

Trade Policy, Economic Performance and Poverty in Uganda¹

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Abstract

Uganda has probably been one of the most successful African examples of economic liberalisation in the 1990s. Growth performance has been impressive and evidence from successive household surveys indicates that poverty reduced during the 1990s, which is partly attributed to policy reforms including trade liberalisation. The focus of this paper is on how trade has affected poverty in Uganda. Using a combination of analytical tools including Computable General Equilibrium (CGE), this paper identifies which types of households have, and which have not, benefited from trade under Uganda's more liberal economic regime, and suggests what can be done to spread the benefits more widely.

Trade affects poverty by contributing to increased or decreased incomes or opportunities, or by altering the prices the poor face for the main commodities they consume or produce. It is clear that the gains from trade (export growth) in Uganda were widespread, although concentrated in households and regions where cash and food crop agriculture predominated. Households engaged in non-traditional exports, especially fish, also gained. The growth in exports benefited not only the households engaged in export sectors but also provided a dynamic gain. The increase in incomes increased general demand for food and services and spread the benefits more widely throughout the economy. The households that did not benefit much from trade comprise three distinct types: (i) non-working households; (ii) wage earners (urban) because of increased food prices relative to wages, and import competition reduced wages and/or employment and (iii) northern region mainly due to poor performance of cotton sub-sector and insecurity.

Policy actions to enhance the role of trade in reducing poverty are suggested. First, improved transport and marketing infrastructure would benefit the Northern region. Second, policies that address employment and industrial development are central to increasing the incomes of urban workers. Investment is needed to increase efficiency, and education (general and vocational) can increase productivity. Third, reducing poverty among non-working households will require targeted government interventions.

1. Introduction

Uganda since the early 1990s has been one of the most successful African examples of economic policy reforms including trade liberalization that reduced policy-induced anti-export bias. Taxes on exports have been abolished, and import protection has been reduced considerably. Uganda now has one of the most open trade regimes in Africa. In conjunction with trade liberalization, the government has liberalized much of the agricultural sector, notably coffee marketing, and this has been associated with increased prices and incomes for producers. Growth performance has been impressive. In general terms, real per capita GDP doubled by the early 2000s compared to the early 1990s. Export growth, especially coffee in the mid-1990s but including non-traditional exports more recently, made a significant contribution to this growth performance; export earnings doubled in real terms during the 1990s. The evidence of successive household surveys is that poverty reduced in most of the 1990s largely due to increased agricultural incomes (first coffee, then food crops since 1997), and increasing non-farm incomes in recent years. The percentage of the population recorded as living below the poverty line (the poverty headcount measure) fell by some 20 per cent between 1992 and 1998, and has continued to fall until the early 2000s.

There were several forces at play in the economy during the 1990s that impacted on poverty. These included trade liberalization and trade performance (which is only in part determined by Uganda's own trade policy), but there were also large aid inflows. Although we will make reference to other factors where appropriate, the concern of this paper is to identify any ways in which trade policy and performance has affected the poor. Trade may affect poverty by contributing to increased or decreased incomes or opportunities, or by altering the prices, the poor face for the main commodities they consume. All of these linkages will be addressed. However, the gains of the past decade have not been evenly distributed; while the 'average' household gained, some households are likely to have suffered under liberalization and some groups remain rooted in poverty. This paper aims to review the evidence to identify which types of households have, and which have not, benefited from trade under Uganda's more liberal economic regime, and to suggest what can be done regarding trade policy to spread the benefits more widely.

The major trade policy reforms tend to have a more immediate effect on imports than on exports, as Ugandan reforms directly affect import prices (by reducing restrictions or tariffs). Export revenues are largely determined by world prices, which are beyond Uganda's influence, while export performance is influenced by non-trade factors, such as marketing and transport. The effects for exports and imports will be examined separately, including reference to results from modeling exercises, in particular Computable General Equilibrium (CGE) studies for Uganda. An attempt is made to relate product effects (e.g. prices of food, imports) to consumption, especially of the poor, using evidence from household surveys. As export growth contributes to economic growth, trade can directly contribute to reducing poverty. Trade, imports and exports, affect households in different ways, as producers or consumers, and we emphasize how such distribution effects should be allowed for when incorporating trade policy into any poverty reduction strategy.

2. Trade policy and economic performance ¹

Uganda has averaged real GDP growth of over five per cent per annum since the launch of the Economic Recovery Program (ERP) in 1987. The key features of the ERP were market-oriented policy reforms, including liberalization of trade and the foreign exchange regime, and achieving macroeconomic stabilization. Uganda has

undergone substantial structural transformation over the past decade with services and industry becoming more important at the expense of agriculture. Nevertheless, agriculture continues to dominate the Ugandan economy, contributing more than 90 per cent of export earnings, 80 per cent of employment, and about 40 per cent of government revenue. The proportion of monetary in total GDP rose from 66 to 77 per cent in the same period, reflecting the transformation from a subsistence-based to a more market-based agricultural sector.

Trade performance, in particular exports, has been a fundamental factor in growth, and trade policy has made a contribution, although global market conditions are the major determinant of export earnings. As Uganda is a price-taker on world markets, it has little influence on the price received for its exports, especially for its major exports of coffee and, more recently, gold and fish. However, the high world prices for coffee during much of the 1990s is not the sole reason for increasing producer incomes – the share of the world price received by farmers also increased significantly following liberalization. Thus, domestic policies are important. Until the early 1990s, Uganda had a strongly protectionist and highly distorted trade regime, with taxes on coffee (the major export) and high tariffs and restrictions on imports. By the end of the decade, a more liberal trade regime was in place.

The presence of import barriers or restrictions creates an implicit anti-export bias by raising the price of importable goods relative to exportable goods. Removal of this implicit anti-export bias through trade liberalization would induce a shift of resources from the production of import substitutes to the production of exports. The factors used intensively in the production of exports, land and rural labor in Uganda, should benefit most. On the other hand, factors employed in the production of import-competing goods, mostly urban capital and labor, can anticipate losses. Typically, import supply from the rest of the world responds more rapidly than domestic export supply, so liberalization imposes adjustment costs (losses tend to be immediate whereas export gains can take time). As will be seen later, this has not really been the case in Uganda. Although imports increased with growth, they remained a stable share of GDP; variations in export earnings drove the balance of payments.

2.1 Evolution of trade policy

The ERP aimed to improve the competitiveness of Ugandan exports by eliminating controls in the foreign exchange market. It aimed at restoring incentives for producers by abolishing most of the price controls and inefficient marketing monopolies. The ERP aimed at promoting investment by ensuring investment incentives and guarantees and returning expropriated properties to their owners. Trade policy reforms implemented in Uganda since 1987, coupled with direct export promotion measures, other aspects of the ERP, reduced the bias against exports, and policy-induced barriers to trade have been reduced substantially. Table 1 provides a summary of the main reforms over 1987-2000, the most recent year for which reforms have been identified. Tariff rates have been reduced, often significantly, and many non-tariff restrictions (e.g. quotas, import bans) have been converted into tariff equivalents. The tariff schedule with rates of zero, 10, 20, 30 and 60 per cent in 1995 has been reduced to a standard schedule with rates of zero, 7 and 15 per cent in 2002, although some goods face higher rates², e.g. lower tariffs apply to imports from regional partners. The export tax on coffee, which generated up to a half of the government revenue in the 1980s, was abolished in 1992 and temporarily re-introduced in 1994 as a Coffee Stabilization Tax but eliminated in 1996. The main export duty is a one per cent levy collected by the Uganda Coffee Development Authority (UCDA) on coffee exports.

Table 1: Ugandan trade policy reforms in 1990s

Year	Trade policy reform
1990	<ul style="list-style-type: none"> Export licensing system replaced with certification system, Foreign exchange bureau/parallel foreign exchange market legalized,
1991	<ul style="list-style-type: none"> Import licensing replaced with certification system, Duty drawback scheme introduced,
1992	<ul style="list-style-type: none"> Tariff structure rationalized (6 rates in 10-60% range), Several duties on raw material abolished, Tax on coffee exports abolished
1993	<ul style="list-style-type: none"> Unified inter-bank foreign exchange market /floating exchange rate System of trade documentation reformed, pre-shipment requirements introduced, Cross border initiative (CBI) to promote regional trade introduced
1994	<ul style="list-style-type: none"> Further rationalization (10-50% range) of the tariff structure Import duties on some of the materials suspended Tax on coffee exports reintroduced
1995	<ul style="list-style-type: none"> Coffee tax reduced Narrow range of products only on negative import list Reduced exemptions from duties on raw materials and intermediate inputs
1996	<ul style="list-style-type: none"> Coffee tax abolished Further rationalization of tariffs, to three non-zero rates with maximum of 30% (though protective excise duty of 12% applies also on many tariff lines)
1998	<ul style="list-style-type: none"> Tariff bands reduced to three – 0, 7 and 15 per cent (although with some special excise duties) and almost all import bans removed. Uganda qualifies for HIPC debt relief
2000	<ul style="list-style-type: none"> Fixed Duty Drawback Scheme and the Manufacturing Under Bond Scheme introduced for exporters

2.2 Trade performance in the 1990s

Trade policy reforms in Uganda aimed at poverty reduction, promoting employment, economic growth and promotion and diversification of exports, particularly non-traditional exports. There are duty and tax exemptions and concessions as incentives to increase the volume and diversity of exports. The policy initiatives undertaken in 1990s provided incentives and increased producer prices. For example, the elimination of the monopoly of the Uganda Produce Marketing Board (PMB) contributed to the growth and diversity of horticultural exports.

Table 2: Exports, imports and trade balance, 1990-2001 (selected years)

Year	1990	1995	1996	1997	1998	1999	2000	2001
Exports/GDP (%)	7.0	10.9	11.9	15.0	12.1	11.8	11.7	11.6
Imports/GDP (%)	20.0	20.8	20.7	20.5	20.1	20.0	20.2	20.7
Balance/GDP (%)	-13.0	-10.1	-8.8	-5.5	-8.0	-8.2	-8.5	-9.1

Source: Economist Intelligence Unit, 2002.

Trade performance during the 1990s has been volatile on the export side, but surprisingly stable on the import side (Table 2). Exports increased from seven per cent of GDP in 1990 to peak at 15 per cent in 1997, during the coffee boom, falling to a stable level of 11-12 per cent of GDP for the rest of the decade. Imports remained

at 20-21 per cent of GDP throughout the decade. As a consequence, Uganda has run a chronic trade deficit of over eight per cent of GDP for most of the period, which has been sustained by flows of foreign aid.

Table 3: Traditional and non-traditional exports (US\$ millions)

	1992	1994	1995	1996	1997	1998	2000	2001
Traditional Exports	131.4	202.3	477.4	435.6	424.2	363.1	258.4	172.0
Non-traditional Exports	40.7	62.4	115.5	152.4	259.3	186.0	180.6	253.2
Total Exports	172.1	264.7	593.0	588.0	683.5	549.1	438.9	425.2

Note: Excludes exports of services. 'Non-traditional' refers to commodities that have only featured in export trade over the previous ten years.

Source: *Background to the Budget 2002/03* (MFPED, 2002).

The composition of Uganda's exports changed markedly during the 1990s, especially in the second half of the decade. One important trend is the fall in export revenue from traditional cash crops, notably coffee since 1999 and cotton in the early 1990s. In contrast, non-traditional exports, especially fish, experienced a boost in revenues in recent years. By 2001, non-traditional revenues surpassed those from traditional exports (Table 3).

Coffee has been by far the single most important export commodity over the decade (Table 4). Between 1992/93 and 1998/99, coffee contributed between 54 and 77 per cent of total exports, earning US\$ 457m at its peak in 1994/95. Uganda benefited tremendously from a boom in the world coffee prices in the mid-1990s combined with an increased supply response. But the boom was followed by bust as coffee export prices fell by almost 70 per cent in dollar terms between 1998/99 and 2001/02. Coffee's share of exports fell dramatically to only 18 per cent in 2001/02, earning US\$85m, some five times less than in 1994/95. Cotton, another traditional cash crop, also experienced a recent downturn. Tobacco, on the other hand, has grown steadily in importance, especially towards the end of the decade. Tea exports have also improved significantly, primarily due to an increase in volumes.

Table 4: Commodity composition of exports (% shares), 1990-2001 (selected years)

	1990	1992	1994	1995	1997	1998	1999	2000	2001
Traditional exports									
Coffee	79.0	65.0	74.6	66.9	52.0	55.1	60.1	31.2	21.6
Cotton	3.3	5.6	0.8	1.7	4.9	1.4	3.6	5.5	3.0
Tea	2.0	5.3	2.6	1.2	5.1	5.3	4.5	9.4	6.7
Tobacco	1.7	2.9	1.8	1.3	2.1	4.2	3.1	6.7	7.1
Non-traditional exports									
Maize	1.9	2.7	6.2	4.0	2.5	1.7	1.1	0.6	4.1
Beans and other legumes	2.3	1.9	2.8	2.8	2.0	1.2	1.8	1.1	0.5
Fish and fish products	0.8	4.4	2.3	5.6	4.7	7.4	5.2	7.7	17.3
Cattle hides	2.3	2.3	2.3	1.8	1.7	1.1	0.6	3.2	5.7
Sesame seeds	2.9	4.4	0.3	1.0	0.2	0.0	0.3	0.2	0.2
Soap	0.0	0.0	0.4	0.5	0.4	0.3	0.4	0.4	0.6
Electric current	0.7	1.0	0.5	0.4	2.0	2.2	2.8	4.6	2.3
Cocoa beans	0.3	0.2	0.1	0.1	0.2	0.3	0.3	0.4	0.4

Goat and sheep skins	1.2	0.5	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Hoes and hand tools	0.1	0.3	0.2	0.3	0.0	0.0	0.1	0.1	0.1
Pepper	0.0	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.1
Fruits	0.0	0.0	0.1	0.0	0.1	0.1	0.0	0.2	0.0
Bananas	0.0	0.1	0.1	0.1	0.0	0.0	0.1	0.2	0.2
Roses and cut flowers	0.0	0.0	0.1	0.1	0.6	1.4	1.5	2.5	3.3
Gold and gold compounds	0.0	0.0	0.0	4.7	13.6	3.6	7.0	10.8	10.9
Other precious compounds	0.0	0.0	0.0	0.0	0.0	0.0	0.6	2.7	2.8
Other products	1.6	3.2	4.1	6.9	7.8	14.3	6.7	12.7	10.5
Traditional exports	85.9	78.7	79.8	71.1	64.2	65.9	71.3	52.6	38.3
Non-traditional exports	14.1	21.3	20.2	28.9	35.8	34.1	28.7	47.4	61.7

Source: Computed from *Background to the Budget* (MFPED, various years)

Fish is the current export success story in Uganda, increasing from only \$4m (2% of exports) in 1992/93 to \$48m (9%) in 1998/99. A temporary import ban imposed by the European Union caused a loss of foreign currency earnings in 1999/00, as exports dropped to \$19m. When the ban was lifted, exports expanded further to a record \$88m (19% of exports) in 2002, making fish the most important export commodity in Uganda in terms of revenue earned. The boom in fish exports can be attributed to increased prices as well as volumes. Hides and skins is another promising export commodity while flowers and electricity show equally promising trends. Maize exports are also important, but volatile, as the produce is sold in bulk and depends on food shortages in other parts of the continent (to which transport is often a problem).

2.3 Non-trade factors and constraints

Trade policy barriers are only a component of the transactions costs associated with trade. Poor infrastructure, notably increasing transport costs, and institutional inefficiencies can significantly increase trade costs. The implicit tax on exports due to transport costs and inefficiencies are often very high, in many cases representing a greater cost (tax) to exporters than trade policy (Milner *et al*, 2000). These high transaction costs make exporters less competitive in world markets. Many institutional reforms, especially dismantling state monopolies on marketing, complemented the trade policy reforms. However, institutional rigidities and infrastructure inefficiencies persist and these constrain trade performance.

The poor functioning of institutions that facilitate trade also constrains efforts to increase exports and may indeed result in reduced incomes and increased poverty. The lack of capacity in the Uganda National Bureau of Standards (UNBS) to monitor and enforce standards in the fish sector in the late 1990s illustrates this point. The EU ban on fish from Lake Victoria in the late 1990s resulted in a loss of income to fishermen and employees in the fish processing plants as a result of abrupt and massive lay-offs in the fish industry. Out of 100,000 people involved in various fishing activities, 32,000 lost their jobs, whilst others earned less than one third of their normal incomes. Families and other dependants (about 300,000 people) of the directly employed were also affected by the ban on Uganda's fish exports in 1999. This example suggests that weak institutions can have direct and indirect effects on efforts to reduce poverty. Stringent quality requirements and standards are of increasing importance in sectors into which Uganda is making attempts to diversify (Rudaheeranwa *et al*, 2003). For example, maximum chemical residue limits

requirements were expected to come into force in 2004 and would potentially affect products in the horticulture and flower industry, both of which are a major source of employment and current export earnings. Institutional capacity is required to ensure they do not have the same adverse experiences as in the fish sector.

3. Trends in poverty in the 1990s³

Although we recognize that poverty is a multi-dimensional concept, we limit our discussion here to its money-metric aspect using income- and consumption-based approaches because data on these are more readily available from household surveys and this allows us to identify recent trends. More importantly, it allows us to 'track' poverty in different regions and household-types, which can be related to the evidence on trade and economic performance by sector and commodity.

Since 1989, the Government of Uganda has undertaken a series of household surveys that provide data to monitor poverty, notably the 1992 Integrated Household Survey (IHS). There have been four annual monitoring surveys since 1992, and the results of the Uganda National Household Survey (UNHS) of 1999/2000 have recently become available. The national poverty line is the cost of obtaining 3000 calories per day using the food basket of the poorest 50 percent of Ugandans in 1993 prices. Non-food requirements are estimated as the non-food spending of those households whose total consumption is just equal to the food poverty line. The rationale for this is that if households are sacrificing the food expenditure needed to meet calorie requirements for non-food spending, then this non-food spending must be considered vital. Results have been shown to be robust to the choice of poverty line.⁴ We review trends largely by comparing the results of the 1992 and 1999/2000 surveys.

In 1992, poverty was widespread, with 56 per cent of the population estimated to be below the poverty line. Although poverty was mainly a rural phenomenon (with rural areas contributing 93% to the poverty headcount), 29% of urban residents were poor. Regional variations were significant, and poverty was significantly higher in the North and lowest in the Central region, which includes Kampala (Table 5). Considering the entire period 1992-2000, a clear picture emerges. Poverty declined substantially to only 35% in 2000. The greatest decline was in urban areas, from 28% to 10%, whilst in rural areas the decline was from 60% to 39% (Table 5). The performance in conflict-stricken northern Uganda, known for production of cotton, groundnuts and sesame, was the worst. The maize and bean-growing Eastern region registered a decline from 59% to 37%, suggesting gains from non-traditional exports. As the West and Central are the main coffee growing regions it is not surprising that most of the gains from the coffee boom and liberalization in the coffee sector accrued there, and they experienced the largest reductions in poverty.

Table 5: Incidence of consumption poverty in Uganda 1992-2000 (%)

	1992	1997	2000
Uganda	56	44	35
Rural	60	49	39
Urban	28	17	10
Central	46	28	20
East	59	54	37
West	53	43	28
North	72	60	66

Source: *Uganda Poverty Status Report 2001* (PMAU, 2002a).

Sector variations in poverty help us to identify which sectors enjoyed the greatest income growth, and therefore the greatest potential for poverty reduction. In 1992, about 70 per cent of Uganda's population was employed⁵ in the agriculture sector, 47 per cent engaged in food crop agriculture and 20 per cent in cash crop farming. Government services accounted for some eight per cent of employment. All the major socio-economic groups saw a reduction in poverty by at least one quarter in the period 1992-2000 (Table 6). The food crop sector contributed almost half (43%) of the reduction in poverty over the whole period, but this was almost entirely between 1996 and 2000. The cash crop sector contributed some 27 per cent to the reduction, with gains primarily for the coffee farmers during the coffee boom and liberalization of the coffee sector in 1992-96. The decline in poverty among households employed in government and private sector services was more pronounced in the later period (1995-2000).

Table 6: Incidence of poverty by main occupation of household head (%)

	Rural			Urban		
	1992	1996	2000	1992	1996	2000
All	60	54	39	28	20	10
Food Crops	60	63	46	-	-	-
Cash Crops	63	47	34	-	-	-
Non-crop agriculture	57	43	44	-	-	-
Agriculture	-	-	-	55	36	23
Mining, Manufacturing	45	40	35	38	36	23
Private Sector Services	40	31	22	16	12	7
Government Services	41	36	22	26	22	6
Non-working	65	68	53	32	18	15

Source: *Uganda Poverty Status Report 2001* (PMAU, 2002a).

While nationally the proportion of the Ugandan population identified as poor fell from 56 per cent in 1992 to 35 per cent in 2000, with substantial poverty reduction occurring everywhere in the country except the Northern region, this provides no information on the dynamics of poverty change. Table 7 presents poverty dynamics based on panel sub-samples of the national surveys in 1992 and 1999, to identify households that remained either poor or non-poor and households that moved into or out of poverty. Almost 20 per cent of the panel households were chronic poor, i.e. poor in the two years for which they were surveyed, while 41 per cent were non-poor in both periods. The remainder moved into or out of poverty between these years, indicating substantial mobility.

Table 7: Distribution of poor in Uganda 1992-99 (% households)

	Chronic Poor	Moving out of Poverty	Moving into Poverty	Never in Poverty	All
All	18.9	29.6	10.3	40.9	
<i>Rural/Urban</i>					
Urban	8.1	12.2	8.8	21.9	15.0
Rural	91.9	87.8	91.2	78.1	85.0
<i>Region</i>					
Central	23.4	32.0	26.3	37.2	31.9
East	19.6	28.0	21.9	19.9	22.5
North	30.1	11.3	25.4	6.8	14.5
West	26.8	28.7	26.3	36.1	31.1

Source: Calculations from raw survey data provided by David Lawson.

Table 7 also shows how chronic and transient poverty is distributed across rural/urban areas and by region. Chronic poverty is particularly prevalent in both the Northern region and rural areas of Uganda. Considering the chronically poor as a whole, almost one-third (30.1%) are in the Northern Region. Households in the North also appear less likely to move out of poverty, with only 11 per cent of households escaping poverty being from the North, compared to 32 per cent from the Central region. It is clear that while there has been substantial movement both into and out of poverty, there appears to be a core of Ugandan households remaining in poverty. These 'chronic poor' are disproportionately located in rural areas (over 90%), especially in the North. Evidently, growth has been associated with distribution effects and has not benefited a significant proportion of the population.

4. Trade and poverty: Exploring the linkages

It is only within the last ten years that economists have started to address, in a rigorous manner, the ways in which trade may impact on the poor.⁶ Data permitting, the unit of analysis would be the household as producer and consumer. As a producer, the household earns income by selling the factors it possesses (e.g. renting land, wage labor) or by utilizing the factors directly for production (e.g. combining household land and labor to grow food, for sale or own-consumption). The distinguishing feature of poor households is that they possess few or low-value factors (e.g. they do not have access to land and their labor is of very low quality). Trade expands market opportunities and increases the demand for, and return to, factors. International trade provides access to (and competition from) a larger market, but also one that is more competitive, so success in exporting or import-competition requires increased efficiency in producing high quality goods. The major share of the benefits from trade will accrue to those households owning the factors that are most in demand, and in general, these will not be poor households. This does not mean that trade will not benefit the poor, but rather suggests that the poor will derive the least direct benefit from trade. Insofar as trade expansion fuels economic growth, aggregate demand in the economy increases and this benefits all.

From the perspective of producers, exports are beneficial (increased demand leads to increased production and incomes) but imports pose a challenge. Increased competition from imports can lead to a reduction of production of import-competing sectors, at least in the short-run. This means that the owners of factors supplied to those sectors will suffer a reduction in income; in a country like Uganda, this is mostly wage labor in manufacturing. If the economy is, flexible it will adjust over time and, in

the long run, the economy should become more efficient. However, most evidence relates to the short-run, so there will be winners and losers from trade. From the perspective of households as consumers, however, trade is generally beneficial. Import competition implies that imports and the products of import-competing sectors will be cheaper. Expansion of export sectors, if they also sell on the local market, should mean lower prices and/or higher quality. Thus, trade has inter-acting effects on households, some good and some bad. To disentangle how these effects may have impacted on different households in Uganda, we present results from simulations using a CGE model in the first sub-section. This helps to identify the types of households that benefited from trade and those that did not benefit.

It is important to distinguish trade policy from trade performance, especially as it is the latter that results in effects on poverty. Trade performance is an outcome, while trade policy is one of the inputs that influence that outcome. Trade policy reforms affect relative incentives, and the performance outcome depends on the ability of agents and sectors to respond to these altered incentives. The link between policy and performance is not a simple direct one. Policy reforms have economic effects on: (a) prices of traded products; (b) output, wages and employment opportunities in affected sectors; and (c) the government's fiscal position. We focus on economic effects, in particular those on export performance to address (b), as data on the effects on import prices are quite limited.

A brief comment on the fiscal effects is warranted. Import liberalization might be expected to reduce government revenue, as tariffs are typically an important tax. Despite the significant trade liberalization since the early 1990s, tariffs have continued to be a major source of tax revenue. Although tariff revenue fell by about a third in the 1990s, this decline was compensated by increased revenue from VAT on imports. Thus Uganda, in effect, substituted domestic sales taxes for tariffs.

The remainder of this section addresses three separate issues. First, we review some simulation evidence of how trade reforms impact on Uganda, taking into account distribution effects on types of household. Second, we look at the performance of the agriculture sector, as this is the mainstay of the economy. There is evidence that producer prices of some major crops increased and that farmers substituted into, and increased production of, those crops. Finally, we look at trends in prices of important consumption goods to see how these may affect the real incomes of the poor.

4.1 Model simulation evidence

Trade liberalization increases competition faced by domestic producers; while some firms may fail, others may respond by increasing efficiency (especially firms using imported inputs). There are welfare gains for consumers who can purchase an increasing variety of goods, potentially of better quality, at lower prices. The immediate effect of import liberalization is losses in some sectors, gains in other sectors, gains to consumers and possible revenue losses to government; the net impact is indeterminate. The longer-term impact will depend on how effectively the export sector responds to improved incentives: although trade liberalization does not usually affect actual export prices, it increases the return to exportables relative to the return to importables. An adequate export response is usually sufficient to ensure that the net impact of trade liberalization is favorable. Because there are so many different effects, some offsetting and others reinforcing, one cannot say *a priori* how trade reforms will affect household welfare. Even if one expects an aggregate gain for the economy, it is important to know which types of households or sectors are most likely to gain and which are most likely to lose. Computable General Equilibrium

(CGE) models are useful in this respect, as they allow one to trace through how relative prices alter production and factor incomes, and how this in turn affects real incomes of specific types of households.

The results of simulations from CGE models of Uganda summarized in Table 8 show the distribution of impacts for ten types of households (the share of each type in the economy is given in the second column). The two cases refer to multilateral Uruguay Round (UR) liberalization, and therefore allow for changes in world prices (that arise from liberalization in other countries). The 'Export Growth' column simulates the effect of a ten per cent increase in the world price of coffee *only* (no other adjustments are allowed). Although this may appear to be a large price increase, the simulation is intended to illustrate the impact of export expansion more generally; the estimated supply response of coffee farmers is quite low (output increases by 2.3%), while labor and other factors are treated as fixed. Obviously, a lower price increase would have less of an impact, but greater supply response would have a greater impact.⁷ The aggregate effect is positive, there is an increase of almost 0.5% in real household income (welfare) at the national level. Most households benefit but those that are most likely to produce or trade coffee benefit most. Interpreting the information in Table 8, coffee-growing farmers (Agriculture) gain, as do traders, processors and providers of inputs (including services) to the farmers (these will be in the urban and rural non-farm self-employed households). Rural wage earners derive some benefit, as wages increase, but urban wage earners are unaffected. The households that lose, the rural non-working, are those that are most likely to include the chronic poor (and that depend on transfers).

Table 8: Effects of trade on household welfare in Uganda
(Illustrative CGE Simulations)

	Share	Export Growth	UR
1. Urban wage earners	12%	0.00	0.08
2. Rural wage earners	10%	0.08	0.24
3. Agricultural, central	14%	0.57	0.50
4. Agricultural, eastern	14%	0.57	0.36
5. Agricultural, western	15%	0.65	0.51
6. Agricultural, northern	9%	0.51	0.29
7. Urban non-farm self employed	12%	0.87	1.20
8. Rural non-farm self employed	9%	0.80	0.87
9. Urban non-working	1%	0.00	-0.53
10. Rural non-working	3%	-0.07	-0.59
Total		0.46	0.42

Note: The 'share' column is the share of each household type in total income (of all households). The two columns of results are simulations of the effect of the Uruguay Round (UR), first assuming only a 10% increase in the world price of Ugandan coffee exports and second assuming full implementation of UR (with only a mild increase in coffee prices).

Sources: Blake *et al* (2002).

In this 'export growth' simulation, even agricultural households in the Northern region benefit, although this is not a coffee growing area. The model generates this by allowing farmers in that region to substitute from other crops into coffee. Even if this is unrealistic, the simulation captures the broader benefits of export growth. In simple terms, a significant expansion of exports provides a direct benefit to households that do or can supply factors to the export sector (in production, processing, marketing or trading). Note that this simulation imposed severe rigidity on the economy – it did not

permit factors (such as labor and capital) to move between sectors (e.g. from wage labor into export crops), nor did it permit any efficiency gains in the economy.

The second simulation (Uruguay Round, all factors) relaxes this rigidity, allowing for import liberalization and some factor movement. This simulation assumes a much more moderate increase in world coffee prices (0.4%), which as it happens would have no effect on aggregate welfare (although coffee producers and traders benefit). Thus, the second simulation adds factor mobility and tariff reductions to export price increases that would not affect aggregate welfare, and can be interpreted as the effects of the former only (this is why the aggregate welfare effect is lower than in the first simulation). It is evident that once flexibility for the economy to adjust is allowed, the net impact is positive – a 0.42% increase in total household welfare (the measure of national income). All households accept the non-working gain, although the greatest gains are again to farmers and, especially, the non-farm self-employed. Non-working households lose in this simulation because tariff reductions reduce government revenues and this leads to a cut in transfers (to some extent this is an artifact of the structure of the model, but it serves to highlight the problem of those depending on transfers). A greater increase in export prices would generate greater benefits, but the distribution across households would follow the pattern shown here.

These results provide two broad conclusions. First, in a relatively inflexible and constrained economy such as Uganda, trade liberalization is more likely to provide aggregate benefits if there are also efficiency gains and factors are mobile (this captures the ability of the economy to respond and adjust). In fact, the greatest benefits arise in the case of multilateral liberalization when the economy has some flexibility to respond to opportunities to export. Second, there are significant distribution effects of trade liberalization. In general, the largest proportional gains are to the urban self-employed, but there are also significant gains in agriculture. The benefits to agriculture are greater in the main food and coffee growing central and western regions, because the factors that benefit are more prevalent in those regions. This is consistent with the evidence that agricultural growth, and poverty reduction, in Uganda in the 1990s was concentrated in these areas (whereas the Northern region fared least well). In these simulations, the non-working households are the major losers. Although not all of these households are the poorest, these household types will tend to include the poorest (the chronically poor), those that do not own the factors that benefit.

These estimates of the effect of trade reform on Uganda suggest that the overall effect will be small, but on balance positive. As there are major benefits to agriculture/rural households, the impact is likely to be pro-poor. However, producers respond not so much to the prices they face for individual commodities, but the relative prices faced for substitute commodities. The CGE models address the effects associated with relative price changes. For example, if cash crop prices increase, farmers will substitute from food to cash crops, and food production will fall. However, if imports do not meet the demand for food, food prices may then rise. The net effect could be to increase the returns to farming in general, so more resources will be attracted to agriculture, or existing resources will be used more effectively. Consequently, outputs of most agricultural commodities, and incomes to farm households, can rise, as appears to have been the case in Uganda. Nevertheless, there are some households that may not benefit from trade or economic growth. Such households depend on transfers (from government in the model, but remittances or inter-household transfers may be more important in practice).

The aggregate impact on the economy will tend to be greater in sectors with higher value added. Primary exports benefit households supplying factors to produce them,

but adding stages of processing spreads the economic benefits wider (although one would have to allow for the possibility of domestic processors offering producers prices lower than the potential export price). Uganda's comparative advantage is in primary commodities, but the economy can derive a greater benefit if exports are upgraded so that more value added is domestic. Non-traditional exports often require more processing and/or packaging than traditional exports, so the shift into new products should broaden the economic benefits. Furthermore, if linkages are greater the benefits spread to more households and are more likely to contribute to poverty reduction.

4.2 Trade, agriculture and poverty ⁸

The CGE models are no more than simulations of how trade policy reforms are likely to affect prices, and how this impacts on households via the linkages in the economy. It is relevant to consider what has happened to production and household incomes in particular sectors, and we focus on agriculture as being the single most important sector. The impact of trade liberalization on poverty depends on whether poor households are net consumers or net producers of the products whose prices have changed and the nature of the labor they supply. That is, price increases benefit net producers but hurt net consumers. In this section we focus on agriculture households as producers (the next section considers the perspective of consumers).

As noted, agriculture's share in GDP declined from over 50 per cent in the late 1980s to just over 40 per cent in the early 2000s, mostly accounted for by a decline in the share of food crops in GDP. However, this was during a period of dramatic GDP growth, and real growth rates in agriculture averaged about five per cent per annum during the 1990s. As agriculture is defined to include fishing, most of the growth in (non-traditional) exports emanated from the sector. The share of agriculture products in imports declined during the late 1990s, as did the volume of imports of most agricultural products (except cereals and sugar preparations among the major imports). Thus, agriculture was evidently a dynamic sector, and contributed to the reductions in household poverty reported above.

Table 9: Real producer prices and output growth, 1992-1999

Crop	Price per kg (Ushs)			Growers (%)		Output
	1992	1999	Change (%)	1992	1999	Change (%)
<i>Cash Crops</i>						
Coffee	239	500	109.2	16.4	27.5	56.5
Cotton	510	230	-54.9	7.1	5.8	-31.7
Tea	185	510	175.7	0.3	0.1	1289
Tobacco	1005	1013	0.8	2.3	2.4	-51.9
<i>Starchy Crops</i>						
Cassava	158	113	-28.5	59.7	58.5	27.6
Matoke	75	78	4.0	41.2	57.0	-0.8
Sweet Potatoes	113	114	0.9	61.9	56.8	354.9
<i>Grains</i>						
Maize	120	200	66.7	27.5	67.8	131.4
Millet	300	300	0	41.9	31.3	-31.7
<i>Legumes</i>						
Beans	320	256	-20	76.1	69.2	-0.1
Peas	300	400	33.3	9.9	19.8	94.9
Groundnuts	300	567	89	31.8	29.7	-27.0

Notes: All data based on a number of sample villages. The percentage of farmers growing the crops refers to the villages, not the national average. Similarly, the output growth is the mean per farmer in the sample villages.

Source: Uganda Poverty Status Report 2001 (PMAU, 2000a), derived from Deininger and Okidi (2001).

Actions to directly increase the ability of the poor to raise their incomes hinge on more targeted interventions in sectors where the poor are involved, and an increase in returns to the factors that the poor own. Survey results show that the agricultural sector is a key employer in Uganda and therefore the Plan for Modernization of Agriculture (PMA) is central to the fight against poverty while increased liberalization which will ensure increased returns to unskilled labor is critical. Table 9 gives changes in real prices received by producers for selected crops between 1992 and 1999, the response in terms of number of growers per crop, and changes in yield per farmer. Producer prices of coffee more than doubled reflecting both the liberalization of coffee marketing and favorable world prices. Prices of tea, maize, groundnuts and peas also rose significantly. However, prices of beans and cassava, the two most widely grown crops in terms of the percentage of farmers planting them, declined. The prices of three other widely grown crops remained stagnant – *matoke*, sweet potatoes and millet. Consumers benefited as these are mostly staple foods, growers lose unless they substitute into crops that are more profitable.

It appears that farmers substituted into crops that are more profitable. In general, the number of growers increased for those crops that saw an increase in prices, especially coffee, maize and peas. The main exceptions are tea, which accounted for very few growers, and groundnuts. Similarly, the percentage of growers declined for crops with falling prices, especially cotton and beans. There is evidence that substitution occurred mostly within types of food crops as relative prices changed. Within grains, the shift was from millet to maize; within starchy crops, there was a shift into *matoke*; and within legumes, from beans to peas.

The increase in output also tended to reflect changes in relative prices. The largest growth in output was generally in crops where prices increased – tea, maize, peas

and coffee. The largest declines in output were in cotton, which recorded the largest fall in prices, and millet (the price relative to maize declined). Groundnuts are an exception, as output fell despite the significant increase in prices, and tobacco is also something of an exception. This merely serves to highlight the importance of non-price factors in determining yields.

Many of the commodities discussed above are included among the 'strategic export' commodities identified for Uganda – coffee, tea, cotton, and vegetables (Government of Uganda, 2001). The strategic commodities we have not addressed are fish, livestock, fruits, flowers and Irish potatoes. In terms of recent export growth, the most important of these are fish, cattle hides and cut flowers, which together accounted for some 27 per cent of exports in 2001. Cut flowers tend to be a commercial (market garden) rather than agricultural activity. Within agriculture, cash crops will continue to be very important but are susceptible to sudden and often dramatic changes in world prices. One strategy is to aim for high quality niche ends of the market, which is possible for coffee and perhaps tea but may not be viable for cotton, and another is to do more processing. Vegetables, especially legumes, and fruits, especially banana, do offer export potential, but are unlikely ever to become very significant (given that, there is intense competition in these buyer-driven global markets).

A major factor in the reduction in rural poverty was the improved incomes and earnings from marketed agricultural produce. This is in part a reflection of trade policy reforms in crops with favorable world prices – producers of coffee and tea benefited during this period, although producers of cotton did not. The relevance of agriculture for poverty and the poor, however, is not limited to export crops. Food crop production is a larger sector, and staple foods are more likely to impact on the poor, as consumers if not producers. In this context, it is measures to increase yields and output that matter, not effects on prices. As emphasized earlier, the principal effect of trade policy, and often of trade, is on prices. Of greater importance than trade *per se*, however, is the ability of farmers to respond to opportunities, in particular to substitute crops as relative prices change. While the evidence is that farmers will respond to price incentives, it is also evident that they face major constraints in doing so. These are issues to be addressed in the PMA, and could be considered as necessary measures to enhance the potential of farmers to benefit from trade (internally, in the case of food crops, as well as external trade in cash crops).

4.3 Trade, imports and prices

Had adequate data been available we would have identified tariff reductions at a product level in Uganda during the 1990s and linked this to trends in import volumes and prices of those commodities. However, such detailed import data are not readily available. What we do in this section is to identify price changes in a range of commodities identified as the most important for poor households (from survey data). These are classified as primarily tradables or non-tradables (or, at least, not traded internationally), to ascertain how a more liberal trade regime might have affected the real incomes of the poor.

In principle, trade liberalization would not directly affect prices for non-tradables, but it may affect production and thus have an indirect effect on prices. Broadly speaking the price of non-tradables falls relative to exportables but increases relative to importables, so the net effect will depend on substitution possibilities in production and consumption. For example, staples such as cassava, *matoke* and sweet potatoes could be considered as non-tradables (they are produced primarily for

household consumption and local markets) but are substitutes in consumption for foods such as rice, an importable, or maize, an exportable. If the price of rice falls due to cheaper imports and the price of maize falls due to increased production, then the price of staples relative to these alternatives increases. Demand for and prices of staples will fall, and it is possible that ultimately relative prices will remain the same. However, it is possible that there are segmented markets, e.g. primarily non-poor urban households consume rice whereas staples are most important in the consumption of poor rural households, in which case any effect of trade on staples will be dampened.

Table 10: Consumption goods of an average poor household

Product	Share of spending (%)	Type	Change in unit value 1992-99 Rural poor	Consumer price index 1992-99
Cassava	10.3	Non-tradable	-20%	+60%
Beans	6.3	Tradable (export)	+133% (fresh) +5% (dried)	+52.2% (dried)
Vegetables	4.4	Tradable (export)		
Alcohol	2.4	Non-tradable	+184%	
Firewood	12.5	Non-tradable		
Washing soap	2.0	Tradable (import)	+107%	
Sweet potatoes	7.5	Tradable (export)	+100%	+38%
Maize	4.8	Tradable (export)	+11 to 15%	+38% (meal)
<i>Matoke</i>	4.0	Non-tradable	+86%	+40%
Fish	3.0	Tradable (export)	+30% (fresh) +19% (dried)	
Clothes/footwear	3.8	Tradable (import)		
Sugar	2.4	Tradable (import-)	+42%	+16%
Total	63.4			

Source: Derived from Household Survey data provided by David Lawson.

Four of the twelve goods can be deemed non-tradables - cassava, *matoke*, alcohol (homemade) and firewood. Fish, beans, vegetables, maize and sweet potatoes are exportables (and often-significant exports), while sugar and soap are import-competing products and clothes are typically imported. The fact that the import component of the expenditure of a poor household is relatively small implies that import liberalization would have a negligible direct effect on these households.

Table 10 illustrates the change in prices for the twelve goods in the 1992-99 periods. Prices can be obtained either directly from the household survey or on the basis of the consumer price index. This can produce conflicting observations, as is to be expected given that the quantity measure (units) and quality vary. Nevertheless, the data are indicative. The available data do not provide conclusive evidence as to whether the prices of tradables have increased less than for non-tradables. There is some tendency in this direction, as in the case of sugar, which has experienced very modest price increases, possibly due to potential competition from imports.

Food prices are among the most important factors affecting the real income of the poor, but are influenced by domestic production more than imports, especially in the case of the rural poor. While trade has been important in influencing opportunities to earn incomes, it has had only a slight effect on the prices paid by poor households for the major goods they consume.

5. Conclusions and policy implications

The analysis presented here demonstrates that trade has made an important contribution to poverty reduction in Uganda. In the first half of the 1990s, most of the gain from trade was through coffee exports. Since the late 1990s, however, significant export diversification has occurred, although exports are still largely of primary commodities. As export growth has contributed to economic growth, it has contributed to poverty reduction. The gains from trade are unevenly distributed, some households derived no benefits (and some even suffered losses). Even in sectors that are growing, the lowest paid workers may derive negligible benefits. Thus, while trade has benefited the Ugandan economy on aggregate and increased average incomes, almost a fifth of the population remains rooted in poverty. This is to be expected: trade and growth can reduce poverty, but trade alone will not eradicate poverty.

Future Ugandan trade policy should aim to consolidate the gains, i.e. support sectors that have experienced export growth, and also to support diversification, not only in emerging non-traditional exports but also in upgrading and processing. This is the 'export side' of trade policy, but the strategy must also recognize the pressures of trade liberalization on import-competing sectors. Furthermore, complementary government policies will be needed to target the poor in sectors or households that are marginalized from international trade. In respect of traditional (cash crop) exports, the major issue is 'insulating' Uganda from declines in world prices. Producers should aim to increase productivity, requiring investment in new varieties and technology, and to upgrade quality (e.g. aiming for niche markets such as organic coffee). In respect of non-traditional exports, the need is to continue diversification, upgrading quality (to link into global marketing chains) and, where possible, adding processing to increase domestic value-added. Some import-competing sectors are likely to face increased competition in the future, as further import liberalization is implemented (e.g. East African regional integration). Firms will need investment in technology to increase efficiency, and training and education to increase labor productivity.

Uganda could target two related areas for further export growth, food and processing. Uganda has considerable potential to increase productivity and production in agriculture and expand exports of, for example, maize, vegetables and fruits. If investment in expanding food crop production aims to penetrate export markets this will encourage quality upgrading; any surplus above export demand can be supplied to the domestic market. Producers aiming to export will want to increase productivity, and this could reduce prices of food in domestic markets. Investment in infrastructure (transport, storage and distribution) and in agriculture supports exports and domestic sales. Expansion of agriculture provides the inputs to develop domestic processing industries, which in turn create employment. In this way, trade policy can be a dynamic element of the poverty reduction strategy.

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¹ General information on Uganda's economic performance can be found in *Statistical Abstract* (e.g. UBOS, 1999, 2000) and *Background to the Budget* (e.g. MFPED, 1999, 2000, 2002); information on trade policy is in WTO (1995, 2001) and Morrissey and Rudaheeranwa (1998).

² Some imports are subject to an import license commission of 2%, a withholding tax of 4% as well as excise duty - normally 10% except on cigarettes (13%), alcoholic beverages (70%) and soft drinks (15%). The 17% value added tax (VAT) applies equally to imports and domestic products.

³ Our discussion is based on Appleton (2001), Appleton *et al* (1999) and PMAU (2002a).

⁴ This is true for both the national price index and regional indices (see PMAU, 2002b). However, regional indices are constructed using food-based indices for urban and rural areas that omit *matoke*, an important staple, due to lack of data.

⁵ Households are allocated to the sector in which the household head is employed, data provided in Appleton (2001).

⁶ McKay (1999) reviews the broad issues regarding how economic reforms affect the poor. McCulloch *et al* (2001) detail the ways in which trade can affect prices, employment and government revenues and how these effects then impact on households. While we do not follow the conceptual framework they outline, our approach is broadly in line with theirs. Winters *et al* (2002) provide a comprehensive review of the evidence on the effects of trade liberalisation on poverty.

⁷ It is well known that there are many constraints on expanding agriculture production, at least in the short-run, so a low supply response is to be expected (see McKay *et al*, 1997).

⁸ This section draws on Deininger and Okidi (2001, 2002), Larson and Deininger (2001).