basis for calculating the burden on all industries by taking a third of all labour cost as the cost distortion. This assumes that when blackouts occur, workers are paid, but cannot produce. It ignores the output that may be spoiled due to the interruption of production processes. On the other hand, it may overstate the distortion if some of the employees continue to work, when emergency generators are used to maintain some functions.

2.45 Non-tradable input distortions

In the category of non-traded goods and services the study distinguishes six kinds of services purchased by firms: repair, subcontracts, rents, transport, communication and other services. In the categories of transport and communication services, major distortions were reported by the firms, who were asked to estimate the excess cost relative to normal operation. For transport services the excess cost is generally attributed to the bad state of the roads, as well as to the unreliability of the rail services. For telecommunications, complaints about excessive costs were also received, but not with the same frequency and emphasis as in Kenyan firms. There, it was frequently reported that firms subscribe to multiple telephone lines in order to have one or two working. But in Uganda also, firms often use cellular telephones in order to secure services that are not available from the public telephone system for which they, nevertheless, pay. In these two categories the individual firms' distortions vary according to the respondents' records and perceptions. The average cost distortion reported is 18% in transport and 19% in communications. All other categories of non-tradables are assumed to be free from major distortions.

2.46 Labour cost distortion

The wage and salary component in total cost is generally below 15% of total costs, due to the relatively low wages of unskilled workers, and in spite of the enormous differential between the unskilled and managers, especially expatriate ones. For all skilled occupations we make the simplifying assumption that the paid wages or salaries reflect the social opportunity cost of these services. For unskilled labour, on the other hand, we discount the paid wages by 20%, due to the existence of unemployment in this category, which includes casual (temporary) workers. This procedure is based on estimates of informal

sector wages as well as the marginal product in agriculture. The resulting distortion component of labour payments is on average 0.3% and always under 3% of total costs.

2.47 Capital costs distortion

The cost of capital is measured by four components. First, the financial social opportunity cost is taken to equal the shadow interest rate applied to the total value of fixed and non-fixed assets at purchase prices. The shadow interest rate is computed as the mean of two estimates. Both are based on the assumption of strong international mobility of capital. The first is the international rate LIBOR (6.1% in 1997)⁶, augmented by an inflation differential between Uganda and the OECD average of 5.4%⁷, resulting in 11.5%. This approach has been criticised as being unrealistic.⁸ One can indeed argue that the shadow interest rate should include a margin accounting for the underdeveloped state of the financial sector and low savings, implying costs and a risk factor that exceed those of high-income countries. Unfortunately, we were unable to find data measuring these factors. An alternative approach, based on the international interest parity condition, is to add to the LIBOR the expected rate of depreciation of the shilling. Using the actual exchange rate of 1998 as the expected one, we obtain an expected rate of depreciation of 14.5% and a shadow interest rate of 20.6%. We consider the rates of 11.5% and 20.6% as lower and upper bound (used in sensitivity analysis) and adopt the mean of 16% as the shadow rate for our computations of the shadow cost of capital⁹.

In contrast, the market opportunity cost of capital is equal to the capital stock times a market interest rate, which is taken to equal the average lending rate of 21.5%, based on IMF statistics (IFS, various years). The difference between these two interest rates constitutes the main capital cost distortion and is the second component. The third component is the annual depreciation as reported by the firms; it is treated as undistorted for simplicity. The fourth component is a capital price distortion, due to the payment of import duties on imported capital goods. Only a few firms have reported this distortion, and even where reported, it represents a negligible proportion of total costs. We also do not attach much importance to this distortion, because we focus on present policy distortions. Duties on capital goods represent a policy distortion of the past, i.e. of the time when major investments were made.

2.5 Data sources, coverage and research procedure

The method of analysis chosen in this project is very data-intensive. Detailed cost and revenue data were collected from 21 firms in Uganda and 42 firms in Kenya. For this data collection a questionnaire was used, which, in addition to the cost and revenue data, also included questions about the policy environment, financing, market share, capacity utilisation, obstacles to competitiveness and future prospects as viewed by firm officials. The data collection required a substantial effort and took about eighteen months to be completed, since most firms had to be visited several times. While in Kenya an earlier data set of a similar sample of firms was also available from the mid-1980s, in Uganda no historical data were available, and the collected data cover the year 1997, in some cases 1996 or 1998. The selection of firms for the sample was guided by three considerations.

⁶ IMF, IFS Yearbook, 1999, LIBOR on one-year US\$ deposits (p.106).

⁷ Based on consumer price indices of Uganda and industrial countries, IFS Yearbook, 1999.

⁸ Comments by Mr. Tumusiime Mutebile, Secretary of the Treasury, Government of Uganda, October 1999.

⁹ It is interesting to note that commercial banks currently charge 15-16% on loans to prime customers rated "credit worthy".

First, the Ugandan industries in the sample were to be matched with Kenyan industries in order to enable us to compare the firms in both countries within each industry. Second, we also tried to cover as many different industries as possible, rather than concentrating on one or two industries and to cover more than one firm if possible, including small ones. The firms covered are usually the largest ones in each industry, with very few exceptions. Therefore, the coverage in terms of value added is larger than the sheer number of firms suggests. A rough estimate based on the Statistical Abstract (SA, 1998) would be that about one third of industries or product groups are covered, usually the most important ones in terms of output value, and perhaps an average of 50% of value added within the industries. In spite of the small number of firms (the Statistical Abstract shows 201+ firms in 32 industries), the coverage allows us to think of the sample as being modestly representative of Uganda's manufacturing sector. The firm-level data are supplemented by tariff data, since price comparisons remained unsatisfactory. Uganda Revenue Authority (URA) provided us with computations of the collection rates of the tariff for a large number of product categories. These rates have been used for the computation of the weighted average NRP of various products in most firms. They are usually slightly lower than the statutory tariff, reflecting the impact of remaining exemptions and misclassifications (from the rest of the world to COMESA). Other data taken from other sources include the exchange rate, interest rates, wages, electricity rates, and transport & communications prices. The main sources were the Bank of Uganda, IMF/IFS, Ministry of Finance, Electricity Board, and the World Bank, as well as other studies quoted where mentioned.

The computations of unit cost ratios and their components, including all distortions, were done using a computer programme specially designed for this project and adjusted to the questionnaire (Siggel, 1997b).¹⁰ The data entry included various cross checks which often led to further questions to the firms in order to validate them. The firm data were also aggregated to the level of 12 industries. The results of the data analysis are presented in the following pages, but only at the sector level, by dealing with the various aspects of competitiveness. For detailed industry-level results, the reader must be referred to the full-length report (Siggel, Ssemogerere, 1999), where the individual firms are coded for confidentiality and compared with individual firms in Kenya.

3 Sector-wide results of the data analysis

The present section proceeds as follows: First, we report the findings on domestic competitiveness based on the unit cost ratio at market prices. This indicator is, among the three indicators used, the one that is least influenced by various assumptions. It follows directly from the data received from the firms and introduces only one assumption, i.e. that the opportunity cost of capital corresponds to the reported depreciation plus the product of capital stock and the market interest rate. Second, we report the findings about international or export competitiveness, which depend, in addition, on the observed output price distortions and the border price difference. The third subsection deals with comparative advantage, the fourth one with its sources, and the fifth one with the various distortions. In the sixth sub-section we analyse the sensitivity of our results to various assumptions, before drawing conclusions.

¹⁰ The programme uses EXCEL and includes worksheets of raw data, calculations, summary results, and trend analysis.

3.1 Domestic competitiveness

Based on the unit cost ratios at domestic prices (UCd) shown in table 3.1, we find that five out of twelve industries in our sample (seven out of 21 firms) are competitive in the sense of being profitable¹¹ under the existing protective tariff. These are auto batteries, footwear, cement, animal feeds and fish processing. It will be remembered, however, that the criterion $UCd \leq 1$ implies long-term competitiveness and comprises a bias against capital-intensive industries, because unit cost is defined to include full opportunity cost of capital at the market interest rate. Since this sets a high standard, it is worthwhile mentioning that in four other industries the unit cost ratio is within 10% above the threshold. They are grain mills, bakery products, paints and metal products. The average UCd is 1.09, but it would be as low as 1.03 if one outlier firm in the textile industry was excluded from the sample.

Table 2: Unit cost ratios at domestic prices (UCd) in Ugandan and Kenyan industries

Ind. No.	Industry	Uganda	Sum of distortions	Border price difference	Kenya
1	Fish processing	0.996	0.118	0 ¹	1.080
2	Dairy products	1.172	0.163	-0.070	1.096
3	Grain mills	1.090	0.110	-0.136	1.034
4	Bakery products	1.066	0.039	-0.085	1.287
5	Animal feed	0.993	0.040	-0.124	n.a.
6	Textile & clothing	2.365	0.471	-0.205	1.408
7	Footwear	0.885	0.153	-0.071	1.054
8	Paper products	1.150	0.136	-0.138	1.738
9	Chemicals: paint	1.078	0.081	-0.146	0.992
10	Cement	0.961	0.089	-0.384	1.721
11	Metal products	1.099	0.130	-0.187	1.099
12	Automotive parts	0.738	0.002	-0.109	0.985
	Average	1.089	0.104	-0.130	1.221

Note 1: Since output is exported directly from Uganda, the border price is taken to be the same as for Kenyan firms.

In the fourth and fifth columns, table 3.1 shows the sum of distortions and the border price differential which, when deducted from UCd, would give us UCs, our measure of comparative advantage. Distortions, which are included in UCd, are on average 10.4 percent and always positive or cost-increasing, i.e. they act as penalties. The border price difference, on the other hand, accounts for 13 percent on average and is cost-decreasing, i.e. it provides natural protection. Both of these cost margins will be discussed in more detail later; they are shown here mainly to argue that if all distortions were instantly eliminated by radical liberalisation and currency realignment, average unit costs would be lowered to less than the average output value, suggesting existence of comparative advantage in general; but that conclusion would be erroneous, since it did not account for the fact that Ugandan border prices are on average about 13% higher than Kenyan border prices. Adding this cost margin shows that, in general, Ugandan manufacturers would not be able to compete with foreign producers

¹¹ Being profitable is taken to mean that the rate of return exceeds the average lending rate.

under totally free trade.

Bilateral comparison with Kenyan industries (column 6), however, leads to a more optimistic conclusion. We find that Kenyan industries were even less profitable at domestic prices than Ugandan industries. In about half of the industries considered, the unit cost ratio in Kenya is higher than that in Uganda and its average of 1.22 is also higher by twelve points. To a large extent, this can be explained by the interest cost differential. Since capital cost represents on average 15% of output value and the interest rate in 1997 was higher in Kenya by one third, most of the unit cost differential is accounted for by the higher cost of finance. To the extent, however, that industries do not have to re-finance their entire capital stock at this moment, the UCd can be taken to overstate Kenyan unit costs. Nevertheless, we find that the higher profitability in Ugandan industries permits them to compete successfully against Kenyan competitors in the Ugandan market and under the present (1997/98) rates of protection. Should these be eliminated under further regional integration, the situation may be changed.

3.2 International or export-competitiveness

The question that the UCx ratio answers, is how the producers' costs compare with cif border prices, rather than protection-ridden domestic prices. It is assumed, however, that costs remain distorted as they are, no further liberalisation is considered and no adjustments take place. To what extent are Ugandan producers able to export under these conditions?

It is obvious that the indicator UCx is generally larger than UCd because its denominator is the output value at border, rather than at domestic, prices. It can be derived from UCd by deducting the unit cost margins of the border price difference and the output price distortion. Both margins are normally negative, so that it follows that $UCx > UCd$. As table 3.2 shows, only two industries, fish processing and batteries, turn out to be export-competitive. In columns 4 and 5 of the table the output price distortion and the border price difference (BPD) are reported, which add up to the difference between UCx and UCd. It is worth noting that both, the output tariff and the BPD (transport cost margin Mombasa to the Uganda border) are expressed here as proportions of unit costs in shadow prices (in the interest of adding up in the accounting procedure); they differ slightly from their ad valorem values. According to our sample of firms, the average cost margin of output protection is with 11.3% of a similar magnitude as the average border price differential (13%).

Table 3: Export-competitiveness in Ugandan and Kenyan industries

Ind. No.	Industry	Uganda				Kenya
		UCx	Output price distortion	BPD	UCx'	UCx
1	Fish processing	0.996	0	0	0.996	1.080
2	Dairy products	1.359	-0.116	-0.070	1.289	1.224
3	Grain mills	1.277	-0.050	-0.136	1.141	1.166
4	Bakery products	1.386	-0.235	-0.085	1.301	1.454
5	Animal feed	1.214	-0.097	-0.124	1.090	n.a.
6	Textile & clothing	2.991	-0.422	-0.205	2.786	1.660
7	Footwear	1.132	-0.177	-0.071	1.061	1.341
8	Paper products	1.334	-0.046	-0.138	1.196	2.005
9	Chemicals: paint	1.324	-0.100	-0.146	1.178	1.236
10	Cement	1.539	-0.194	-0.384	1.345	1.936
11	Metal products	1.418	-0.132	-0.187	1.231	1.326
12	Auto parts	0.947	-0.109	-0.109	0.838	1.171
	Average	1.332	-0.113	-0.130	1.202	1.416

The comparison with Kenyan industries suggests that, on average, their export competitiveness is lower than that of the Ugandan industries. This outcome is puzzling, because it contradicts what industry officials have reported in interviews. It is possible, for instance, that we have under-estimated the border price differential. Our estimate is based on information from firms about transport costs as proportions of input costs and output value, but not all of these data appear to be fully credible. It is also the case that not all industries in the two country samples correspond to each other in terms of output mix. For instance, in paper products, the Ugandan firm is a producer of school booklets and other stationary, whereas the Kenyan industry includes mainly paper mills. The unit cost ratios, as we have argued elsewhere, are biased against the latter, due to their high capital intensity and the fact that the Kenyan interest rate is 50% higher than the Ugandan rate. In auto parts, the high competitiveness of the single Ugandan firm (producing auto batteries) has been recognized by national awards, whereas the Kenyan industry includes more firms and other products than batteries. In cement, which Uganda still imports from one of the Kenyan firms, the problem is not different product mix, but more likely an under-estimate of the border price difference. It may also be a case of increasing competitiveness on behalf of the Ugandan firm, which the Kenyan suppliers may have met with discriminatory pricing. The argument of high capital cost also applies to this industry.

In col.6 of table 3.2, the export competitiveness indicator is adjusted (UCx') by adding the border price difference. In other words, it makes the Ugandan unit costs comparable with those of Kenyan firms in the Ugandan market under regional free trade. This comparison suggests that, given the high transport cost between the Kenyan and Ugandan market, ten out of twelve Ugandan industries would remain competitive vis-à-vis Kenyan exporters even without protection. If one adjusts the Kenyan UCx in a similar way, however, one can conclude that only three out of twelve industries would be able to export to the Kenyan market.

3.3 Comparative advantage

The third unit cost ratio, which is based on shadow prices of output and inputs (UCs), is the one that relies most strongly on assumptions and is therefore most prone to errors of evaluation. The factor that makes up most of the difference between UC_x and UCs is the effect of exchange rate overvaluation, estimated at 20% in Uganda and 10% in Kenya, on costs and output value. For an industry with a tariff of 20% it is roughly equivalent to the effect of output protection, but with opposite signs. Protection raises profitability, whereas overvaluation diminishes it. Other important distortions included in the total distortion differential are the input tariffs and the interest rate distortion.

Table 4: Unit cost ratios and border price differences: Uganda and Kenya

Industry No.	Industry	Uganda			Kenya UCs
		UCs	Border price difference as:		
			UC-margin ¹	price margin	
1	Fish processing	0.878	0	0	0.909
2	Dairy products	1.080	-0.07	0.06	1.008
3	Grain mills	1.117	-0.14	0.13	0.973
4	Bakery products	1.190	-0.09	0.08	1.132
5	Animal feed	1.077	-0.12	0.13	n.a.
6	Textile & clothing	2.099	-0.20	0.09	1.199
7	Footwear	0.967	-0.07	0.08	1.050
8	Paper products	1.152	-0.14	0.12	1.276
9	Chemicals: paint	1.143	-0.15	0.14	1.039
10	Cement	1.257	-0.38	0.40	1.139
11	Metal products	1.157	-0.19	0.17	1.063
12	Auto parts	0.839	-0.11	0.15	0.963
	Average	1.115	-0.13	0.13	1.063

Based on the criterion of $UCs \leq 1$, we find that only three out of twelve industries of the sample can be deemed to have comparative advantage, auto batteries, fish processing and footwear, but dairy products and animal feeds are within 10% above the threshold. Average unit costs ratio at shadow prices exceed the shadow output value by 11.5%, a result very similar to the domestic unit cost ratio of 1.089. This means that the average sum of all distortions (10.4% according to table 3.1), which acts as a penalty, is roughly equivalent to the natural protection provided by the average border price difference of 13%. The border price difference (BPD) is shown as a unit cost margin in col. 4, and as proportion of the output price in col. 5.

When the border price differential is factored in, as in UCs shown in table 3.3, the average Ugandan unit cost ratio is about five points higher than the Kenyan one, implying that Kenya holds a stronger comparative advantage on average, and only in one third of the sample firms do Ugandan firms have comparative advantage vis-à-vis Kenyan firms. But even this conclusion is hard to defend under closer scrutiny, because of the differences in product mix (paper products, auto parts and footwear) mentioned earlier. On the other hand, the advantage of Kenyan real competitiveness does not seem to be as strongly superior as expressed by industry officials.

3.4 Sources of competitiveness and comparative advantage

It is useful to subdivide the sources of competitiveness into real and virtual or distortion-based ones. The real sources of competitiveness are of course the same as those of comparative advantage, i.e. factor productivity and factor abundance (cheapness). Comparative advantage is always based on either high factor productivity as reflected by low input quantities, or by factor cheapness, which is observable as low equilibrium prices of the factors of production. Since capital is highly mobile, its shadow price is assumed to be close to its international price, but it can, nevertheless be a source of comparative advantage when it is used very efficiently. As we have seen earlier, this is not the case in most industries. Comparative advantage is more easily expected to stem from low cost of labour (or high productivity), or from the abundance and low price of material inputs and utilities. Competitive advantage, in contrast, can also be derived from various kinds of price distortions, such as an undervalued exchange rate, interest or labour use subsidies, or regulated and under-valued input prices. We shall therefore discuss first the sources of comparative advantage and then the distortions, knowing already that in Uganda the distortions sum up to reduce the existing advantage or to enhance disadvantage.

3.41 Sources of comparative advantage

In order to discover the sources of comparative advantage, one would naturally look at the cost components in terms of shadow or equilibrium prices. Sometimes it is possible to find an industry where one cost component is particularly low, without others being any higher than normal. But generally speaking, one cannot easily attribute advantage or disadvantage to specific factors because of the possibility of substitution between them. A labour-intensive technique can save capital, and high intermediate input costs may reflect a technique that uses highly transformed inputs as opposed to raw materials. Since our method of analysis excludes the analysis of a production or cost function, the substitution possibilities between different factors are not considered. Let us first inspect the coefficients of the four input components, all expressed as proportions of the output value in shadow prices.

Table 5: Components of the unit cost ratio in shadow prices (UCs) in Uganda

Industry No.	Industry	Tradable inputs (VITs)	Non-tradable inputs (VINs)	Labour cost (LCs)	Capital cost (KCs)
1	Fish processing	0.712	0.075	0.021	0.069
2	Dairy products	0.696	0.088	0.109	0.188
3	Grain milling	0.793	0.146	0.069	0.109
4	Bakery products	0.860	0.080	0.091	0.160
5	Animal feed	0.900	0.083	0.061	0.034
6	Textile & clothing	0.604	0.233	0.104	1.159
7	Footwear	0.585	0.188	0.141	0.053
8	Paper products	0.725	0.277	0.025	0.125
9	Chemicals: paint	0.900	0.092	0.026	0.125
10	Cement	0.620	0.075	0.070	0.491
11	Metal products	0.670	0.186	0.101	0.200
12	Auto parts	0.451	0.168	0.080	0.140
	Average	0.760	0.110	0.054	0.191

The coefficients in table 3.4 are not the usual input coefficients summing up to one, but they are summing up to UCs. They are recorded in this fashion here in order to be comparable to all distortion coefficients, which are also expressed as proportions of output value at shadow prices. As argued above, the textile industry exhibits a capital coefficient that is clearly out of line with the industry average and invites the conclusion that capital must be a source of the industry's comparative disadvantage. The opposite case can be seen in Uganda's footwear industry, where the cost of capital is extremely low, without other cost elements being particularly high. Since footwear's UCs is below one, this invites the conclusion that low capital cost, combined with strong use of labour, may be the source of this industry's comparative advantage.

One way to generalize this kind of reasoning is to examine whether any of the cost components tends to be particularly high or low whenever unit cost ratios are low. We interpret a tendency of a factor to account for a particularly high proportion of unit cost whenever unit cost is low (below average) as evidence of it being a source of comparative advantage. Conversely, when a factor's share in total cost tends to increase with the level of total unit cost, such a tendency, when statistically significant, identifies that factor as a source of disadvantage. i.e. the trend line of the particular input coefficient over UCs has a negative intercept.

Due to the small size of the Ugandan sample, one can hardly expect a significant trend. The trend lines of all four cost components are shown in the figure 1 and their equations are as follows:¹²

$$\begin{array}{ll}
 \text{VITs/VOs} = 0.039 + 0.614 \text{ UCs} & \text{with } R^2 = 0.293 \text{ for tradable inputs,} \\
 \text{VINs/VOs} = 0.038 + 0.080 \text{ UCs} & \text{with } R^2 = 0.04 \quad \text{for non-tradables,} \\
 \text{TLCs/VOs} = 0.077 + 0.004 \text{ UCs} & \text{with } R^2 = 0.0001 \quad \text{for total labour cost and} \\
 \text{KCs/VOs} = -0.154 + 0.302 \text{ UCs} & \text{with } R^2 = 0.135 \quad \text{for capital cost.}
 \end{array}$$

¹² As argued elsewhere, one of the textile firms has a capital coefficient that exceeds the value of output, i.e. $KCs > 1$, and is also an 'outlier' with respect to UCs. The three first trend lines in fig.1 are obtained by excluding this firm from the sample; the shaded diagram includes the firm.

where all variables are defined as in section 2. It follows from these regression lines that there is a very weakly significant bias against capital. This is not surprising, given the high cost of credit. Firms that use capital intensively, either by the choice of highly capital-intensive technology, or by using capital inefficiently, tend to have comparative disadvantage. More specific conclusions about the sources of comparative advantage can be drawn only at the level of specific industries, as summarized in section 4 of the full-length report.

3.5 Distortions as sources of and obstacles to competitiveness

The decomposition of the total difference between UCd and UCs into eleven categories of distortions has permitted us to weigh them according to their relative importance on unit costs. The most important ones are the distortions of the tariff, the exchange rate, the interest rate, of the cost of energy and the cost of transport and communications. The energy and transport/communications distortions are not, like the other ones, purely price distortions, but include also poor quality of the service.

Table 6: The main distortions expressed as proportions of output value

Industry	Tariff distortion	Exchange rate distortion	Interest rate distortion	Energy cost Distortion	Transport cost distortion
Fish processing	0.053	0.047	0.014	0.013	0.001
Dairy products	-0.004	0.111	0.043	0.104	0.006
Grain milling	-0.001	0.081	0.028	0.024	0.015
Bakery products	-0.168	0.088	0.040	0.021	0.010
Animal feed	-0.031	0.053	0.009	0.014	0.017
Textile & clothg.	-0.267	0.398	0.319	0.128	0.023
Footwear	-0.131	0.091	0.015	0.018	0.007
Paper products	-0.007	0.102	0.029	0.006	0.013
Chemicals: paint	-0.041	0.071	0.040	0.013	0.030
Cement	-0.102	0.153	0.167	0.058	0.037
Metal products	-0.052	0.125	0.052	0.049	0.051
Auto parts	-0.074	0.083	0.035	0.028	0.010
Average	-0.040	0.095	0.056	0.034	0.022

The tariff is traditionally the prime instrument of industrial policy and a major source of government revenue. The fact that it is described and measured here as a distortion, reflects our belief in the virtues of free trade. But free trade in an absolute and multilateral sense would probably be unwise for Uganda at this stage of its development. It could possibly bankrupt the manufacturing sector and may transform the industrial labour force into an army of street peddlers selling cheaper imports. Industrial policies should therefore find the right trade-off between the cost of too much and the cost of too little protection. Having said that, we consider that Uganda's progress in trade liberalisation has been impressive and has actually overtaken that of other member countries of COMESA, including Kenya. The rates of protection used in this study are the collection rates of the external or COMESA tariff, depending on whether imports originate from within the region or from abroad. The rates of protection on output and tradable inputs are compounded in their effect on unit costs. As explained earlier, the output tariff has a unit-cost-lowering effect, and the input tariff raises unit costs. The

combined effect is negative and approximately four percent on average for the twelve industries of our sample. It varies between plus five percent for fish processing (due to its zero protection of output) and -26.7 percent for the textile and clothing industry. The latter rate is surprisingly high, given the special problems of this industry. It results from the fact that the output tariff is still substantially higher than the actually paid input tariff.

The overvaluation of the Ugandan shilling, which we estimated at 20% in 1997, has an average impact of 9.5 percent on unit costs, with a low of 4.7% for fish processing and a high of 39.8% for textile & clothing. On average again, therefore, the impact of currency misalignment is stronger than the impact of the tariff regime. Although they are inversely related, they do not cancel out, leaving a net unit-cost-increasing (competitiveness-lowering) effect.

The second-greatest impact on unit costs comes from the interest rate distortion, measuring 5.6 percent on average, and ranging from 0.9 percent in animal feeds to 31.9 percent in textiles & clothing. While the rate differential between the market interest rate of 21.5% and the shadow rate of 16% is taken to be the same for all industries, the strong variation among industries reflects the differences in capital intensity. In reality, the differences may be even larger since firms may either borrow on preferential terms or incur penalties for lack of collateral or “connections”. In general, this distortion is caused by the inefficiency of the financial sector in Uganda, which has recently become evident through several bank closings. It is important to note, however, that the distortion is much less important in Uganda than in Kenya, due to a more conservative attitude of the government in fiscal policy and the financing of deficits.

The two final distortions, of energy costs and transport costs, have been mentioned nearly by every firm, and are very much discussed among manufacturers (cf. UMA, 1997). Although their quantitative impact on unit costs is much smaller than the other three distortions discussed so far, they may have a stronger psychological impact on managers. When production runs are interrupted by electricity blackouts or because raw materials and spare parts are not received due to breakdowns of the transportation, this leads to more frustration than the high tax on fuel. The energy distortion, which averages 3.4 percent of output value across industries, combines the cost impact of electricity failures and the tax burden on fuel. It varies between less than one and nearly 13%, depending on the energy intensity of the industry. The transport cost distortion captures the additional transport cost on the input side, due to the unreliability of railways and the poor state of the roads. Since this additional cost, which averages 2.2% across industries, is often caused by the transport of inputs from Mombasa to Uganda, much of the responsibility for it falls on the authorities outside Uganda’s borders. For some industries, however, the domestic road conditions are also of major concern, for instance in the collection of milk for the dairy industry.

In conclusion of this discussion, it is important to add that this study has succeeded in quantifying only some of the sources and obstacles impacting on industry competitiveness, although we had attempted to quantify also the effects of red tape and corruption. The responses from industry officials on these matters, however, remained too incomplete and cautious to attempt quantification. Among the ten factors that were quantified, the exchange rate distortion is clearly the most expensive penalty, followed by the interest rate distortion, the energy and transport cost distortions. The tariff regime penalizes exporters at an average rate of 7.3%, but it enhances competitiveness in the domestic market

by lowering unit costs by 11.3%, with a combined impact of about four percent acting like an implicit subsidy. Other distortions, like the one of unskilled wages, direct subsidies and capital goods prices are of minor importance.

3.6 Sensitivity analysis

The sensitivity of our findings to changes in some of the key variables is being explored by two different approaches. In the first one we examine how the indicators are affected by different assumptions about the shadow prices. This approach attempts to overcome the uncertainty about finding and using the most accurate estimates of true scarcity prices. It leads us to determine maxima and minima of UCs that determine the ranges of greater certainty and possible error in our evaluation. Obviously, the values of UCd and UCx are not affected by these simulations, and only the findings about comparative advantage are being modified. The second approach examines the question of how the unit cost ratios are changed when tariffs are lowered in pursuit of further liberalization.

3.6.1 Simulations for different shadow prices

As shown in earlier sections, the interest rate is of prime importance as a cost factor and determinant of competitiveness. The estimation of the shadow interest rate is particularly problematic, due to the difficulty to find data reflecting adequately country risk, without including policy-generated distortions. The estimation of the shadow interest rate led to an upper bound of 20.6% and a lower bound of 11.5%, which are used to test the sensitivity of the unit cost ratio to variations of the interest rate.

As to the misalignment of the exchange rate, we had argued earlier that by 1997 the shilling had appreciated in real terms and we estimated the rate of overvaluation as 20%. For simulation purposes we are using a lower bound of zero and an upper bound of 27%, the latter being based on a real exchange rate index vis-à-vis the US\$ of 0.73 and assuming that the 1992 rate was an equilibrium rate. Based on these estimates of upper and lower bounds of the shadow interest rate (rs) and exchange rate overvaluation (Reo), the following table shows the unit cost ratios at shadow prices of the total sample of firms (weighted average).

Table 7: Simulation of UCs for the total sample of firms and for varying values of the shadow interest rate (rs) and the rate of currency overvaluation (Reo)

	rs (%)		
Reo	11.5	16.0	20.6
0	1.134	1.190	1.245
0.2	1.071	1.115	1.164
0.27	1.054	1.098	1.141

The analysis suggests that for our sample of industries, the unit cost ratio at shadow prices may vary between a minimum of 1.054 and a maximum of 1.245, depending on what values of rs and Reo we assume to be most realistic. Since the interest rate and the exchange rate are related, and since the maximum of one is not compatible with the minimum of the other, the median value of

each appears to be the safest estimate. A unit cost ratio of 1.12, taken as sector average, means comparative disadvantage vis-à-vis the rest of the world, but only a slight comparative disadvantage vis-à-vis Kenyan manufacturing, where the comparable rate was computed as 1.06. There are several industries in which Ugandan firms may easily become suppliers of Kenyan demand or, at least, Kenyan exporters may lose their competitive advantage relative to Ugandan producers. Such reversal could be accelerated by further regional integration, to which we now turn.

3.62 Consequences of further liberalization

The second exercise of sensitivity analysis has the purpose of simulating the price changes to be expected when trade among the three countries of East Africa region becomes fully liberalized. The computation of unit cost ratios based on zero regional tariffs raises two questions: What will happen to output prices, and how are costs affected? For costs, the question is relatively straightforward. All inputs imported from Kenya or Tanzania are expected to become cheaper by the remaining regional (COMESA) tariff margin. For output prices, the question depends on whether the present price is determined by regional imports and their prices or by international prices and the external tariff. The answer is facilitated by the fact that the URA distinguishes between COMESA goods and goods imported from third countries. For COMESA goods prices are also expected to decline by the COMESA tariff. For importables not yet imported from COMESA, the question is ambiguous, since under full regional integration they could become COMESA goods. Furthermore, even in the first case the outcome depends on the capacity of regional (usually Kenyan) exporters to export increased quantities without raising their prices. If the prices of imports decline this increases the unit cost ratios, implying a loss of competitiveness.

Essentially, the effect of further regional trade liberalization on the prices in Uganda depends on the cost and price differential between the producers in Uganda and Kenya. A price decrease cannot always be predicted, but when it occurs, its effect would be to diminish the Ugandan domestic competitiveness (raising UCd). This, however, may be countered by equally falling prices of intermediate inputs that are also imported from Kenya. In order to find the maximum effect of further regional integration on Ugandan competitiveness, we ignore the beneficial effect on inputs and assume that the domestic price in Uganda will decline by the percentage equal to the regional tariff whenever it is smaller or equal to the unit cost differential between the two countries. The impact of this assumption is as follows.

In only one of the twelve industries considered in Uganda, is the unit cost differential sufficiently substantial to expect that regional free trade with Kenya would lead to strongly increased imports from Kenya, lower Ugandan prices and diminished competitiveness of the Ugandan firms. This industry is the textile industry, and as we have argued earlier, its data reflect special circumstances that can be corrected. In all other industries the unit cost differential is either smaller than the present regional tariff or the cost differential is advantageous for Uganda. This finding implies that the fear that most Ugandan manufacturers have vis-à-vis their Kenyan competitors is not generally justified by the data received from them and by our analysis of these data.

4 Conclusions and policy recommendations

(1) Uganda's manufacturing firms, although not internationally competitive at this point, are progressing in this respect and, in comparison with Kenyan firms, are not lagging as much as is often assumed. In particular, they are not facing as many impediments in the policy environment as Kenyan firms do. Uganda's government seems to be more responsive and flexible in dealing with their problems.

(2) The Ugandan firms in our sample tend to be more profitable than their Kenyan counterparts, which is taken as a sign of competitiveness in the protected domestic market. Industries that export are not numerous in Uganda and, although some may have comparative advantage, they face several major obstacles to export competitiveness. First, Uganda's landlocked geography implies that all prices of traded goods have to cover additional transport cost not only for imported inputs, but also for the shipment to international markets. This transport cost is very substantial, due to Kenya's deteriorating infrastructure. Second, the difference between export competitiveness and comparative advantage, which is measured as the sum of all price distortions, except that of the protective tariff on output, is positive. That means, the distortions act as penalties rather than implicit subsidies to firms. The most important distortions are the remaining tariff on tradable inputs, the exchange rate over-valuation and the excessive cost of borrowing. The following table summarizes our quantitative findings about the three forms of competitiveness. It shows the sample averages of the three indicators for Uganda and Kenya.

	Unit cost ratios				
	UCx		UCd		UCs
Ugandan firms (1997)	1.33	>	1.09	<	1.12
	∨		∧		∨
Kenyan firms (1997)	1.42	>	1.22	>	1.06
Kenyan firms (1984)	1.25	>	1.13	<	1.17

The numbers suggest that in Uganda domestic competitiveness, equivalent to profitability under protection and other distortions, is higher than in Kenya. Export competitiveness ($UCx \leq 1$) also appears to be higher, but that result may be due to a bias in measurement, and comparative advantage (UCs) is clearly weaker. Industries that have an advantage in Uganda seem to be fish processing, auto batteries and footwear, whereas Kenyan industries have an advantage over Uganda in dairy products, grain mills, textile & clothing and metal products. In cement, Uganda could gain comparative advantage vis-à-vis Kenya, given the natural protection of transport cost, but this will also prevent it from becoming an exporter of cement to Kenya.

(3) The main feature of the present study is its distinction between the real sources of competitiveness, which are the basis of comparative advantage, and the various cost distortions, which are mostly policy-induced.

Impact of main price distortions on unit costs
(in % of output value)

	Tariff protection	Exchange rate	Interest rate
Ugandan firms (1997)	-4.0	9.5	5.6
Kenyan firms (1997)	-13.3	7.5	19.3

The numbers in this table show that tariff protection was stronger in Kenya in 1997, exchange rate over-valuation was more damaging for Ugandan industries, but the excess cost of borrowing was substantially higher in Kenya. The cost distortions in energy, transport and communications were observed to be of similar magnitudes in the two countries.

(4) In a liberalized trading environment, competitiveness is a major objective and challenge for the private sector as well as the government. Our study suggests that to overcome the existing obstacles to international competitiveness, it is not sufficient for the government to rely on a relatively open trade regime. Cautious progression in trade openness needs to be accompanied by a number of policies that constitute an industrial strategy.

(5) The present tariff regime has relatively low tariff rates that can provide a modest amount of protection to Ugandan industries. This protection, however, is effective only if the laws are enforced. Smuggling and other evasive practices render the trade regime ineffective as a tool of industrial policy and erode the revenue basis of the government. We recommend, therefore, a tightening of the trade law enforcement.

(6) In the domain of investment finance it is less important to provide additional incentives than to nurture a strong financial sector that offers affordable credit to existing and potential manufacturers. This requires fiscal restraint and a strong regulatory framework for the banking sector.

(7) As to the exchange rate, the recent depreciation of 1999 has brought the rate closer to its equilibrium level. This correction was necessary; but the Bank of Uganda must avoid any substantial over-valuation by monitoring the purchasing power of the Uganda shilling, in addition to a prudent monetary policy.

(8) In the domain of fiscal policy, more attention is needed to equity in tax collection. Inefficient and disorderly tax collection creates disincentives and leads to high tax rates, which, in turn, are conducive to tax evasion, creating a vicious circle with reduced government revenue and disincentives to the private sector.

(9) A well-developed infrastructure is essential for competitiveness. In this respect, various targets are recommended, such as better road maintenance and the renewed availability of rail connections. Telecommunications services also need to be improved and are better handled by the private sector.

(10) While Kenyan firms in the present study generally did not complain about skill shortages, several Ugandan firms have reported scarcity of skilled manpower. Since this is one of the prime areas of government support for industries in liberalized trading regimes, we recommend that the Government promote more manpower training as a major component of a future industrial strategy.

(11) A further domain that needs attention and government support is the one of standards. In several industries we have observed a need for more stringent quality controls and the enforcement of standards. This is particularly important in industries that export or aspire to export, such as fish processing.

(12) Some sectors require political support as well as regional cooperation, in order to allow them to exploit their natural comparative advantage. For instance in fish processing, the problems of resource conservation and observance of international standards cannot be solved without political will and close cooperation between the neighbour countries around Lake Victoria.

(13) Regional integration, such as the one being pursued by the three East African nations, tends to be successful when intra-industry trade flourishes. Although such trade flows develop through competition in the private sector, the government can encourage the process by promoting foreign investment, including that from within the region. The development of intra-industry trade can also be encouraged by regional trade fares and professional associations.

(14) Finally, we recommend that the Government preserve data like the ones collected for this study, as well as the method of analysis like the one proposed here, to monitor the progress in achieving competitiveness. A similar study should be undertaken every three to five years, with a widening sample of industries and firms.

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