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Identifying financial constraints under trade liberalization

Lessons from Kenya, Uganda and Ghana



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Contents

Abbreviations

Acknowledgements

Summary	1
1 Introduction	3
2 Finance-export links and their role under trade liberalization	4
3 The case of Kenya	5
3.1 Trade history	5
3.2 Financial sector development	6
3.3 Finance-export links	7
4 The case of Uganda	9
4.1 Trade history	9
4.2 Financial sector development	11
4.3 Finance-export links	12
5 The case of Ghana	13
5.1 Trade history	13
5.2 Financial sector development	14
5.3 Finance-export links	15
6 Conclusions	17
Bibliography	21
Box	
Box 1: Research matrix for sector and layer specific determinants of financial constraints	19

Annex

Tables

Table 1	Kenya, selected indicators	25
Table 2	Uganda, selected indicators	27
Table 3	Ghana, selected indicators	29

Abbreviations

AERC	African Economic Research Consortium
BAT	British American Tobacco
BOU	Bank of Uganda
COCOBOD	Ghana Cocoa Board
CREDIT	Centre for Research in Development, Instruction and Training
ECGS	Export Credit Guarantee Scheme (Uganda)
EDP	Export Development Project (Kenya)
EFC	Export Finance Company (Ghana)
EPAU	Export Policy Analysis Unit (Uganda)
ERP	Economic Recovery Program (Uganda, Ghana)
FAO	Food and Agriculture Organization of the United Nations
FDI	Foreign Direct Investment
FSAP	Financial Sector Assessment Program
GDI	German Development Institute
GDP	Gross Domestic Product
IAMA	International Food and Agribusiness Management Association
IDS	Institute of Development Studies
IMF	International Monetary Fund
KEAS	Kenya Exporters Assistance Scheme
NBER	National Bureau of Economic Research
NTAE	Non-traditional Agricultural Export
NTB	Non-tariff Barrier
PFC	Pioneer Food Cannery (Ghana)
SIN	Statistics and Information Networks Branch
SPEED	Support for Private Enterprise Expansion and Development
UN	United Nations
UNCTAD	United Nations Conference on Trade and Development
UNSFIR	United Nations Support Facility for Indonesian Recovery
USAID	United States Agency for International Development
WTO	World Trade Organization

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Summary

This paper explores the influence that financial sector deficits have on a country's export performance under trade liberalization. It argues that under such circumstances, financial constraints are particularly damaging because trade liberalization increases the demand for finance both in the export sector and for investment. The paper aims to identify the most relevant factors in determining how financial constraints are likely to hinder the export performance of a particular country. Based on these factors, the paper outlines a research scheme that once applied to a particular country, provides a detailed understanding of the financial needs that should be addressed during trade liberalization.

The analysis of the experiences of three African countries – Kenya, Uganda and Ghana – that undertook substantial trade liberalization in the 1980s and 1990s reveals the following key findings:

- Financial constraints unevenly affected the various sectors and producer subgroups within the economy. Such constraints therefore not only affected the country's overall trade performance, but also influenced the composition of the export portfolio and the participation of producer groups in the export sector.
- Export is a multilayered process determined by production, transaction and competitiveness. Financial constraints can be present in each of the three layers and can severely hamper a sector's export performance even if there is a sufficient supply of finance in the other layers.
- Investment support schemes or alternative sources of finance, such as FDI or integration into a global value chain, can be partial substitutes for weaknesses of the domestic financial system. However, they are typically only available for certain sectors and producer groups.

The research scheme incorporates these insights in seeking to identify potential financial constraints in countries planning to liberalize trade. The aim is to improve the outcome of future trade liberalization projects by improving the targeting and timing of supplementary programs meant to overcome financial constraints.

1 Introduction

Trade liberalization has been broadly prescribed by economists and development organizations as a path to economic development. Although there is a strong theoretical case and some encouraging examples for the beneficial impacts of trade on economic development, not all countries' experiences with trade liberalization have been positive. Particularly, the anticipated increase in a country's exports, both in terms of overall value and portfolio diversification, has often failed to materialize. Apparently, trade liberalization works better for some countries than for others. There are a number of reasons given for this, one of which is that a country's export performance can be severely hindered by deficits of its financial system. However, although most researchers would agree that there is some link between financial development and export performance, few details are known so far about the impacts of financial constraints for the special case of a country undergoing substantial trade liberalization. Exploring the channels through which financial constraints impact on an economy under trade liberalization provides the opportunity to improve the outcome of future liberalization projects by complementing them with targeted measures to overcome the most damaging financial constraints.

This paper contributes to this body of research by analyzing the experiences of three African countries – Kenya, Uganda and Ghana – that undertook substantial trade liberalization during the period from 1980 to 2000. This work does not claim to be a cookbook for tackling financial constraints. It aims instead to develop a research scheme to identify how financial constraints are likely to hinder the export performance of a particular country and to gain a detailed understanding of financial needs that should be addressed under trade liberalization. The idea is to develop a precise picture of what has to be achieved, which can then be used as a yardstick for the design of policy measures for financial development.

As this paper represents a first step into a large field of research, its scope is limited in a number of ways. First, it is focused on growth and diversification of exports as a measure of success of trade liberalization. Of course, liberalization impacts on other indicators such as poverty ratios or GDP growth, which are at least as important. However, they are influenced by a vast number of additional variables independent of trade, which would greatly complicate the analysis. Second, only merchandise exports are analyzed while exports of services are ignored. This is simply in order not to overstretch the analytical scope given that financial constraints in the service sector are very different from those affecting merchandise exports. Third, all case studies are from African countries. This does not necessarily mean that results are inapplicable to other regions, but they certainly reflect conditions typical of Africa.

The first section reviews the literature on finance-export issues in order to provide an overview of the links between them that have so far been identified. Based on this, the general case is made for why financial constraints are of particular importance under trade liberalization. The next three sections are delineated by country with three subdivisions each. The first subdivision describes the country's trade performance under liberalization. The second subdivision describes its level of financial development and analyzes the strengths and weaknesses of its financial sector. Lastly, it describes the existing schemes for export finance that have been set up by the government and donors. The third subdivision analyzes the effects that financial issues had on trade performance and draws general

lessons from them. The conclusion brings these findings together in order to develop recommendations for future liberalization projects.

2 Finance-export links and their role under trade liberalization

In general, the literature on trade and finance indicates two lines of argument for why trade liberalization would increase the significance of financial constraints. Henceforth, these two will be referred to as the trade-finance and the investment arguments.

The trade-finance argument is based on the idea that producing and marketing an export product requires more financial services than does domestic production and marketing. There is a broad body of literature concerning this link. For example, Finger and Schuknecht (1999) identify four reasons why export needs financial institutions: first, to provide credit to bridge the time period between production and payment, which tends to be longer for exporting producers than for domestically operating firms; second, to provide efficient and safe financial instruments for international payments; third, as a source of various kinds of market information which otherwise would be more costly to obtain; and fourth, to provide insurance against trade related risks like transport hazards, currency volatility, and the danger of non-compliance of foreign business partners.

Using a standard gravity trade model, Becker and Greenberg (2003) find a significant relation between financial development and export performance. They explain this with exporters' higher up-front costs for market finding, product and market development, and the establishment of distribution networks, which often have to be financed externally.

For the case of Indonesia, Aswicahyono and Feridhanusetyawan (2004) state that one reason for the strong decline of exports during the crisis in 1998 was that the collapse of the banking system deprived potential exporters of the means to obtain trade financing. This shows how problems in the financial system can hinder even the performance of exporters who are already established in international markets.

The trade finance argument combines these findings with the idea that the main aim of trade liberalization is to increase exports. Thus, if exports require finance and liberalization increases exports, it follows that the demand for export related finance is going to rise under trade liberalization. This is essentially the main point of the trade finance argument.

The investment argument is based on two ideas. First, financial systems are important for investment because their basic function is to channel people's savings to promising investment projects and thus enable entrepreneurs to make profitable investments which they cannot fund from their own resources. Second, trade liberalization increases the demand for investment in a country because it changes relative prices and thus starts a process of economic readjustment. Following this line of argument, Liebig et al. (2005) emphasize the significance of domestic financial market deficits as a supply side constraint under trade liberalization. They argue that in opening up its markets, a country will usually experience both a contraction of its import competing industry and an expansion of its export industry. However, if a country's financial sector is underdeveloped, this may severely constrain its export expansion because entrepreneurs find it difficult to finance the investments necessary to take advantage of newly arising export opportunities. This con-

cern is supported by Warczarg and Welch's (2003) finding that starting two years after liberalization, there tends to be a significant growth in investment rates. As these investments must somehow be financed, there is reason to expect an increased demand for external finance in the years following trade liberalization.

In summary, both the trade-finance and the investment arguments indicate that demand for financial services is likely to increase in a country after trade liberalization. Experience shows that supply of these services is very limited in most developing countries and usually concentrated in a few sectors. There is thus reason to believe that trade liberalization will aggravate the shortage of financial services, which in turn is likely to hamper the anticipated improvement of a country's export performance.

3 The case of Kenya

3.1 Trade history

During the 1980s Kenya had a per capita GDP level around 350 US \$. Growth was low in the first half of the 1980s leading to an overall decline in per capita GDP. It improved during the second half of the decade, bringing per capita GDP up to 379 US \$ in 1990. The share of merchandise exports to GDP fell from 17.1 % (1980) to 12.1 % (1990). Macroeconomic conditions were unstable with high inflation and a twin deficit of both the fiscal budget and the current account. Exports comprised mainly agricultural products and raw materials, with tea and coffee together accounting for between 37 % (1981) and 63 % (1985) of total merchandise exports. Merchandise export growth rates were volatile, ranging from +25.3 % (1986) to -19.9 % (1987) and reflecting the country's high dependence on world market commodity prices. Overall, merchandise exports decreased by 17 % between 1980 and 1990. The share of manufactured exports was constantly below 15 % during the 1980s. The trade regime included unweighted average tariff rates of around 40 % and a number of non-tariff barriers (NTBs) further hindering imports.

In 1990, the Export Development Project (EDP), sponsored by the World Bank, instituted substantial reforms of the existing trade regime. The reforms were implemented by 1993 and included incentives and support programs for exporters. The average unweighted tariff rate was lowered from 43.7 % in 1990 to 22 % in 1995 and remained below 20 % during the following years. Most NTBs were dismantled and the tariff system was simplified. Kenya became a founding member of the WTO. Additionally, the government undertook market oriented reforms such as reducing the power of marketing boards for agricultural products, restructuring state owned enterprises, reducing the fiscal deficit, increasing the emphasis on macroeconomic stability, and liberalizing the exchange rate. (WTO 2000; World Bank 1995a; Onjala 2002.)

Between 1990 and 1996, Kenya's merchandise exports grew constantly at an average annual ratio of 11.6 %. This was regardless of the fact that coffee and tea exports remained volatile and both decreased in the first years after liberalization. This overall growth was made possible by the increasing role in the export portfolio of other agricultural exports such as vegetables, fruit, cut flowers, and fish and by a strong increase in manufactured exports, which grew at an average annual ratio of 30 % between 1990 and 1996. Consequently, the share of tea and coffee in overall merchandise exports decreased from 51 % in

1990 to 31 % in 1996. The current account balance improved and became positive in the years 1993 and 1994. However, the increase in exports did not immediately translate into GDP growth. The early 1990s saw very low or even negative GDP growth and it was not until 1994/1995 that the country again experienced significant growth. Accordingly, the export sector's importance for the economy strongly increased, with the merchandise exports / GDP ratio growing from 12.1 % (1990) to 22.3 % (1996).

In 1996/1997, natural disaster (mainly *El Niño*) hit the country and concerns about governance and social problems undermined investor confidence (WTO 2000). GDP growth declined again. Merchandise exports began to fall slightly, but constantly, over the next years. This was driven by a sharp decline in coffee and most other commodity exports with tea exports remaining volatile, but basically around their initial level. While the decline in coffee exports corresponded with a reduction of coffee production due to the destruction of plantations by *El Niño*, other commodity exports such as fruit and fish declined even though production levels remained constant or even increased. The next subdivision provides a possible explanation by relating this situation to financial constraints. With its export level stagnating well below the import level, Kenya ran current account deficits again after 1995.

3.2 Financial sector development

Compared to other Sub-Saharan African countries with similar GDP levels, Kenya's financial sector is relatively well developed. The level of private sector credit to GDP has been fairly constant between 29 % and 35 % during the 1980s and 1990s, corresponding to an annual per capita credit level between 95 and 123 US \$. Although a vast number of banks and other financial institutions are operating in Kenya, competition in the financial sector is relatively low because markets are segmented and most institutions focus on business with a small number of established large scale clients. A deficient legal and institutional framework further aggravates inefficiency. After the interest rate was liberalized in 1991, the lending interest rate grew much faster than the deposit rate. This high interest spread, which reflects excessive transaction costs, makes credit expensive and deposits unprofitable thereby depressing the savings rate (Atieno 2001; Beck and Fuchs 2004; Ngugi 2001; FSAP 2005). Generally, the bigger a business is, the more likely it is to have access to credit (Bigsten et al. 2003; Isaksson 2002a; Isaksson 2002b). On the other hand, access to credit and other financial services is often lacking in rural areas and for small and medium enterprises (Kariuki 1995). The limited and more expensive services of informal lenders are only a weak substitute for formal financial services (Isaksson 2002c).

Macroeconomic instability, namely inflation and high fiscal deficits, threatened the Kenyan financial system throughout the 1980s. The first part of the 1990s saw substantial progress in balancing the fiscal deficit and controlling inflation. However, this trend was reversed in 1996 when the government had to take up additional credit on the domestic capital market in order to finance relief programs for natural disaster victims. This, combined with a tight monetary policy and a decreasing inflow of foreign capital, led to an increase in interest rates and worsened the credit shortage for private enterprises (WTO 2000).

Kenya has some financial institutions designed for the promotion of exports. The World Bank funded Kenya Exporters Assistance Scheme (KEAS) gives grants to small and me-

dium producers of non-traditional exports. USAID also provides financial support to export oriented small and medium scale firms in manufacturing and agri-processing, while the Central Bank of Kenya has a rediscount scheme for commercial trade credits. Finally, government owned financial institutions such as the Industrial Development Bank previously promoted export oriented investment by giving below market rate loans, but have recently stopped this practice (ibd.).

3.3 Finance-export links

Generally, trade liberalization in Kenya led to an improvement of its export performance in terms of both absolute export values and portfolio diversification. Also, Kenya could reduce its dependence on world market commodity prices by increasing the share of manufactured exports. Unfortunately, this positive development came to an end primarily because of governance issues and external shocks, namely natural disasters. Nevertheless, trade liberalization in Kenya can be seen as a limited success.

The Kenyan experience provides several hints on the relation between financial sector development and the outcome of trade liberalization. Generally, a comparatively high level of financial sector development corresponds with a relatively positive liberalization experience in terms of trade diversification and export growth. There are of course a number of other factors apart from financial issues that played an important role in Kenya's relative success.

The history of the World Bank sponsored support mechanisms for exporters under the EDP shows that there were financial constraints hindering export performance during the Kenyan trade liberalization. In its performance audit report (World Bank 1995a), the Bank states that while the success of other measures such as the creation of an Export Processing Zone remained below expectations, the response to its KEAS was overwhelming. The program proved extremely successful in providing a springboard to firms that once exporting could operate without further assistance in international markets. The program's experience demonstrates that there is a high potential for successful export performance in Kenya, which is hindered by financial constraints. However, as the program's resources are limited, most of this potential will remain unexploited if the financial system does not develop to provide exporters with up-front financing on a commercial basis.

Further details of the adjustment process contribute to a more in depth picture of financial constraints in Kenya. With respect to manufacturing exports, Söderbom (2000) finds that in Kenya, export performance is determined by micro-data related to particular firms rather than industry specific variables as neoclassical trade theory would predict. Among these variables, a firm's size measured in terms of its number of employees has a significant positive influence on the probability that the firm is engaged in exporting (Söderbom 2000, Teal 1999). One explanation for this is that fixed up-front costs for transport, information and market research create economies of scale advantage for bigger firms.¹ A sec-

1 It should be noted that this is not necessarily the case as these up-front cost factors are linked to the process of exporting rather than the production of the export goods. Thus, if export goods are produced on a small scale but many producers cooperate in the process of exporting, they do not face this economies of scale disadvantage.

ond explanation is the above cited finding that bigger firms in Kenya have easier access to credit. Meanwhile, small and medium firms willing to become exporters tend to be constrained by their inability to find external finance to make the investments or get the working capital necessary to engage in export activities. This leads to a discrimination against small and medium producers and thus lowers both overall exports and the diversification of the export portfolio as only goods produced on a large scale are exportable.

Second, Kenya's experience shows that even if the financial system is relatively well developed, access to credit can vary significantly between different economic sectors. Given the concentration of banking services in urban regions, there is a strong bias in credit availability against agriculture. For example, in 1998, agriculture received only 5.35 % of total credit to the private sector. The problem is aggravated by the general bias against small lenders because most agricultural production in Kenya is small-scale. Thus, farmers are unable to get credit to finance investment in inputs such as seeds, fertilizers, pesticides, and land preparation. This severely hampers their ability to improve productivity, increase their yields, and fully benefit from arising export opportunities (Nyoro et al. 2001). The fact that after trade liberalization, some non-traditional agricultural exports such as fruit and vegetables have grown significantly anyway can be explained by what Muendo and Tschirley (2004) call the "dualistic nature" (p. 30) of these sectors. They show that while a relatively small group of commercial farmers and well organized groups of small scale farmers compete successfully in international markets, the far bigger group of unorganized small scale farmers produces entirely for domestic markets. Although these small scale farmers produce the same fruits and vegetables, they are unable to meet the high standards of price and quality necessary to compete in international markets. Thus, successful export performance is limited to a small group of producers who are able to make necessary investments, either because they can rely on their own financial resources or because they have access to external finance. Other producers are excluded from these market opportunities due to their financial constraints.

Another interesting phenomenon with respect to the role of the financial sector in Kenya's export performance is the effect of the 1996/1997 downturn. As it has been discussed earlier, exports of almost all commodities decreased in the years following the natural disaster and the downturn of the economy it provoked. In the case of coffee, this was because of a decrease in production due to the destruction of plants and fields. However, the downturn also affected commodities with unchanged or even growing output ratios, which suggests a general shift back to an inward orientation of the economy. There are a number of possible explanations for this, among them governance problems and the destruction of infrastructure which increased transport costs. However, there is also a finance related explanation to this phenomenon. As it has been pointed out, the government borrowed heavily on the domestic capital market to deal with the consequences of the disaster. This led to a rise in the interest rate and further aggravated the finance gap in the private sector. A decline in Kenyan exports is thus what one would expect in accordance with the findings of Aswicahyono and Feridhanusetyawan (2004) that a decrease in the amount of credit available for exporting activities can significantly depress a country's exports.

The example of Kenya holds an important lesson for financial development with respect to trade liberalization. First, producers' access to credit is an important factor in determining export performance of a particular subgroup of the economy. This holds true both for different sectors and with respect to different firm sizes and locations and has an important

implication for the outcome of trade liberalization. Financial constraints which concern one sector or group of producers more than others will have an influence on the determination of a country's export portfolio and the group of producers operating in the export sector. However, this country's export portfolio reflects the distortions of its financial sector rather than its comparative advantage or the competitiveness of exporters under market conditions. Thus, it is likely to lead to an efficiency loss in terms of a suboptimal resource allocation in export activities. To avoid these losses, a country would have to enable its financial sector to provide exporters with unbiased access to financial services, which would then trigger an adjustment process of the export portfolio towards comparative advantage and maximum competitiveness. Given that each readjustment of the export sector involves transaction costs, this makes an argument for fixing financial sector distortions along with trade liberalization. Otherwise, a country might find itself in a situation where it has to undergo two painful adjustment processes of its export sector, one after the other, and suffer unnecessary efficiency losses in the meantime.

4 The case of Uganda

4.1 Trade history

During the early 1980s the Ugandan economy was characterized by a per capita GDP around 170 US \$, unstable, sometimes negative GDP growth rates, and an export sector that depended entirely on coffee. The country's strong dependence on coffee prices made its export earnings highly dependent on both the world market price for coffee and the harvest yields of its coffee producers. Other export activities were strongly discouraged by bad and inconsistent policy, including highly inefficient state owned monopolies for processing and trade, state administered agricultural prices, and a high level of tariff protection (Morrissey and Rudaheranwa 1998).

In 1987, the government adopted an ambitious reform agenda called Economic Recovery Program (ERP) which was supported by the IMF and the World Bank. This program included privatization of state owned enterprises and marketing boards, the liberalization of prices and interest rates, and a gradual simplification and reduction of trade barriers. Also, Uganda became a founding member of the WTO. This coincided with the ongoing political stabilization of the country following Museveni's take-over of power in 1985/86, further contributing to economic recovery and growth.

The reforms had an almost immediate positive effect on the country's macroeconomic performance. GDP growth rates went up to levels around 5 % and significantly above in some years. Inflation remained high during the first liberalization years, but decreased after 1990 and has been down to one digit levels since 1993.

With respect to the export sector, it is more difficult to identify a direct impact of liberalization. The trade regime was liberalized in subsequent steps between 1987 and 1996. Average nominal tariff rates declined from 30 % (1986) to 17.1 % (1994) to 10 % (1998) while NTBs were completely removed. The tariff and licensing system was simplified and export taxation abolished (WTO 1995; WTO 2001a; Collier 1997). The explicit aim of the ERP was to increase both the value of exports and the diversification of the export portfolio.

While the value share of non-coffee exports in total exports rose significantly from 1987 to 1993, this was mainly due to a strong decline in world coffee prices. Total merchandise exports fell from 436 million US \$ in 1986 to 142 million US \$ in 1993. Nevertheless, there was also some increase in non-coffee exports, namely tea, tobacco, fish, sesame, cotton, beans and maize in the years 1990–1993. This reflected large increases in production of these commodities in the years directly after liberalization. However, while traditional exports of tea and tobacco rose in line with increases in production, export growth in non-traditional sectors such as maize, beans and fish usually remained behind overall production growth in these sectors. This indicates that these sectors' export performance was constrained by factors affecting the process of exporting rather than the production of exportable goods.

While output growth of non-traditional crops was mainly due to an extension in the land used for plantation, growth in tea, cotton and tobacco production resulted from long term improvements of yields which indicates improved productivity in these sectors.

In 1993 Ugandan merchandise exports began to grow tremendously and by 1996 had reached a level of 587 million US \$, more than four times its 1992 level. Again, this was mainly driven by the coffee sector and made possible by a fortunate combination of rising world market coffee prices and extraordinarily high plantation yields. However, there was only a minor increase in the area used for coffee plantation and the increase in yields turned out to be a short-term phenomenon, driven by good climate conditions in these years rather than improvements in agricultural productivity. Unfortunately, other relevant agricultural exports declined in 1994 and 1995. While the traditional export commodities tea, tobacco and cotton recovered shortly thereafter and again began to grow, maize, sesame seeds and beans exports, which had only just begun after the reforms, kept falling and returned to their initial marginal role in the export portfolio. This is even more surprising given that production levels of all three crops kept rising substantially except for one bad harvest in 1997 brought on by a drought followed by El Nino. Some of the declines in non-traditional agricultural exports were compensated for by an increase in other sectors, mainly strengthening flower exports. Nevertheless, the growth of the non-traditional export sector, which had been slow, but constant since 1987, came to a halt in 1996 and has been moderately falling since. Combined with a constant decline in coffee prices since 1997, which has only partly been compensated by increases in the traditional exports of tea and tobacco, this has led to a decline in Ugandan merchandise exports from 555 million US \$ in 1997 to 443 million US \$ in 2002. Although exports of manufactures, mainly processed agricultural products, rose slightly following liberalization, they still play a very limited role for Uganda.

Generally, liberalization had a positive effect on Ugandan exports. The share of non-traditional exports increased and it is very likely that exports would be at an even lower level today if the dependence on coffee prices had not at least been somewhat reduced. However, the decline of total merchandise exports after 1997 has revealed that the country's dependence on coffee is still very high and that its capacity to improve performance in other sectors is limited. Surprisingly, the data presented above show that often this is not due to a supply problem as production of many non traditional exports has risen while exports stagnated or declined. Correspondingly, GDP growth of Uganda was on average higher during the period 1987-2002 than export growth rates, which is contrary to what one would expect following trade liberalization. This can be explained by the high trans-

action costs born by Ugandan exporters. Transport costs are significant due to the country's landlocked position and miserable infrastructure. Man-made barriers such as inefficient custom procedures cause further delays and costs and thus aggravate the problem. Furthermore, a survey conducted by the Export Policy Analysis Unit of the Ugandan Ministry of Finance and Economic Planning (EPAU 1995) revealed that most exporters name inadequate market information and uncompetitive prices as their main problems. The latter finding can be linked to the discovery that only agricultural sectors such as tea and tobacco, which managed to increase their yields, reached a sustainable growth of exports. Other sectors such as maize, beans and sesame, which grew mainly through an extension of the land harvested for production, were unable to reach a significant role in the country's export portfolio. Apparently, their level of productivity was insufficient to successfully compete internationally.

4.2 Financial sector development

Uganda's financial sector is small and underdeveloped. The annual per capita level of credit to the private sector was around 4 US \$ during the early 1980s and then rose substantially to 22 US \$ in 2000. This means an increase of the credit/GDP ratio from around 3 % to 6.5 % which is still very low, even compared to African standards. Furthermore, Uganda's currency/M2 ratio is among the highest in Africa, indicating that most money is held cash and not in banking accounts. Commercial banks are the predominant actors in the Ugandan financial system. Bank branch penetration is at the very low rate of 130,000 people per branch and there is hardly any access to banks for people in rural areas. Also, Ugandan banks tend to focus on low-risk business with a few long-term clients. Credit for market entrants, especially for those engaged in emerging and insecure businesses such as export of non-traditional commodities, is very hard to find. Agriculture, despite its predominant role in Ugandan GDP and especially in exports, receives only 10 % of total private sector lending. Although Uganda has some fairly well-developed microfinance institutions, their supply of credit is relatively small compared to the needs of small-scale producers. As in Kenya, interest rates for commercial lending are driven up by high interest spreads due to high risk perceptions, inefficiencies, and a lack of competition in the financial sector (IMF 2003a).

The so called Export Finance Scheme administered by the Bank of Uganda (BOU) guaranteed funding for 195 non traditional export contracts between 1991 and 2000. Credit was guaranteed for both working capital needs during shipment and investment in export infrastructure such as warehouses and packaging facilities. The program was renamed the Export Credit Guarantee Scheme (ECGS) and upgraded with the support of USAID in 2001. The idea was to encourage participating private banks to provide exporters with credit by taking over part of the credit risk (WTO 2001a). In 2003, an evaluation report of the project stated that "the development objective of the ECGS – to finance increased volumes of non-traditional exports - is in the process of being realized. This has been especially true of grains, beans, and flowers." (SPEED 2003, 6). Although a general positive trend in 2002 for the export commodities mentioned is not unambiguously supported by other sources of data such as the FAO statistical database, the report's findings seem reasonable in stating that the ECGS has indeed contributed to successful export business in a number of cases. Its limited effect on overall non-traditional exports is certainly due to its relatively limited funds: in June 2002 the fund was about 1,8 million US \$ guarantying a

total amount of about 3,4 million US \$ of credit. However, the experiences of the project reveal some interesting hints as to the importance of finance in the Ugandan export sector, which will be discussed below.

In 1995, an Export Promotion Fund was launched at the BOU with the support of the European Investment Bank. This fund gives interest free loans to exporters for market studies, staff training, and representation abroad. The European Investment Banks also provides a loan scheme for investment (WTO 2001a).

4.3 Finance-export links

The Ugandan experience shows that the determination of export performance is multilayered. It depends on the supply of potential export goods, the transaction between suppliers in the country and their clients abroad, and their competitiveness on world markets.

The supply side reaction to liberalization in terms of an increase in the provision of exportable goods has been relatively strong in the case of Uganda. With the exception of coffee, all relevant agricultural export commodities grew significantly in terms of output during the post-liberalization years. However, this did not translate into sustained export growth in all cases. One striking characteristic of sectors with sustained export growth such as tea and tobacco is that yields were substantially improved in these sectors which indicates increased productivity and thus more competitiveness. On the other hand, output of commodities such as maize, beans and sesame was raised mainly through an extension of the land harvested without substantial gains in productivity. These sectors export performance, although promising in the first years after liberalization, remained weak and unsustainable.

An explanation for this is that productivity gains are indispensable in order to reduce costs and remain competitive in international markets. As productivity gains are usually achieved through investment, which often has to be financed externally, this finding further supports the importance of financial markets under trade liberalization. As pointed out above, access to credit is often even more limited for producers in non-traditional sectors because banks tend to have a restricted circle of long-term clients and are reluctant to work with new clients in young business sectors. Thus, financial constraints in these sectors were especially strong and prevented them from improving their productivity and developing a stable position in world markets. Other sectors had much more positive experiences. For example, the tobacco sector in Uganda benefited from an existing vertically integrated export scheme operated by British American Tobacco (BAT) which buys almost the entire tobacco production of the country and supports local farmers in improving their productivity. Thus, tobacco planters could improve their yields regardless of existing credit constraints. Apparently, financial constraints are not just relevant for a sectors output response to liberalization, but also for its ability to remain competitive in world markets. Differences in terms of demand for and access to external finance can thus also occur and affect a sector's export performance on the competitiveness layer.

The most important layer of export determination with respect to financial constraints in Uganda turned out to be the transaction between suppliers and their clients abroad. High transaction costs due to bad transport and communication infrastructure as well as man-

made barriers constitute a mayor problem for Ugandan exporters. This is related to financial sector issues because it raises the up-front costs exporters face and thus their demand for trade finance. The positive experiences of the ECGS show that there is indeed a high demand for trade finance among Ugandan exporters, which is not satisfied by the country's financial system. It also proves that overcoming these financial constraints can significantly improve the country's export performance. Of course, access to finance cannot substitute necessary investments in transport and communication infrastructure and the reduction of man made barriers. However, it can help to reduce the depressing effects that these obstacles have on a country's export performance. Thus, finance also has an important role to play in the transaction layer of export determination and financial constraints on this layer can be just as damaging as those affecting the production and the competitiveness layer.

In summary, the analysis of the Ugandan liberalization experience reveals that since determination of export performance is multilayered, finance is needed on several levels in order to secure a successful export performance. Credit is often required to (a) expand production in export sectors, (b) improve productivity in export sectors in order to maintain competitiveness in world markets, and (c) overcome financing gaps during the transaction between producers and clients. As each layer has the potential to severely hinder a sector's exports, bottlenecks and financial constraints on all levels have to be considered at the same time.

5 The case of Ghana

5.1 Trade history

By the early 1980s, Ghana's economy had already been declining for decades with per capita GDP falling since the 1960s and reaching a level of around 200 US \$ in the 1980s. The country's exports underwent an even sharper decline during these years. This was mainly driven by falling production levels of cocoa, by far Ghana's most important export good, and mining exports, mainly gold and diamonds. The real overvaluation of the Ghanaian currency, driven by high inflation rates, hindered the competitiveness of exports and encouraged smuggling through the neighboring country Côte d'Ivoire (Federal Research Division 2004).

In 1983, the government launched a World Bank and IMF supported ERP which included elements of both liberalization and stabilization. The exchange rate was devalued several times and then liberalized in subsequent steps. The tax system was reformed, the tax base was broadened, and subsidies were reduced. Interest rates and prices were liberalized with the exception of the cocoa sector, where producer prices continue to be set by the Ghana Cocoa Board (COCOBOD). The trade regime was streamlined, most quantitative restrictions removed and import licensing abolished (World Bank 1995b)). Unweighted average tariff rates declined from 43.3 % in 1982 to 17 % in 1988. Ghana is a founding member of the WTO.

The reforms had an almost immediate impact on GDP growth which since then has been constantly positive at rates between 8.6 % (1984) and 3.3 % (1990 and 1994). Merchandise exports remained volatile, but generally grew at an average annual ratio of 7.6 % after

1983. This was driven by three factors. First, growing cocoa export earnings reflected the slow, but constant growth of cocoa output. This was made possible by both growing yields and the cultivation of additional land. The state-run marketing board COCOBOD with its monopoly for exporting cocoa and its authority to set producer prices has often been criticized as a major impediment to cocoa exports. For example, Teal (2002) argues that incentives for growth in cocoa exports have been substantially reduced by the fact that producer prices were set at a level way below world market prices. This is indeed a major problem which the Ghanaian authorities have recently started to address (WTO 2001b). On the other hand, COCOBOD has contributed to the realization of productivity gains in cocoa planting by providing research results as well as improved plants at subsidized prices. It also organizes the marketing and exporting of cocoa (German Embassy Accra 2005). Aside from cocoa, Ghana has developed only few other agricultural exports in relevant scope. The most important of these are pineapples and cashew nuts, which have undergone slow but constant growth in both production and export since 1983.

The second important factor in export growth was a strong increase in traditional mining exports, mainly gold. Third, the non-traditional export sector strongly increased its export share from 3 % in 1986 to 19 % in 1998. Processed and semi-processed food such as canned tuna and sliced pineapples, as well as timber products contributed the biggest share to this growth (WTO 2001b).

5.2 Financial sector development

In terms of financial development, Ghana is in many ways similar to Uganda. From a very low level of 2.85 US \$ in 1983, per capita credit to the private sector rose to 35.5 US \$ in 2000, reflecting a growth of private credit to GDP from 1.5 % to 14 %. This is still very low. The increase in credit was triggered by a variety of financial reforms including the liberalization of interest rates, the restructuring of banks, and the abolishment of the mandatory channeling of credit to certain sectors. Although these reforms were successful in increasing overall levels of credit, they did not significantly increase the country's level of financial deepening (Aryeetey et al. 1997).

Ghana has a variety of financial institutions including a banking sector dominated by the state-owned Ghana Commercial Bank and three foreign owned banks (IMF 2003c). There are also several rural banks and a stock exchange. However, most of these institutions are underdeveloped, inefficient, and reach only a low share of the population. Bank penetration is relatively high in the region around the capital Accra, but often completely missing in rural areas. Rural banks, which were designed to overcome this problem, tend to focus on mobilizing rural savings, but are often reluctant to provide credit in rural areas (IMF 2003b). Generally, there is a lack of competition in the Ghanaian banking system which leads to inefficiency and high transaction costs in allocating capital. One reason for this are the heavy financing needs of the government which have encouraged banks to invest in risk free treasury bills rather than to seek business with private sector clients. Government borrowing has also put upward pressure on the interest rate, crowding out private borrowing (Brownbridge and Gockel 1996). Further, there are economies of scale effects in the banking system and high investment costs which deter new entrants (Buchs and Mathisen 2003).

In addition to high transaction costs in allocating capital, the savings rate in Ghana is very low. This is mainly because high inflation rates (often above the deposit interest rate) and overall macroeconomic instability have undermined confidence in financial institutions. This discourages people from holding financial assets even if they have the ability to save (Boehmer et al. 1994). The informal financial sector, although significant, is unable to fill the gap caused by the formal sector's deficits. Thus, most firms in Ghana, especially small ones, lack access to credit and thus have to rely on their own savings and profits for working capital and investment (World Bank 1994) as well as for export operations (Buatsi 2002).

A number of institutions have been set up in Ghana to provide export promoting finance schemes. In 1990, the government founded the Export Finance Company (EFC) which provides loans, export insurance, and credit guarantees to non-traditional exporters. However, the EFC's activities have been hampered by its weak financial resources and the substantial losses it incurred in the early 1990s. Since 1993 the World Bank has been funding an export credit refinance and guarantee facility which helps exporters to get short-term finance from participating banks. An Export Development and Investment Fund was set up by the government in 2001 to guarantee investment finance for exporters. It is funded by a tax on imports. There are also government funded agencies for micro and rural credit (WTO 2001b).

5.3 Finance-export links

As it has been pointed out above, Ghana's export performance after trade liberalization was relatively successful both in terms of total merchandise exports and portfolio diversification.

In comparing the Ghanaian experience to those of Kenya and Uganda, two observations stand out. First, Ghana was much more successful in increasing its traditional cocoa exports than Kenya and Uganda were with respect to their traditional exports of coffee and tea. This was the case regardless of the fact that small scale rural farmers and traders were just as credit constrained if not more so in Ghana than in Kenya and Uganda. Nevertheless, they were able to strongly increase their production levels both in terms of yields and in terms of area used for cocoa plantation and to find export markets for the additional production. Part of this success was made possible by the involvement of the state-run cocoa board. Despite its inefficiencies and its negative influence on the producer price for cocoa, COCOBOD helped farmers increase their productivity and organized the export of the cocoa harvest. Theoretically, COCOBOD did not do anything which a functioning market mechanism would not have been able to achieve. However, financial constraints due to market failures often hinder small scale producers' attempts at investment even if their businesses have the potential to be profitable. The Ghanaian COCOBOD helped to overcome such "transaction failures" (Dorward et al. 2005) by providing farmers with subsidized investment goods.

A second observation is related to the growth in both gold and other mining exports as well as non-traditional exports despite Ghana's financial underdevelopment. Gold mining in Ghana is dominated by Ashanti Goldfields Company, a big partly state owned company which is also active in other African countries, and a number of foreign firms or joint-

ventures with foreign participation. The expansion of the mining sector was mainly driven by its ability to attract foreign capital, either through equity participation in Ashanti Goldfield (which has also received a number of World Bank credits) or through foreign direct investment (FDI).

With respect to non-traditional food exports such as canned tuna and pineapples, export growth was made possible by the country's integration into global value chains with the participation of multinational companies. The tuna processing industry is dominated by Pioneer Food Cannery (PFC), which is owned by the US food company Heinz. This company established a vertically integrated production and export network complete with its own fishing vessels, processing facilities, transport, and exporting networks (Hoefter 2001). Pineapples, both sliced and unprocessed, are produced and exported by big commercial farms or smallholders organized in cooperatives. While the former often possess their own transport equipment and warehouses, most of the latter work with Farmapine Ghana Limited. This company, owned by the cooperatives and sponsored by the World Bank and the Ghanaian government, does not just organize the collection and transport of the products, but also provides technical and financial support to producers (Hagen et al. 2004). Pineapples are then sold to and exported by foreign international food companies. For several reasons, integration into such global value chains lowers those firms' dependence on the domestic financial sector. In the case of a completely integrated vertical production and export chain such as the tuna industry, a big multinational company, with its own strong capital resources and access to international financial markets, exerts itself in all three layers of export determination.

However, even if the production and export chain is not entirely owned by a multinational, integration can still help producers and agents of transaction in the exporting country overcome domestic financial constraints. This is because integration reduces the transaction costs associated with finance by providing lenders information and control mechanisms about potential borrowers along the supply chain. In other words, a multinational fruit company which has an established business relationship with a local producer has a much more accurate picture of the viability of his investment plans than any bank. Thus, it can provide credit for a profitable investment at lower transaction costs than the bank. Thus, finance within the value chain can be channeled directly to the layer where it is needed most without transaction costs or the mediation of financial institutions. Also, it provides producers with a means to access foreign capital (Yow 2002). Finally, some multinational companies engaged in global value chains provide direct support to their local producers in the form of know-how and the provision of investment goods such as in the case of BAT and the Ugandan tobacco growers.

With respect to timber processing, most companies involved are owned either by the government or by wealthy Ghanaian families with good connections abroad. These companies have been able to raise substantial equity capital and have received credit from both the World Bank and private foreign sources.

The experience of Ghana indicates two paths with a potential to compensate for financial sector constraints in export performance. These are the provision of investment support and the ability to attract capital from sources independent of the domestic financial sector.

With respect to the former, there is reason to believe that mechanisms providing investment support in agriculture can compensate for a lack of financial sector development (Dorward / Kydd / Poulton 2005). Given the fact that financial development is a very long lasting process, this can be a promising shortcut to rural development. The apparent risk of this argument is that it could be used as a justification for excessive government involvement and lead to maintaining state dominated marketing boards with strong monopoly positions. It has been sufficiently proven in the past that these tend to generate inefficiency and corruption which suppress producer prices and thus both investment and production. What is needed instead is a non-mandatory offer to farmers to participate in a jointly organized, but not necessarily state run distribution chain that provides cheap investment goods without the abusive powers of a state run marketing board.

The case of Ghana has also shown that there are a number of possibilities for export sectors to attract capital from sources independent of the domestic financial sector. The most important of these possibilities are FDI, integration into global value chains, equity capital, and foreign loans. However, they all have limitations. The literature on the advantages and disadvantages of FDI and the presence of multinational companies in developing countries is very extensive and shall not be reviewed here (see for example Cypher and Dietz 2003, chapter 14: Transnational corporations and economic development). For the purposes of this paper it is sufficient to state that FDI and global value chains do have a potential to help a country's export sector to grow under trade liberalization, but that it is usually constrained both in its amount and in terms of target sectors as it mainly flows into the exploitation of natural resources and few manufacturing industries. Also, competition for FDI among developing countries is fierce and the loss of control over the exploitation of a country's resources that goes along with foreign participation is often seen as problematic. One problem with export production within a global value chain is that it usually does not have strong links to the rest of the domestic economy. The opportunity to raise equity capital or attract foreign loans is restricted to persons or businesses with a strong commercial standing and very good business contacts.

6 Conclusions

Trade liberalization puts a country's financial system under stress by raising the demand for credit to finance an increased level of both trade (trade-finance argument) and investment (investment argument.) Financial constraints therefore hamper a country's ability to benefit from the increased value and diversification of exports that is expected to result from trade liberalization. However, the case studies presented in this paper show that the effect financial constraints have on export performance depends on a number of additional factors, which are usually specific to a particular sector or producer group. Also, financial constraints can occur in any of the three layers, production, transaction and competitiveness, that are crucial for a country's export performance. Taking these findings together leads to a two-dimensional picture combining sector specific and layer specific factors that identifies where financial constraints are going to occur under trade liberalization. These can be summarized in the following matrix which should be completed for each individual sector considered relevant to a country's export performance.

In each field, the financial needs of a specific sector in a specific layer can be identified. The factors which have proven to be crucial are given in the chart above and should be related to the specific financial sector conditions in the country under analysis.

On the production layer, access to credit for producers in most developing countries is especially low in rural areas and for small scale enterprises. There is often an anti-agriculture bias in the allocation of credit. Thus, producers' size and location and the type of production are relevant for a sector's access to credit. In analyzing the potential impact of financial constraints, access to credit has to be seen in relation to demand for external finance. A sector with high fixed upfront costs will tend to have a higher demand for external finance than a sector where variable costs are predominant. Such a sector will also need long term credit, which is usually more difficult to obtain than short term loans. The technology used for production has an impact on the costs of increasing output and thus impacts the need for investment finance. Production that is labor and land intensive can be expanded more easily without access to external finance than production that is capital intensive. Finally, potential substitutes for domestic credit have to be examined. A sector's ability to attract investment inflows from other sources reduces its dependence on domestic financial systems. This can occur through FDI, integration into global value chains, or the firm's own ability to raise portfolio investment or get foreign loans. The presence of cooperatives, which provide investment goods such as seeds and fertilizers at subsidized prices or offer special financing schemes for input purchase can also mitigate producers' demand for credit. Finally, firms with high profits or savings can rely on these resources and thus do not need to rely on credit to finance investment.

On the transaction layer, the first and most important point of analysis is determining whether export structures for a given sector exist and if so, how they are organized. For example, a vertical export structure which is owned by a multinational company such as BAT's export chain for tobacco from Uganda or PFC's export chain for canned tuna from Ghana does not have to rely on the domestic financial sector at all. In such a case, financial constraints on the transaction layer will not be expected. On the other hand, domestically owned, horizontal export structures often involve many levels (small-scale buyers, domestic traders, exporters) which all have their individual financial needs. In this case, a sector's export performance will depend strongly on the financial system's ability to satisfy each of these demands. In the case of non-traditional exports, export structures will often be inexistent or rudimentary. This will most likely raise the up-front costs associated with market creation and the development of relevant structures, and will thus further increase the demand for external finance. The same holds true for high transport and communication costs and a long time gap between production and payment. The amount of risk associated with an export sector, whether real or perceived, is relevant for determining the access to credit because banks are risk averse and thus prefer to make business with less risky clients even if others would be willing to pay a higher interest rate.

Box 1: Research matrix for sector and layer specific determinants of financial constraints	
<p><u>Supply:</u> Producers' ability to respond to market opportunities arising from liberalization by increasing their output</p>	<p><u>Question: Do financial constraints hinder the ability of producers in this sector to increase their output?</u></p> <p>Relevant factors for credit access:</p> <ul style="list-style-type: none"> - type of production (agriculture, manufacturing, mining) - scale of production - location of production (urban, rural) <p>Relevant factors for credit demand:</p> <ul style="list-style-type: none"> - technology used - cost structure (fixed vs. variable) <p>Potential substitutes for domestic credit</p> <ul style="list-style-type: none"> - alternative sources of capital (FDI, global value chains, equity capital, foreign loans) - investment support agencies - high own profits or savings
<p><u>Transaction:</u> The export good's way from producers to buyers abroad including transport, market creation, and contact building with potential buyers, etc.</p>	<p><u>Question: Do financial constraints hinder the transaction between producers and buyers in other countries?</u></p> <p>Relevant factors:</p> <ul style="list-style-type: none"> - Existing export structures (efficiency and level of development, vertical or horizontal organization, state-run, private or foreign) - transport and telecommunication costs and availability - time gap between production and export payment - real and perceived sectoral risk (eg. traditional vs. non-traditional exports, price and production volatility)
<p><u>Competitiveness:</u> The product's ability to compete in export markets in terms of both price and quality</p>	<p><u>Question: Do financial constraints hinder the competitiveness of the product in international markets?</u></p> <p>Relevant factors for credit access:</p> <ul style="list-style-type: none"> - type of production (agriculture, manufacturing, mining) - scale of production - location of production (urban, rural) <p>Relevant factors for credit demand:</p> <ul style="list-style-type: none"> - availability and cost of alternatives to the technology currently used <p>Potential substitutes for domestic credit</p> <ul style="list-style-type: none"> - alternative sources of capital (FDI, global value chains, equity capital, foreign loans) - investment support agencies - high own profits or savings
<p>Source: Author</p>	

On the competitiveness layer, access to credit and the availability of potential substitutes for domestic credit are determined by the same factors as on the production layer. The need for external finance is mainly determined by the costs of alternative production technologies. Although financial constraints on the competitiveness layer are thus characterized by factors similar to those on the production layer, the result is not necessarily the same. This is demonstrated in the case of non-traditional agricultural exports from Uganda where production was strongly increased through the cultivation of additional land. Apparently, there was no financial constraint on the production layer because production could be increased with an increase in land and labor input rather than capital investment. However, exports soon stagnated and then began to decline because productivity in the sectors remained insufficient to compete on world markets. The case of Uganda also reveals that prices of export goods often become uncompetitive because of high transport costs including man-made barriers and poor infrastructure. Although external finance can help exporters deal with such up-front costs (on the transaction layer), the decision to reduce them and thus become more competitive (which would affect the competitiveness layer) is typically outside their control. This is clearly a task for the government.

Using the above described matrix for all sectors relevant to a country's future export performance, one can identify where financial constraints are most likely to occur under trade liberalization. It should be noted that a sector can only perform well if constraints are tackled on all three layers. Also, the matrix gives an idea of how differences in access to external finance will impact the role different sectors can play in a country's future export portfolio. Although this will of course also be determined by other factors such as the country's comparative advantage, financial constraints can cause fundamental distortions by hindering the performance of potentially successful export sectors.

The cases analyzed in this paper provide many examples of instruments countries have developed to tackle financial constraints under trade liberalization. These include micro credit schemes, investment support agencies, trade credit guarantee funds, and trade insurance. It is beyond this paper's scope to judge their individual efficiency, but it can be stated that many of these programs have led to encouraging results, demonstrating that financial constraints can be alleviated. The better these measures are targeted, the more efficient one can expect them to be. However, the case studies also show that most of these instruments were only adopted years after trade liberalization when financial bottlenecks and their negative effect on export performance became so severe that they could no longer be ignored. In carrying out a research scheme based on the above described matrix, financial constraints can be identified and addressed at an earlier stage of trade liberalization. This has two advantages. First, the efficiency of the measures adopted can be optimized with respect to the export sectors' particular financial needs under trade liberalization. Second, in identifying and tackling potential financial constraints at an early point in the liberalization process, a country can avoid painful learning through bad experiences and thus reduce transaction costs and more quickly realize the benefits of liberalization.

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A N N E X

Table 1: Kenya, selected indicators												
All values in 1000 US \$ if not indicated otherwise												
Year	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989		
Per capita GDP in US \$		357	349	342	336	338	351	359	369	375		
GDP growth		5.6%	1.5%	1.3%	1.8%	4.3%	7.2%	5.9%	6.2%	4.7%		
Total merchandise exports	1,245,000	1,138,000	1,021,000	876,000	1,081,000	958,000	1,200,000	961,000	1,071,000	970,000		
Manufactured exports	209,471	154,367	137,865	127,336	117,563	123,112	137,138	137,227	147,335	138,899		
Agricultural exports	701,288	619,376	557,087	630,989	744,031	686,167	907,510	673,894	752,425	685,000		
Fuels and mining exports	478,240	425,348	282,115	217,645	221,007	179,541	158,860	149,421	172,702	168,560		
Merchandise exports / GDP	17.1%	16.6%	15.9%	14.6%	17.5%	15.6%	16.6%	12.1%	12.6%	11.6%		
Growth in Merchandise exports	-8.6%	-10.3%	-14.2%	-14.2%	23.4%	-11.4%	25.3%	-19.9%	11.4%	-9.4%		
Current Account Balance	-876,258	-561,592	-305,338	-47,252	-126,892	-115,019	-44,990	-502,051	-471,288	-590,420		
Exports of selected commodities												
FISH FILLETS,FROZEN							712	2,475	6,452	11,270		
FISH, PREPARED/PRESERVED												
VEGETABLES NES,FRSH/CHLD	22,353	21,122	20,829	20,979	19,698	19,108	25,298	30,825	34,488	37,557		
NUTS EDIBLE,FRESH/DRIED	15,570	13,713	8,291	6,676	9,926	7,913	10,169	7,300	15,090	6,430		
FRUIT/NUTS/VEG PRSVD NES	27,985	31,201	28,969	39,506	39,489	34,210	38,640	39,576	34,949	39,038		
COFFEE, NOT ROASTED	367,571	266,459	279,484	260,907	286,651	317,441	531,581	297,601	240,895	291,500		
TEA	188,405	156,600	163,887	187,534	300,141	283,405	170,520	229,541	234,492	250,001		
BOVINE/EQUINE HIDE RAW	9,192	5,916	4,730	3,937	5,593	4,054	1,791	1,394	2,952	3,799		
SISAL ETC UNSPUN/TOW/WST	23,782	23,567	21,439	19,294	16,780	13,853	13,295	10,735	12,056	13,302		
CUT FLOWERS/FOLIAGE	16,726	14,517	11,553	14,335	16,235	17,059	25,374	31,783	33,727	33,681		
VEGETABLE MATERIALS NES	31,041	14,792	19,502	13,623	9,259	13,400	13,431	13,836	12,708	18,040		
FUEL OILS,NES	162,914	94,480	56,311	1,365	6,174	13,037	10,421	10,421	2,842	1,881		
CHLORIDE/BROMIDE/IODIDE	21,034	13,068	15,525	6,889	9,541	10,344	9,875	13,634	14,628	18,951		
WOMENS/GIRL JACKET WOVEN					153	218	789	322	748	1003		
Domestic credit to the private sector / GDP	29.5%	29.4%	30.0%	29.3%	30.6%	31.5%	30.3%	28.9%	30.2%	31.2%		
Per capita domestic credit to the private sector in US \$	129	117	108	95	99	97	107	109	117	115		
Unweighted average tariff rate			40.3%		41.7%		39.2%	39.2%	41.7%	37.5%		

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	source
	379	374	361	352	352	359	364	363	360	356	347	World Bank, World Development Indicators 2005
4.2%	1.4%	-0.8%	0.4%	2.6%	2.6%	4.4%	4.1%	2.1%	1.6%	1.3%	-0.2%	World Bank, World Development Indicators 2005
	1,031,000	1,108,000	1,339,000	1,374,000	1,587,000	1,878,000	2,067,000	2,053,000	2,008,000	1,747,000	1,734,000	WTO statistics database
	304,845	244,513	500,205	399,937	466,530	503,000	525,000	494,000	452,000	365,154	325,138	WTO statistics database
	559,109	670,547	658,723	808,098	1,041,534	1,158,000	1,269,000	1,220,000	1,244,000	1,088,813	1,062,259	WTO statistics database
	164,418	233,138	184,375	168,654	108,896	163,219	194,049	237,496	214,867	185,700	176,550	WTO statistics database
12.1%	13.8%	16.7%	27.6%	22.2%	20.8%	22.3%	19.3%	17.5%	16.5%	16.6%	16.6%	author's calculation based upon data from World Development Indicators 2005 and WTO statistics database
6.3%	7.5%	20.8%	2.6%	15.5%	18.3%	10.1%	-0.7%	-2.2%	-13.0%	-0.7%	-0.7%	author's calculation based upon data from World Development Indicators 2005 and WTO statistics database
-527,084	-213,321	-180,154	71,171	97,912	-400,449	-73,466	-456,839	-475,295	-89,639	-199,392	-199,392	World Bank, Global Development Finance 2005
16,022	21,916	23,854	25,253	30,388	30,636	52,677	30,777	26,999	24,709	24,907	24,907	NBER - UN Trade Data
46,293	48,079	55,493	56,244	58,357	68,322	82,771	85,754	89,604	115,901	13,595	13,595	NBER - UN Trade Data
4,246	8,668	7,451	5,617	10,169	8,410	12,256	11,023	15,956	12,487	3,955	3,955	NBER - UN Trade Data
48,409	57,256	59,148	46,020	43,032	52,675	67,078	55,176	68,266	52,940	43,975	43,975	NBER - UN Trade Data
228,651	225,786	180,019	183,962	211,192	342,502	343,287	308,276	226,670	182,115	162,053	162,053	NBER - UN Trade Data
300,230	278,281	274,655	318,963	266,856	288,462	297,232	290,628	392,234	326,807	302,081	302,081	NBER - UN Trade Data
4,319	1,324	2,182	2,767	3,713	4,906	7,607	7,110	7,137	7,040	18,022	18,022	NBER - UN Trade Data
13,776	11,862	13,431	12,290	14,394	15,421	12,669	12,112	10,997	8,887	8,036	8,036	NBER - UN Trade Data
44,154	53,946	63,391	69,101	86,229	105,434	113,989	119,946	82,489	94,018	93,551	93,551	NBER - UN Trade Data
21,567	18,847	21,670	21,410	27,682	27,024	27,655	23,683	12,393	11,748	8,189	8,189	NBER - UN Trade Data
2,672	4,759	9,148		4,189			885	906	2,281	3,701	3,701	NBER - UN Trade Data
15,084	13,425	23,898	17,026	25,365	20,198	26,605	23,521	23,743	17,945	18,963	18,963	NBER - UN Trade Data
2,636	3,803	9,050	14,292	14,323	9,479	9,864	11,054	12,696	11,904	18,640	18,640	NBER - UN Trade Data
32.8%	34.2%	35.7%	33.8%	29.1%	34.1%	34.7%	33.8%	30.7%	30.7%	29.8%	29.8%	World Bank, World Development Indicators 2005
120	115	116	66	80	116	117	128	123	110	104	104	author's calculation, based upon data from World Bank, World Development Indicators 2006
43.7%	34.0%	33.6%	31.9%	32.1%	22.0%	13.5%	19.0%	19.9%	18.0%	15.3%	15.3%	World Bank, data on trade and import barriers

Table 2: Uganda, selected indicators										
all values in 1000 US \$, if not indicated otherwise										
Year	1980	1981	1982	1983	1984	1985	1986	1987	1988	
Per capita GDP in US \$			175	181	175	165	161	162	169	
GDP growth				5.7%	-0.3%	-3.3%	0.4%	4.0%	8.3%	
Total merchandise exports	345,000	243,000	349,000	372,000	399,000	387,000	436,000	319,000	271,000	
Agricultural exports	344,262	244,330	361,530	371,470	392,415	364,409	410,406	319,727	283,624	
Merchandise exports / GDP	27.7%	18.2%	16.0%	16.6%	11.0%	11.0%	11.1%	5.1%	4.2%	
Growth in Merchandise exports		-29.6%	43.6%	6.6%	7.3%	-3.0%	12.7%	-26.8%	-15.0%	
Current Account Balance	-82,670	25,401	-69,897	-72,237	103,544	4,598	-43,267	-112,010	-195,210	
Exports of selected commodities										
FISH FILLETS, FROZEN		SITC Rev. 1								
FISH, DRIED/SALTED/SMOKED		344								
VEGETABLES		350								
NES, FRSH/CHLD		545								
COFFEE, NOT ROASTED		711	21	4						
TOBACCO, NOT STRIPPED		442,906	255,216	355,182	318,537	342,698	435,329	303,507	252,592	
TOBACCO STRIPPED/STEMMED		1211			780	288	118			
BOVINE/EQUINE HIDE RAW		1212			845					
BOVINE HIDES, WHOLE, RAW		2111	1,606	2,534	11,700	10,669	6,602	5,452	6,051	
GOAT/KID SKINS, RAW		2112	172	216	1,278	749	492		6,221	
SESAME SEEDS		2114	36	950	3,112	4,390	3,276	1,926	4,179	
RAW COTTON, EXCL LINTERS		2225								
BULBS/CUTTINGS/PLANTS		2631	9,019	10,267	12,442	13,130	5,446	5,172	3,055	
CUT FLOWERS/FOLIAGE		2926								
		2927								
Domestic credit to the private sector / GDP	3.9%	4.0%	3.2%	2.6%	3.4%	2.9%				
Per capita domestic credit to the private sector in US \$	3.8	4.1	5.2	6.8	8.2	7.6				
Unweighted average tariff rate							30.0%	19.9%		

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	source
173	177	180	180	180	189	195	212	226	231	236	248	253	World Bank, World Development Indicators 2005
6.4%	6.5%	5.6%	3.4%	8.3%	6.4%	11.5%	9.1%	5.1%	4.9%	7.9%	5.4%		World Bank, World Development Indicators 2005
274,000	152,000	200,000	142,000	179,000	409,000	460,000	587,000	555,000	501,000	519,000	460,000	460,000	WTO statistics database
279,813	172,864	166,734	134,347	179,502	266,611	476,292	521,021	414,782	425,106	437,361	261,309	261,309	FAO, statistical database
5.2%	3.5%	6.0%	5.0%	5.6%	10.2%	8.0%	9.7%	8.9%	7.7%	8.7%	7.8%	7.8%	author's calculation based upon data from World Development Indicators 2005 and WTO statistics database
1.1%	-44.5%	31.6%	-29.0%	26.1%	128.5%	12.5%	27.6%	-5.5%	-9.7%	3.6%	-11.4%	-11.4%	author's calculation based upon data from World Development Indicators 2005 and WTO statistics database
-259,521	-263,300	-169,770	-99,600	-171,130	-174,200	-281,490	-211,500	-315,730	-363,690	-293,200	-358,800	-358,800	World Bank, Global Development Finance 2005
	656	3,893	4,274	4,291	5,821	9,919	13,233	11,105	20,087	18,416	23,176	23,176	NBER - UN Trade Data
	169	610	1,811	1,949	2,895	5,483	6,345	5,771	2,813	1,956	4,363	4,363	NBER - UN Trade Data
	102	482	523	915	759	1,031	1,192	1,994	2,757	2,999	2,820	2,820	NBER - UN Trade Data
256,431	169,159	144,447	133,274	100,581	342,595	543,727	473,706	448,696	324,588	299,049	184,603	184,603	NBER - UN Trade Data
402	1,686	1,074	1,324	1,158	1,514	1,039	2,132	1,373	1,376	5,601	4,184	4,184	NBER - UN Trade Data
	493	1,868	4,434	3,306	2,557	9,002	8,754	9,786	6,825	14,262	23,941	23,941	NBER - UN Trade Data
4,706	5,601	4,596	5,608	6,356	6,387	4,488	3,894	3,117	2,933	2,914	4,534	4,534	NBER - UN Trade Data
3,638	3,369	1,998	2,078	2,808	3,986	2,803	1,594	1,420	702	552	436	436	NBER - UN Trade Data
4,452	4,184	2,576	839	1,290	2,635	2,226	1,820	1,721	1,065	474	474	474	NBER - UN Trade Data
504	1,503	2,324	4,688	2,087	2,585	6,348	6,467	1,563	1,563	1,569	2,818	2,818	NBER - UN Trade Data
3,070	5,646	8,303	12,092	7,138	7,814	7,993	9,073	19,323	10,377	12,141	9,889	9,889	NBER - UN Trade Data
							145	818	1,584	2,837	3,692	3,692	NBER - UN Trade Data
						2,632	4,809	7,695	4,778	5,340	9,471	9,471	NBER - UN Trade Data
			4.0%	4.4%	4.4%	4.6%	5.3%	4.8%	5.7%	6.4%	6.6%	6.6%	World Bank, World Development Indicators 2005
			6.1	7.4	8.8	13.0	15.4	14.2	16.9	16.9	16.6	16.6	World Bank, World Development Indicators 2005
					17.1%	16.8%	12.8%	13.2%	10.0%	10.4%	8.3%	8.3%	World Bank, data on trade and import barriers

Table 3: Ghana, selected indicators												
all values in 1000 US \$, if not indicated otherwise												
Year	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989		
Per capita GDP in US \$	239	224	201	185	193	195	199	201	207	212		
GDP growth	0.5%	-3.5%	-6.9%	-4.6%	8.6%	5.1%	5.2%	4.8%	5.6%	5.1%		
Total merchandise exports	1,258,000	1,065,000	874,000	1,158,000	528,000	617,000	863,000	977,000	1,009,000	1,018,000		
Manufactured exports	772,399	487,294	467,830	1,685,482	342,481	412,383	568,409	560,360	637,305	636,528		
Agricultural exports	9,420	25,764	15,279	110,761	23,343	28,136	73,752	56,121	77,035	93,294		
Fuels and mining exports	160,643	357,359	250,226	126,450	29,888							
Merchandise exports / GDP	28.3%	25.2%	21.7%	28.5%	12.0%	13.7%	15.1%	19.3%	19.4%	19.4%		
Growth in Merchandise exports		-15.3%	-17.9%	32.5%	-54.4%	16.9%	39.9%	13.2%	3.3%	0.9%		
Current Account Balance	30,200	-419,182	-107,280	-172,165	-38,800	-133,900	-85,320	-97,900	-67,100	-93,900		
Exports of selected commodities												
FISH/LIVE/FRSH/CHLD/FROZ	8141	14159	22148	24803	15508	9164	19544	14096	16679			
FISH, PREPARED/PRESERVED												
FRUIT FRESH/DRIED NES	211	607	691	635	1318	1578	2874	3763	5840	6899		
COCOA BEANS,RAW/ROASTED	483214	328130	379578	233289	243186	298334	330223	362215	299385	279731		
COCOA PASTE	103508	47380	40245	29490	34945	36653	48038	46926	46814	26383		
WOOD IN ROUGH/SQUARED	23779	10871	8984	8079	7898	16217	31364	58056	61517	32691		
SOFTWOOD												
SHAPED/GROOVED	2483	36685	14322	12377	13332	23675	29802	53950	64922	54727		
MANGANESE ORE/CONC.	2877	14894	9512	5110	14399	11376	9070	9782	13482	18395		
VENEER SHETS ETC <6MM	6341	5604	2794	3848	3871	4213	5685	9673	13605	10232		
DIAMONDS UNSET	6672	2,869	6645	15119	36666	16574	50559	33553	19018	41649		
ALUMINIUM/ALLOYS UNWRT	6841	1487	23	893					2288	1892		
Domestic credit to the private sector / GDP	2.2%	1.8%	1.8%	1.5%	2.2%	3.1%	3.6%	3.2%	3.1%	5.8%		
Per capita domestic credit to the private sector in US \$	5.2	4.1	3.6	2.9	4.3	6.1	7.2	6.4	6.5	12.4		
Unweighted average tariff rate			43.3%	30.0%	30.0%	30.0%	20.0%	23.0%	17.0%	17.0%		

all values in 1000 US \$ if not indicated otherwise												
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	source
214		220	222	227	228	230	234	238	244	249	254	World Bank, World Development Indicators 2005
3.3%	5.3%	3.9%	4.9%	3.3%	4.1%	4.6%	4.2%	4.7%	4.4%	3.7%		World Bank, World Development Indicators 2005
897,000	617,000	1,252,000	974,000	1,425,000	1,724,000	1,669,000	1,635,000	1,795,000	1,720,000	1,671,000		WTO statistics database
	358,854	465,692						765,000	775,582	621,053		WTO statistics database
		54,885						155,000	238,190	156,068		WTO statistics database
		188,648					232,957	235,283	153,718	280,965		WTO statistics database
15.2%	9.3%	19.5%	16.3%	26.2%	26.7%	24.1%		23.8%	24.0%	22.3%	33.6%	author's calculation based upon data from World Development Indicators 2005 and WTO statistics database
-11.9%	-31.2%	102.9%	-22.2%	46.3%	21.0%	-3.2%		-2.0%	9.8%	-4.2%		author's calculation based upon data from World Development Indicators 2005 and WTO statistics database
-223,200	-252,052	-377,000	-558,800	-254,600	-143,700	-306,850	-403,464	-521,730	-964,300	-386,500		World Bank, Global Development Finance 2005
9958	11825	12071	15381	18165	20973	27714	30693	38740	83740	75271	68615	NBER - UN Trade Data
309974	308906	311244	277879	323012	389713	481635	381410	502584	484782	375617	31167	NBER - UN Trade Data
52251	29528	38551	45530	59677	81597	85037	95300	98189	65745	62843	2992	NBER - UN Trade Data
37298	42135	40918	58104	85776	41468	2906	3506	1597	4858	4858	89795	NBER - UN Trade Data
95325	59759	84921	90204	133037	156606	115515	120958	119709	105765	89795	31387	NBER - UN Trade Data
22832	30185	32260	21295	15523	17580	14050	20587	21440	22336	22336	40246	NBER - UN Trade Data
14825	13476	18706	17473	23546	36742	35172	34528	39790	40440	40440	84845	NBER - UN Trade Data
85617	96182	106034	198456	254513	203719	217851	199542	129623	208357	208357	13498	NBER - UN Trade Data
	446	1684	1155	1257	574	914	946	6835	3393	3393		NBER - UN Trade Data
4.9%	3.7%	4.9%	4.8%	5.3%	5.1%	6.0%	8.2%	9.4%	12.6%	14.0%		World Bank, World Development Indicators 2005
10.5	8.0	11.0	11.0	12.0	11.7	14.1	19.5	22.8	31.3	35.5		author's calculation, based upon data from World Bank, World Development Indicators 2006
17.0%	17.0%	0.0%	17.0%	17.5%	15.0%	14.5%	14.8%	14.8%	14.2%	14.7%		World Bank, data on trade and import barriers

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