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Geoffrey Bakunda
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Executive Summary

Uganda probably has the most liberal trade regimes of any African country today. Although the economy has been effectively liberalized through both domestic and external trade liberalization the effects on household welfare have not been effectively assessed. Household evidence of poverty in Uganda has remained scanty. This CUTS sponsored study is an attempt to contribute to household evidence on the impact of liberalization on household welfare and poverty

The overall objective of this study was to gather household evidence and perceptions on how an open market environment has affected household welfare. In particular, the study examined the effect of liberalization on household production and productivity; markets, distribution channels and marketing arrangements; wages and employment; prices and price stability; technology adoption and risk and vulnerability and how these have affected the depth and breadth of poverty at household level.

Given that 70% of Uganda's population and 80% of her poor are engaged in agriculture, the study covered two agricultural sub-sectors namely; the dairy and maize sub sectors. For each of the sub sectors, the leading producing districts were selected for study. For the dairy sector, the districts of Ntungamo, Ibanda, Mbarara and Bushenyi were selected while the districts of Kamwenge and Iganga were selected for the maize sector.

The study has established that liberalisation has contributed to the deepening of rural poverty. The welfare and real incomes of most rural farming households is generally worse off than before. Most rural farming households can be termed as 'economic orphans' with little support if any for cost effective production and marketing. Secondly, it has been established that although liberalization opened new opportunities to the private sector, the incompetence of the private sector only resulted in the expansion of trade at the informal level and only limited expansion of the formal marketing of agricultural output in the two sub-sectors. Market efficiency has gone down and increasing portions of agricultural out put have remained unsold. The liberalised market regime has failed to effectively link the producers to markets both local and export markets.

Consumers seem to have both lost and benefited from liberalization. Consumer prices of agricultural produce have not gone down but instead are regarded as higher than their true value. Quality has also been declining in most cases and is still unreliable. There is no system to assure the quality reaching consumers and regulations meant to protect consumers are not implemented**.**

Liberalisation has not been accompanied by the requisite regulatory and promotional capabilities of the institutions created to do so. Though these institutions were created, they were never strengthened to implement their mandates effectively. Consequently, there have remained gaps in regulation, promotion and supportive infrastructure, which have not enabled the liberalised markets to function properly. Its apparent that government has not gained neither in terms of direct taxes nor income growth for farming households to spur consumption of indirectly taxed goods. Because of generally declining incomes for the farming households, income inequalities between urban and rural households have widened.

1.0 BACKGROUND

Uganda has probably been the most successful African example of economic liberalization in the 1990s. Uganda probably has the most liberal trade regimes of any African country today. Liberalization began way back in 1987 and included initiatives aimed at redressing imbalances in the system of allocation of foreign exchange, restoration of credibility of the monetary and fiscal policy, abolition of marketing monopolies, the reduction of administrative red – tape, and gradual introduction of a more rational tax and tariff structure. All these efforts were geared to increase competition, which would in turn improve the quality of manufactured goods, encourage the emergence of new products and promote adoption of new production techniques.

Around the early 1980s, the Government of Uganda (GoU) identified five major food crops, namely maize, beans, groundnuts, sesame and soyabeans, as non-traditional agricultural exports (NTAEs). The parastatal Produce Marketing Board (PMB) was mandated to procure and market these commodities. The primary objective of PMB was to procure, store, grade and sell food to deficit areas, thereby ensuring food security. Any surplus was then to be sold outside the country. Beyond food security, these crops were to be promoted as export crops for the generation of foreign exchange. However, marketing under the PMB-controlled era was characterized by several flaws including diversion of crop finance, lack of prompt payment and inability to reach the rural farmers.

Following these and other related shortcomings, government decided in the early 1990s to open up the marketing of agricultural produce to competition. The objective was to improve efficiency, restore price incentives and consequently generate producer confidence. Under the liberalized marketing system, farmers were generally paid cash for their produce. However, government set no price and hence the price paid to the farmer was generally that offered by the buyer. The marketing of agricultural produce could therefore take place either on the farm, at the buyer's store, rural market, mill and in the urban market.

Although liberalization of trade and agriculture has been associated with ‘poverty reducing’ growth, on average over 6.5% annually during the period 1991-2000 and over 5% growth during the period 2001 and 2005, and annual per capita income increased from US $ 186 in 1991/1992 to about US $ 272 by 2000 and US $ 325 in 2005 (UNDP, 2002; GOU, 2005), household evidence of such reduction has remained scanty. On the contrary, the incidence of poverty has remained high. Although the incidence of poverty fell from 56% in 1992 to 35% in 2000, the proportion of the national population living below the poverty line in 2003 was 38.8% corresponding to 9.8 million Ugandans. By 2005, this level had not changed (GOU, 2005). Of importance to note is that poverty fell more in urban areas than in rural areas (Morrissey et al., 2003). Similarly, income inequality has risen since 2000 as demonstrated by the change in the Gini Coefficient Index from 0.395 in the UNHS 1999-2000 to 0.428 in the UNHS 2002-2003[1]. Uganda’s Human Development Index (0.493) is 146th of the 177 reported countries with per capita income of US$ 300 or less in 2003 according to national authorities. Analysis of these studies show that poverty has increased during the period 2000-2005 from 39% to 49% among households especially those engaged in agriculture and especially for the proportion of those in crop agriculture whose numbers grew from 39% to 50% over the same period.

Since the launching of Uganda Vision 2025 and the adoption of the Poverty Eradication Action Plan (PEAP) in 1997 as the framework for development planning in Uganda, efforts have been made to understand better the causes and effects of poverty. However, as elsewhere in the world, the studies so far conducted are not

[1] UNHS refers to the Uganda National Household Survey.

exhaustive and more work remains to be done. Household evidence of poverty has remained scanty and in particular the poverty impacts of liberalization have not been effectively assessed.

2.0 PURPOSE OF THE STUDY

The objective of this study was to gather household evidence and perceptions on how the open market environment in Uganda has affected household welfare and the level of poverty.

3.0 ANALYTICAL FRAMEWORK

Trade Liberalisation

The analytical framework used in the background report which relied mainly on literature and secondary data was carried through to the fieldwork phase that captured and analysed primary data. Trade liberalization, in theory, is regarded as the reduction of the official barriers to trade which distort the relative prices of tradable and non-tradable goods and those between different tradables (Winters, 2000). Trade Liberalization has two major dimensions that is, external liberalization and domestic liberalization which are often implemented together. In practice, however, the challenge is that even if all the distortionary policies are identifiable, which is rarely the case, it is difficult to gauge the overall degree of trade liberalization because one does not know how effectively the policy changes have been implemented nor how the various changes interact at a detailed level.

Trade liberalization, particularly external trade liberalization involves opening up an economy which exposes it and its component households to increased risks. Liberalization exposes households and firms to new risks although it is argued that the long term effect can be to reduce overall risk, particularly in the case of external trade liberalization, since world markets have many players and tend to be more stable than domestic ones. Trade liberalization increases risk either by undermining existing stabilization mechanisms (either autonomous or policy based) or because residents consciously switch to a portfolio that offers higher average rewards but greater variability.

Trade liberalization recognizes that effective trade, ordinarily, is preceded by effective production and that in assessing its impact, it is important to distinguish between the process and outcome effects of trade liberalisation.

Households and Poverty

Consistent with Winters, 2000, the ‘farm household’ is regarded as the most useful for assessing the poverty impact of liberalization. The farm household potentially undertakes most production in a largely agriculturally dependent economy such as Uganda. Price changes due to liberalization directly impact on household welfare. Household responses to a liberalized regime affect the extent to which welfare shocks can be mitigated and the extent to which shocks on one market are transmitted to others and hence onto other individuals/households (Winters, 2000).

Markets, Distribution Channels and marketing arrangements

If the internal distribution sector is not competitive, the pass through of price changes may not be complete, perhaps completely frustrating the liberalization. Merely replacing the marketing boards is not sufficient. Attention has to be paid to what replaces them.

Moreover, if changes in domestic marketing arrangements lead to the disappearance of marketing institutions, households can become completely isolated from the market and suffer substantial income losses. This is obvious on markets on which to sell cash crops but can also afflict purchased inputs and credit. For instance, if official marketing boards provided credit for inputs and against future outputs, and post liberalization private agents do not, no increase in output prices will benefit farmers unless alternative borrowing arrangements can be made.

Wages and Employment
The loss of jobs is probably the most common reason for the precipitate declines into poverty. How labour markets work is critical. In an economy which is labour abundant, freer trade gravitates towards higher wages in general. Thus, an increase in prices of a good that is labour intensive in production is likely to result in an increase in real wages and vice-versa, having a corresponding impact on poverty. However, formerly employed people may be thrown into unemployment and technological improvements in mode of production may lower labour requirements.

In general, while assessing the impact of Trade Liberalization on poverty, Winters et al. (2000) Framework that identified five areas of analysis and asking corresponding questions was used. These areas and some of the questions are:

i) *Economic Growth and Stability:*
- Did trade liberalization enhance growth in the sector and hence alleviate poverty?
- Did trade liberalization boost productivity in the sector?
- Is the sector less stable?

ii) *Households and Markets*
- Did border price shocks get transmitted to poor households?
- Were markets created or destroyed?
- How well did households respond?
- Did the spillovers benefit the poor?
- Did trade liberalization increase vulnerability?

iii) *Markets*
- How did trade liberalization affect prices?
- How have prices affected household income?
- How much of any price change got transmitted to the poor?
- Do markets exist at all?

iv) *Wages and Employment*
- Did liberalization raise wages or employment?
- Is transitional unemployment concentrated on the poor?

v) *Government Revenue and Spending*
- Did liberalization cut or increase government revenue?
- Did falling tariff revenues hurt the poor?

The following sections attempt to answer some of the above questions sector by sector. Where some issues are cross cutting such as relating to growth and stability, they are addressed in relevant sections. Broadly, the analysis covers sub-sectors in Agriculture, Manufacturing and Services.

4.0 APPROACH TO THE STUDY

4.1 Selection of the sectors for survey

Given that 70% of Uganda's population and 80% of the poor are involved in the agricultural sector (GOU, 2005), it was considered important that the sub-sectors for study be chosen from the agricultural sector. The sub-sectors selected for the study were the dairy sub-sector and the food crops sub-sector where Maize as a food crop was particularly targeted. The dairy and the food crops sub sectors are some of the sectors that were substantially liberalized in the mid-1990s and in which a significant number of rural households directly or indirectly participate. The two sub-sectors have traditionally represented both a source of food and a source of income for many households. Both sub-sectors therefore contribute substantially not only to livelihood security and development but also to national food security. Moreover, each of the sub-sectors has an external interface as milk and other dairy products as well as maize have been trade internationally particularly within the region. Apart from that, there was little information about these two sub-sectors particularly about the impact on poverty since liberalization. Few studies related to these sectors, if any, have been undertaken and their inclusion was more likely to increase the value of this study.

4.2 Sampling and Data Collection

For each of the selected sub-sectors, 'areas of concentration' were earmarked and field visits undertaken to those areas. The areas of concentration represented those districts with the highest production according to national statistics (UBOS, 2004; DDA, 2003). Consequently for the dairy sector, the districts of Ntungamo, Mbarara and Bushenyi were selected for study. The three districts represented the most productive among all the districts in Uganda active in the production of milk and related products. For the maize sector, districts covering the main maize producing areas were covered. These were the districts of Iganga, Bugiri and Kamwenge as they ranked highest in maize production in 2002/2003 (UBOS, 2004).

Data collected was mainly qualitative relying on the primary responses obtained from households and key stakeholder agencies and institutions. However, effort was made to collect both qualitative and quantitative secondary data on each of the sectors considered useful for assessing the poverty impact of liberalization. A participatory approach was adopted in collecting primary data. In particular, in-depth interviews, focus group discussions, focused observation were used to collect the primary data. The selection of respondents was purposive. From each district headquarters, a list of the major farmers, traders and other stakeholders who included mainly local NGOs and local farmer groups was identified together with their location. Visits were then undertaken with the help of local guides. In all, a total of 22 dairy farmers and 19 maize farmers were visited during the data collection exercise. In addition, visits were made to 2 NGOs and 3 farmers groups in the dairy sector. In the maize sector, 2 farmer groups and 3 private buyers including a trading consortium were visited.

4.3 Data processing and analysis

Winters (2000) framework for assessing the poverty impacts of liberalization was used as the guiding framework during both the data collection and data processing and analysis. Data collected was analyzed using qualitative data analysis techniques suggested by Huberman (1994). These included but were not limited to data summary sheets, memos, tables and matrices as well as flow charts and diagrams. All responses from respondents were recorded on tape recorders and later transcribed. This allowed for preparation of narrative summaries. Information was analysed objectively and emerging themes relating to the framework variables isolated. This allowed for assessment of the perceived influence of a liberalized economic and business environment on key variables that impact household welfare.

5.0 EMPIRICAL EVIDENCE

5.1 Introduction

This section reports the results of field work undertaken in the Dairy and Maize sub-sectors in Uganda. As earlier indicated, the evidence is based on in-depth interviews and focus-group discussions with farmers, staff of community based organizations (CBOs) providing support services, as well as government officials in the areas surveyed. Primary data has been validated where possible with secondary sources. In the whole exercise, liberalization was taken as an outcome of government policy measures in the 1990s that opened the economic environment to free market forces and which affected production, marketing and distribution in various sectors. The agricultural sector was the most affected since it was the dominant sector of the economy at the time, contributing over 70% of GDP in 1995.

During the whole field exercise, focus was mainly on identifying the perceptions of farmers and key stakeholders, particularly regarding how the liberalized environment has affected variables that impact on household welfare and poverty.

5.2 Impact of Liberalisation on Poverty: Evidence from the Dairy Sector

The dairy sector is one of the sectors that had been under government control for sometime with the Uganda Dairy Corporation (UDC) dominating most of the buying of milk from farmers.

The Uganda Dairy Corporation had a network of milk collection and bulking centers scattered all over the country and was responsible for both setting the price of milk and buying this milk from the farmers. The price set by the UDC acted as the reference price on which other minor players pegged their prices. The period considered post liberalization is when independent and formal organizations came up to challenge the UDC as regards price and other market dynamics such as time of payment and these organizations started buying milk in large quantities competing with the UDC. They set up Milk Collecting Centers (MCCs) and established more formal channels for the buying of milk. The first major private operators entered the dairy sector in 1992 following the governments economic and market liberalisation policies. Five operators were licensed to set up milk processing plants and this marked the beginning of a competitive era in the sector. However, legal and institutional development lagged behind the operation of market forces and the Dairy industry Act was enacted in 1998 and the Dairy Development Authority mandated to regulate the sector established in the year 2000. In addition, largely due to the lack of sufficient funds, the DDA has not been able to perform its roles, including, the promotion of market research in dairy produce and the improvement in quality and promotion of private enterprise in production among the others.

5.2.1 Impact of liberalization on Household Production and Productivity

i) *Increase in milk production*

Over the period 1995-2005, milk production in the districts surveyed (Ntungamo,Mbarara, Bushenyi, Ibanda) increased tremendously doubling in most cases. Most farmers reported increases in milk output from 20 to 60 litres and by corresponding magnitudes. In order to respond to positive market signals immediately following liberalisation, farmers invested in acquiring more exotic breeds of animals that could afford them higher yields with the same piece of land. A common observation from farmers was that “it is changing from local breeds to cross breeds.” Some farmers sold off their indigenous herds outright while others cross bred their indigenous herds with exotic breeds to improve the quality of the herds while maintaining the disease-resistant qualities of the indigenous animals. Additional evidence from dairy farmers in Ntungamo district suggests that the increase in output was deliberately planned by the farmers to take advantage of positive market signals.

Exhibit 1: Some farmers' responses on changes in milk output since 1998

George Nubo, a dairy farmer in Ibaare , Nyakyera Sub-County, Ntungamo District: *"I was producing about 30 litres, I now produce 80 litres including what we take domestically. So I sell about 50 litres in the morning and 20 litres in the evening which is about 70 litres per day. I have crossbred my animals and I look after them well and also maintaining my farm very well".*

Christopher Komere , a farmer Muyogo ,Kikoni Sub-County Ruhama County: *"I used to milk 20 –25 litres per day. Now, I milk an average of 100 – 120 litres depending on season. I milk a maximum of 120 litres but I leave at least 10 litres at home for domestic use. Through training I have managed to increase my milk yields. I had 40-45 animals but I now have over 70 animals".*

Amos Nabimanya, Nombe, Nyabuhoko Sub-County in Kajara County, Ntungamo: "*I was producing 15-16 litres of milk in 1995. I would sell 10-14 litres a day and the remaining milk would be for the calves and family consumption. I now produce 70 litres, sometimes 80 litres. I sell 70 litres and 10 litres remain for our consumption. When the market improved, I also improved my farming practices, I looked for better breeds. I sold the local breeds and replaced them with exotic breeds*

Lauben Kanyesigye, the District Production Co-ordinator and District Veterinary Officer,Ibanda District and a farmer in Ibanda Town Council:
"We could sell about 5 litres out of the 20 liters we were milking. This was because of the big family and sometimes during the dry season we could not sale. Now we produce about

The general increase in output at farm level has been further reflected by the changes in national output during the period 1990-1996 and 1997-2004 as indicated in the table below.

Table1: Milk output during the period before and after liberalization

Year	Milk Output 1990-1997(million litres)	YEAR	Milk Output 1998-2004 (million litres)
1990	-	1997	
1991	365	1998	615
1992	511	1999	638
1993	548	2000	700
1994	532	2001	900.7
1995	551	2002	1,105
1996	572	2003	1350
1997	593	2004	1, 450

From the figures in Table 1, the average annual growth rate in milk production between 1991 and 1997 was 9.2% while the average annual growth rate in milk output in the period 1998 to 2004 was 15.7%.The difference in the two growth rates is statistically significant, suggesting that opening of the markets for milk and milk byproducts indeed had a positive impact on milk production at both the farm level and the national level. However, it is important to note that despite the general increase in milk output, field evidence points out that there was no corresponding expansion of the processing and marketing sub-sectors (see also Mbabazi, 2003) to absorb the massive upsurge in milk output. This was particularly in the Ankole region but also in other milk producing areas. This created a gap in demand that was compounded by the closure of most of the milk processing factories that had been established in Mbarara.

ii. *Increase in input costs and reduction in extension services*

Although there was a modest increase in farm level productivity arising from use of improved herds, increased use of acaricides, planting of improved pastures, and a general improvement in farm management methods, further improvement in farm productivity was hampered by uncontrolled increases in input costs. The prices of farm inputs such as acaricides, farm equipment and others increased considerably limiting their usage. Most agricultural inputs including fertilizers are imported. However, previously, agricultural input imports were handled by Uganda Farm Supplies Ltd, a wholly owned government company that supplied inputs at affordable prices. The liberalization of agricultural input imports and their distribution meant that the farmers had to purchase inputs at market prices as all forms of subsidies by the UDC were removed. Not only did it create uncertainly of access by farmers, it meant that farmers could only access inputs at higher market prices. Farmers have not been cushioned against market forces in connection to imported farm inputs. Field evidence shows that the prices of imported inputs have sharply risen under liberalization. For instance, field estimates show that the cost of fertilizers, drugs and acaricides have risen by more that 60% on average over the last five years. In some cases, the prices have more than doubled.

Apart from the rise in input costs, the farmers reported that they are not getting enough inputs and lack access to extension services.

In fact, the near total absence of extension services has worsened an already worse situation. Under liberalisation, all veterinary services were privatized and under the government Plan for Modernisation of Agriculture (PMA), this is likely to continue. While prior to liberalization, government used to offer training to dairy farmers, after liberalization, much of this training has been left to NGOs and CBOs which do not operate everywhere. Where the CBOs do not operate, extension services are non existent.

The absence of extension services and the high cost of inputs has forced many dairy farmers to resort to the use of generic drugs as opposed to branded ones which, more often, are not only less effective but also less cost effective. The costs of veterinary services are simply unaffordable by the ordinary farmers. Farmer evidence suggests that the increase in costs exceeded the increase in productivity, and subsequently eroded the farmers' investment in better breeds.

Mr. Geoffrey Katuffu, a farmer from Rushoroza in Ntungamo District complained that: *"In fact, the inputs are very expensive, the acaricides and other drugs like dewormers are more expensive than before….. The expense on animals is high and earnings from milk are less. They give us shs.200=per litre. When you put this money to workers and buying acaricides and maintaining the farm, you realize we are losing".*

The combination of low farm gate prices of milk together with the high input costs have made it difficult for farmers to break even. The minimal use of effective acaricides and other drugs have combined with poor extension services to hamper further increases in productivity. Farmers lack sensitization of animal feeding, treatment and yield improvement. Most animals therefore continue to produce milk below optimum yield levels.

In general, farm management has deteriorated. Most of the farmers visited reported that it was too expensive to maintain their farms in good order.

iii. Increased farm level losses of milk

While there was a general increase in farm output for milk, there was no corresponding increase in purchases farmers' milk. Liberalization of the dairy sector appears to have failed to address the fundamental issue of creating more market outlets for excess supplies during the wet season. Milk production has consistently exceeded its demand and the farmers have over the last decade since 1997 suffered increased farm level losses of milk due to inadequate demand especially during the wet seasons. Milk losses directly meant loss of sales income but have also frustrated farmers to increase yields. Knowledge of excess milk at farms made the farmers more vulnerable to exploitation by both the formal and informal milk traders.

5.2.2 Impact on Marketing and Distribution Channels

i. *Weakening of the regulatory regime*

The regulatory regime is reported to have deteriorated following the liberalization of the dairy sector in the mid-1990s. Regulation of the sector is weak.

The DDA was created in 2000.to undertake regulatory and developmental functions in the sector in accordance with the DDA Act of 1998. However, while a legal framework was put in place, this was not followed by sufficient enforcement machinery and infrastructure. It was reported that the activities of the DDA seemed to focus on the DCL largely neglecting the activities of the private players particularly the informal ones.

This has created confusion and uncertainty in the supply chain due to poor governance. Farmers are more vulnerable to exploitation than before as the behaviour of the different actors is not monitored and regulated. The DDA has limited, if any infrastructure outside Kampala, the Capital City, and has few personnel, only 21 staff in 2002 (DDA, 2003). This has created a *laissez faire* situation and implementation of policies and quality standards difficult.

Exhibit 2: Effects of openness without regulation and Support in the Dairy Sector

Dr Bernard Niwagaba, District Veterinary Officer & Production Coordinator Ntungamo District: "*Currently we must admit DDA is very thin. They had said they would recruit staff and have regional offices to help bring sanity to this sector but they have not*"
Bernard: In about a year or two they had all closed! A number of them closed and currently I think they are about two. Because there is Kachuma and …"

Bernard: "*Yes yes because we were seeing that farmers were being cheated. They were not even following any quality regulations*".

Bernard: "*So one thing is that, those processors aaah! Some fail to sale their products. The market in Uganda is still low for cheese, butter, Yogurt and what ever they were making and they had not even accessed the outside market.I remember they were requesting government to protect them and to help them and see how they can export and may be also those things also let them down. Secondly I even think they were buying poor quality milk because of their poor testing methods. I don't think it was the best quality Milk. That milk must have been adulterated. Of course once you start with poor quality milk as the raw product, I don't expect you to get a very good product after processing*".

Mr Henry Mutabaazi, the Secretary Manager, NDAFCO, complained;
"*These vendors in the informal sector. Actually they now have a bigger portion of the market; we have a regulating body, which is dead like all other government institutions. At the end of the day when you look at a scenario that frequently happens here, the milk we reject here, somebody, those milk vendors, buys it. Surprisingly at a price higher than the one we offer farmers with good milk. So abariisa, find it a problem to bring their milk to us here at the NDAFCO diary*"

It is apparent that a liberalized regime that has not been accompanied by appropriate institutional framework and regulatory reforms has created “confusion” in the sector leaving the weakest members of the sector, the farmers, prone to exploitation and without protection or support.

ii. *Reduced guarantee of markets for Milk*

After opening up the buying, processing and distribution of milk and milk products in the Ugandan economy, a key result that occurred was that farmers were no longer guaranteed selling their milk. It was no longer guaranteed that all the milk produced would be sold. . Prior to liberalization, the UDC, which enjoyed near monopsony conditions, was mandated not only to purchase milk countrywide but also to guarantee fair prices to dairy farmers. Following liberalisation, and the creation of DCL which was to compete alongside other private buyers and at market prices, the obligation to purchase farmers' milk ceased forthwith. DCL has the option to buy or not buy depending on whether it served its commercial interests. Competition between DCL and the private sector increased the demand for milk soon after liberalisation and farmers not only reaped higher prices but also were able to sell all their milk produced. The situation was temporary and lasted for about one year during which time new investors were also entering the market. However, the positive market signals had attracted many small and medium farmers to increase production.

Due to the ‘new competition’ DCL could neither guarantee regular purchases from farmers which quite often reduced the volumes purchased nor the prices farmers were paid for their milk. At the same time, the private buyers operated purely on commercial basis, had no established milk buying centres and their purchases from farmers were more sporadic than under the UDC regime.

Most of the new entrants in the sector apart from Alpha and Paramount Diaries collapsed soon after worsening the farmers' already diminished market even farther. Increased production combined with DCLs inability to sustain large purchases of milk soon created conditions where farmers could not sell all their milk.

Since about the year 2000, farmers have had no guaranteed market for milk. DCL like the other private buyers only buy when it suits them and at prices set by themselves. This has been exacerbated by the general deterioration of the milk cooling and collecting infrastructure which has neither been expanded nor improved upon. The sum total of all this has been that liberalisation reduced the guarantee of markets previously enjoyed by the farmers.

Dr. Bernard, Niwagaba, DVO Ntungamo District: *“When all the milk was being bought by Dairy Corporation it was such that the farmers were solely dependant or were at the mercy of the dairy cooperation and the Dairy Corporation was much better when its capacity was good and it almost took all the milk produced by farmers”*

“So having seen the Rwandan market closed and a few of those plants failing to come again to buy. These farmers had nowhere to take the milk and Dairy Corporation was operating in a few areas”

There was no regulatory mechanism for the new players who entered the dairy sector as buyers and traders of milk. The absence of a regulator in the procurement and milk buying exposed the farmers to unscrupulous buyers who cheated the farmers, by taking their milk and never paying for it.

ii. *Increased Importance of Micro markets*

There has been increased reliance on micro markets since liberalisation of the dairy sector. After the opening up of the dairy sector to other players, dairy farmers found themselves having to rely more on local micro markets for essential sales of milk and mitigation of prices. Under the liberalized regime, prices often plummet during the wet seasons (March-June) and (September-November) for about 7 months each year which negatively affect farmers incomes. Increasingly, the local micro markets (small towns and villages without milk) within the milk producing locality offer better prices and payment terms to the small dairy farmer as compared to the DCL which is supposed to market milk and milk by products nation wide. The farmers are paid a slightly higher (an average of Ushs. 350 a litre compared to ushs. 200 a litre) price in cash as opposed to the relatively lower DCL price which is normally paid 2-3 months after delivery and which is often the price offered by the other licensed buyers. Some of the observations from farmers are captured below.

Exhibit 3: The Growing importance of Micro- Markets in the Dairy Sector

Mr. George Nubo, a Diary Farmer Ibaare, Nyakyera Sub-County in Ntungamo District complained:
"NDAFCO[1] pays us Shs. 200 per litre but for those who sell their milk in the village the litre is at Shs.300"

Similarly, Mr. Steven Mwine, a small farmer in the same village, producing 20 litres daily who is not a member of NDAFCO testified:

"Those who were selling to the Dairy Corporation were not earning enough, we are better off than them in terms of income. So it never attracted me to sell my milk to NDAFCO, I have been selling to people in the village here and I have never sold to the Dairy. I get Shs.300 per litre but also in the months of June- September, I get Shs.400"

Mr. Jimmy Kadoogo, the Chairman, Ibanda Milk Project Association (IMPA), Ibanda District, IMPA exclusively sells its milk to the town folk in Ibanda town, observed that:

"We sell our milk around here in Ibanda. However, we have intentions that in future we set up a Diary plant and we start supplying to the western parts of Kamwenge, Kasese and Kibaale because those people don't have a lot of cattle"

... be exploited to address their market concerns and improve their income problems. Some have opted not to sell their milk to commercial traders but locally.

The increased reliance on micro markets pointed to the increasing failure in the formal marketing system to not only offer a fair price but also to harness farmers' production capacity adequately.

iii. *Expansion of the informal distribution channels and network*

The enactment of the DDA Act in 1997 and the dismantling of the Uganda dairy Corporation (UDC) into the Dairy Corporation ltd (DCL) and the establishment of the Dairy Development Authority (DDA) to regulate and promote the growth of the sector resulted in a phenomenal growth of the informal sector in the distribution chain of milk and dairy products. According to current estimates, about 80% of all milk produced is sold through the informal sector (Land O Lakes, 2003). with all its associated problems. While informal traders have generally improved access to milk by increasing the distribution intensity especially in urban markets, this informal sector has distorted the key market parameters including quality, prices, distribution, and packaging and several other problems have arisen out of their participation in the sector. First, quality control is difficult to enforce. Consumers increasingly are fed on adulterated milk as the informal traders try to maximize on their profits by adding water to increase volumes.

Secondly, due to poor storage and packaging systems, milk spoilage is high which puts consumers at greater risk. Consumers aften buy milk only to lose it later at home.
Third, because of attempts to maximize their margins, the informal traders often perpetrate price falls when milk is abundant by offering lower than market prices.
On the whole, the emergence of a large informal network has made milk marketing in Uganda difficult to coordinate and regulate. At the worst, they have not only discouraged organized investment in the sector but also led to the collapse of the few processing plants that were established soon after liberalization. This has

been mainly through selling adulterated milk, making it difficult to procure economic quantities, and 'killing' demand for processed milk by selling milk at artificially low prices to consumers.

Exhibit 4: Expansion of the Informal Distribution Channels and Networks

Mr Henry Mutabazi, The Secretary – Manager, NDAFCO, complained;
"These vendors in the informal sector. Actually they now have a bigger portion of the market; we have a regulating body, which is dead like all other government institutions. At the end of the day when you look at a scenario that frequently happens here, the milk we reject here, somebody, those milk vendors, buys it. Surprisingly at a price higher than the one we offer farmers with good milk. So abariisa, find it a problem to bring their milk to us here at the NDAFCO diary"

Henry further reported;
"The milk vendors and their agents pay cash, those vendors do not insist on quality. They buy adulterated milk. What does this adulteration do? This vendor you can't compete with him because he pays cash and pays a higher price. Actually at the end of the day they have destroyed the market for processed milk. The vendor will come and buy one litre of milk. He can afford to buy it at a higher price. He will go there and add another one litre of water. And now he has 2 litres from one litre.

"Now adulteration itself has an effect on the sector. While we are saying we have a lot of milk, do we have it? That's the question. Now this man instead of transferring 15.000 litres of real milk to Kampala, he is actually transferring 7, 500, the rest is water! Thereby denying actual milk a market. the value of milk also goes down because of these people. In the end you have people complaining that there is no market kumbe the market is there but being eaten up by the water".

iv. Breakdown of the quality control systems

The end of the UDC monopoly as the only commercial buyer of milk in the milk belt led to a complete breakdown of the quality control systems. UDC hitherto was running and enforcing quality control. Following liberalization of the sector, many private traders joined the commercial milk buying and selling without the necessary knowledge, technical expertise, professional competence and integrity to handle milk for human consumption. As a result, there has been an increase in milk adulteration, and the subsequent drop in the quality of milk.

Field evidence suggests that the DDA as a regulator of the sectors seems to put emphasis on the DCL bound deliveries neglecting the informal sector who are the biggest adulterators of milk.
Subsequently, the DDA which is the regulatory authority that came with the liberalization regime has proven ineffective with its limited coverage which excludes the informal sector that currently constitutes 80% of the dairy industry in Uganda.

Bernard:

"*yes yes because we were seeing that farmers were being cheated. They were not even following any quality regulations. . They would just purchase any milk….."*

Mr Henry Mutabazi, the Secretary – Manager, NDAFCO, testified

" The government is keen at monitoring what processor do or let me say DDA the government arm for regulating milk is more keen on going from time to time to the market and check on the milk destined for a

renowned processor as opposed to checking the milk which the vendors are transporting, to