

# The Structure and Competitiveness of Uganda's Dairy Exports

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## Abstract

The study was prompted by the significant importance of the Dairy sector and Dairy exports to Uganda's economy, thus creating the need to establish the extent to which Uganda's Dairy's export earnings were sustainable. Specifically we sought to establish whether Uganda's Dairy exports were growing (or declining) in promising (or stagnating) export markets. The results indicate that Uganda's dairy exports are concentrated on one product (i.e. milk and cream) and heavily concentrated in one export market (Kenya). The results also indicate that the bulk of Uganda's milk and cream exports are growing in promising markets. Thus, the Kenyan market that imports 80% of Uganda's milk and cream is growing at a rate of 43 % per annum, and Uganda's market share in the Kenyan market is growing impressively at 17 % per annum. However, Uganda's market share is also growing in stagnating markets (DRC and Sudan). But such growth is pretty insignificant since the declining and stagnating markets only account for a minor proportion of Uganda's milk and cream exports (3.7%).

**Keywords:** Uganda, Dairy Exports, Competitiveness, International Business and Trade

## 1. Introduction

Within the East African region, Uganda has both comparative and competitive advantages in the dairy sector; the dairy sector employs over 2.5 million households in Uganda who are directly engaged in milk production (UEPB, 2007; Mbowa, Shinyekwa and Lwanga, 2012). To the economy, the dairy sector contributes up to 45%-50% of the national agricultural GDP and between 7%-9% of the national Gross Domestic Product (Wozemba and Rashid, 2008). The dairy sector is also estimated to be growing at an average of 5-7 % per annum, thus an exception in Uganda's agricultural sector (Balikowa, 2011; Kjaer, Muhumuza and Mwebaze, 2012). Export earnings from the dairy sector have grown by 2617% between 2003 -2012, and contributed approximately US \$ 20 million to Uganda's export earnings (ITC, 2013). This significant growth is partly attributed to reforms in the dairy sector and significant donor input into the sector (Mbowa, Shinyekwa and Lwanga, 2012).

Given the contribution of the dairy sector to both export revenues and consequently employment creation in Uganda, there is need to ascertain the extent to which Uganda's dairy sector is competitive in its export markets, thus ascertaining the sustainability of export revenues. Previous studies into export development in Uganda have been at an aggregate level, taking into consideration all exports (Rudaheranwa, 2012) and therefore failed to have an in-depth analysis of specific sectors. However, given that the selection of appropriate export markets significantly affect the export performance and sustainability of export ventures, coupled with the complexity in selecting international / export markets (Rahman, 2003), specific sector studies ought to be carried out. It's against this background that we sought to establish the extent to which Uganda's dairy exports are Growing (Declining) in Promising (Stagnating) markets. We hope that this information will establish the need (or not) for exploring alternative export markets, diversification of export markets or even abandoning certain export markets. Specific objectives of the paper were to; (I) establish the structure of Uganda's dairy exports, (II) establish the competitiveness of Uganda's dairy sector in its top export markets.

## 2. Background and Data

The data used in this study was obtained from the UN Comtrade Database (United Nations, 2013) and analysis was based on the Harmonized Commodity Description and Coding System or harmonized System (HS). The HS system is an "internationally standardized nomenclature for the description, classification and coding of goods" (Yu, 2008). Harmonized system enables for international comparison between products. Products are aggregated at the 2, 4 and 6 digit levels under the HS system, with HS-2 being the broadest and HS-6 being more specific. At HS-2 (chapter/ sector level), we have all dairy products, eggs, honey, edible animal products nes. At

HS-4 (Sub-sector), we have 10 broad product groups from HS 0401 to HS 0410. HS-6 represents the product level. The focus of this paper is at HS-0402, which is “milk and cream, not concentrated or sweetened”. This product category was chosen because between 2008 and 2012, it contributed the most significant proportion of Uganda’s dairy exports (Table I).

Global trade in dairy products, eggs, honey, and edible animal products nes (HS-2) grew a 6 percent between 2008 -2012, and by -2 percent between 2011-2012. Dairy Products worth US \$ 78.9 trillion were imported globally in 2012 (ITC, 2013). “Cheese & curd”, and “Milk and cream concentrated or sweetened” dominated 60 percent of these imports. China was the world’s leading importer of Milk and cream concentrated or sweetened in 2012 and their demand grew by 52 percent between 2008-2012.

### 3. Methodology

The study focused on Uganda’s dairy exports analyzed at the product cluster 4-digit or Harmonized System code-4, thus allowing for identical comparison of the same product internationally (Liu and Revell, 2009). Specifically the study focused on milk and cream (concentrated or sweetened).

Competitiveness was measured based on Uganda’s export market share in its respective export markets, thus its share of individual markets relative to its competitors, it’s growth in exports into the individual markets, and the growth of the importing markets relative to world growth in the sector (wood and Roberston,2000). This data was obtained from the ITC / UN COMTRADE statistics data base, 2013.

Such a decomposition of Uganda’s export growth is informative and can provide answers to whether Uganda has outperformed or underperformed it competitors in its destination export markets (World Bank, 2009). However, Staal and Kaguongo (2003) noted that a distinction should be made between the use of export values and export volumes in calculating export market shares. In this case, we used export values to compute export market shares. This involved; identifying Uganda’s top export markets for milk and cream, and then establishing the proportion of each market that Uganda’s milk and cream occupies. We also established the rate at which each export market was developing relative to the worlds growth in demand for milk and cream, this enabled us to establish whether Uganda was growing (or declining) in promising (or stagnating markets).

### 4. Results and Discussions

The structure of Uganda’s dairy’s exports is presented in table I. Total exports decreased by US \$ 124,000 between 2003-2007, a -16% decline, while between 2008 and 2012, dairy exports increased by US \$ 15.7 million, an increase of 315%. This significant increase would be partly attributed to structural changes initiated by the Uganda Dairy Development Authority (DAA). The composition of Uganda’s dairy exports hasn’t changed significantly over the years. It has mainly comprised of Milk and cream (concentrated or sweetened), Milk and cream, (not concentrated or sweetened), Butter and other fats and oils derived from milk, Birds' eggs in shell. However, the input of butter and birds’ eggs were only significant between 2003 and 2007. The period between 2008 and 2012 was dominated by Milk and cream (concentrated or sweetened), Milk and cream (not concentrated nor sweetened), however the contribution of Milk and cream (not concentrated nor sweetened) is steadily and significantly declining over the last three years at a rate of -45%. The concentration on few product categories, most likely leads to instability in export earnings from that sector (Tariq and Najeeb, 1995).

**TABLE I:Uganda’s Dairy Export Structure from 2003-2012**

Product label	2003 (%)	2004 (%)	2005 (%)	2006 (%)	2007 (%)	2008 (%)	2009 (%)	2010 (%)	2011 (%)	2012 (%)
Milk and cream, concentrated or sweetened	55.7	27.8	43.2	28.4	35.2	34.3	27.0	16.1	51.0	55.8
Milk and cream, not concentrated nor sweetened	12.6	7.3	2.3	35.3	59.6	39.7	61.2	64.1	42.6	35.5
Butter and other fats and oils derived from milk	17.4	-	4.8	34.0	4.2	4.8	9.0	3.6	5	5.7
Buttermilk and yogurt	12.2	15.3	2.8	-	-	1.1	0.9	0.5	0.7	1.5
Whey and natural milk products nes	1.8	-	-	2.0	-	0.1	0.0	0.0		0.3
Birds' eggs in shell	-	47.4	44.8	0.3	-	3.4	1.4	14.2	0.6	0.2
Birds' eggs dried	-	0.3	0.5	-	-	4.2	0.1	1.3	0.3	0.2
Cheese and curd			1.4	-	0.8	12.5	0.3	0.1	0.2	0.2
Natural honey	0.4	1.8	-	-	0.2	0.0	0.1	0.0	0.0	0.0
<b>TOTAL (000) USD</b>	<b>763</b>	<b>327</b>	<b>433</b>	<b>306</b>	<b>639</b>	<b>4,995</b>	<b>6,703</b>	<b>16,247</b>	<b>18,191</b>	<b>20,727</b>

**Source:** Authors’ calculations based on ITC / UN COMTRADE statistics

The results in table II show Uganda’s export markets for its milk and cream (concentrated or sweetened), henceforth: Milk and Cream. Milk and Cream exports declined by -47% between 2003-2007, and grew by 575%

between 2008-2012. Between 2003- 2007, the main export markets comprised of Rwanda, Tanzania, Burundi, Kenya, DRC and Sudan. Basically all the East African Community (henceforth: EAC) countries were covered. However the period from 2008-2012 was characterized by one main / dominant export market, Kenya. With the exception of 2010, 81% of Uganda's milk and cream was destined for the Kenya market. This change can be justified by the fact that for Uganda, Kenya is the largest importer of milk and cream within the EAC, thus accounting for an average of 73% of all milk and cream imports (annex: Table A1)

**TABLE II**  
**Top 10 export markets for Uganda's milk and cream (concentrated or sweetened) exports 2003-2014**

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
<b>TOTAL (000 USD)</b>	<b>425</b>	<b>91</b>	<b>187</b>	<b>87</b>	<b>225</b>	<b>1,714</b>	<b>1,807</b>	<b>2,622</b>	<b>9,283</b>	<b>11,565</b>
100 %										
1 KENYA	-	-	83	14	-	71	89	28	85	79.5
2 DRC	-	-	-	39	24	1	3	1	7	9.0
3 SUDAN	1	12	3	46	53	9	5	16	1	4.6
4 ZAMBIA	-	-	-	-	-	-	-	-	3	4.1
5 ETHIOPIA	-	-	-	-	-	-	-	-	0	1.0
6 EGYPT	-	-	-	-	-	-	-	-	-	0.7
7 TANZANIA	6	48	14	-	-	2	2	7	1	0.6
8 RWANDA	78	-	-	-	12	-	1	1	0	0.5
9 BURUNDI	-	34	-	-	1	1	-	7	1	0.0
10 SOMALIA	-	-	-	-	4	-	-	25	0	-
	<b>85%</b>	<b>95%</b>	<b>100%</b>	<b>99%</b>	<b>93%</b>	<b>83%</b>	<b>100%</b>	<b>85%</b>	<b>98%</b>	<b>100%</b>

**Notes:** the top 10 export markets are defined by ranking from the largest to the smallest in terms of proportions imported Uganda's of milk and cream exports.

**Source:** Authors' calculations based on ITC / UN COMTRADE statistics

As of 2012, 97.2 percent of Uganda's milk and Cream exports were destined for only four export markets (Kenya, DRC, Sudan and Zambia respectively). However, Kenya was the dominant export market consuming 80% of Uganda's milk and cream exports. In the Kenyan market, Uganda has the greatest market share (36.8%), closely followed by Oman (34.1%), collectively controlling 71% of the Kenyan market (see Table III). However, Oman's milk and cream exports into Kenya are a growing twice as fast as Uganda's (41% and 17%). This may imply that, if this trend continues, Uganda's market share may reduce over the years, in favour of other faster growing exporters like; the United Kingdom at 4850% p.a., Ireland at 462% p.a. and Oman at 41% p.a



**TABLE IV**  
**Uganda's competitiveness of its milk and cream exports (concentrated or sweetened) in its top (3<sup>rd</sup> & 4<sup>th</sup>) exports markets (SUDAN & ZAMBIA: 8.7%) 2012.**

		Imported growth in value			Imported growth in value		
		Share in SUDAN imports (%)	2008-2012 (% p.a.)	2011-2012 (% p.a.)	Share in ZAMBIA imports (%)	2008-2012 (% p.a.)	2011-2012 (% p.a.)
SUDAN	<b>WORLD</b>	<b>100</b>	<b>0</b>	<b>-23</b>	<b>WORLD</b>	<b>100</b>	<b>16</b>
1	New Zealand	70.6	24	-23	South Africa	20.8	9
2	Oman	6.1	-14	-36	Hong Kong, China	13.1	134
3	Argentina	4	5	-7	Germany	11.7	39
4	Canada	3.9	-	30	Ireland	9.7	201
5	Netherlands	3.2	-30	-55	Netherlands	6.9	83
6	Switzerland	3.1	3	-42	Tanzania	6.5	-15
7	Malaysia	2.6	19	115	New Zealand	6.2	147
8	Singapore	2.6	-	-	United Kingdom	6.1	2
9	Belgium	1.4	13	-26	Kenya	4.9	-19
10	Australia	0.8	-43	-68	Argentina	2.5	288
11	<b>Uganda</b>	<b>0.6</b>	<b>30</b>	<b>372</b>	Lebanon	2.1	8300
12	Germany	0.4	4	109	<b>Uganda</b>	<b>1.7</b>	<b>938</b>

**Source:** Authors' calculations based on ITC / UN COMTRADE statistics

According to the results in table IV above, in spite of the marginal contribution, Sudan is Uganda's third largest export market for milk and cream, its market share is insignificant at 0.6 %. The Sudan market for milk and cream is dominated by New Zealand which accounts for 71% of the market. However, Uganda is the fastest growing supplier of milk and cream in the Sudan at 372 % p.a, while New Zealand's contribution is growing at -23%. At this rate, Uganda is likely to become the market leader in the future. Zambia is Uganda's fourth largest export market for milk and cream. The results in table IV indicate that Uganda's market share is insignificant at 1.7 %. The milk and cream market in Zambia is dominated by South Africa (21%), Hong Kong (13.1%), Germany (11.7%) and Ireland (9.7%) accounting for 55.3 % of the market. However, in the Zambian market, Uganda supply (938% p.a), is growing faster than that of the top suppliers. South Africa which is the market leader is growing at 9% p.a., Hong Kong at 134 % p.a, Germany at 39 p.a and Ireland at 201%.

**TABLE V: Uganda Performance in Its Top Milk and Cream Export Markets**

	KENYA	DR C	SUDAN	ZAMBIA
-Uganda's Market share (%)	36.8	3.1	0.6	1.7
-Growth in Uganda's exports into importing markets (%)	17	61	372	938
-Importing Market growth rate 2008-2012 (%)	43	-2	0	16

**Source:** Calculations based on ITC / UN COMTRADE statistics

Results in Table V above establish whether Uganda's market share is growing (or declining) in promising (or stagnant) markets. The fastest growing markets include Kenya which is growing at 43% per annum, followed by Zambia which is growing at 16 % per annum. DRC which is Uganda's second biggest export market is growing at a rate of -2 % per annum, while the Sudan market is not growing at all over the past 5 years. Therefore, only

two of Uganda's top export markets are promising (Kenya and Zambia) and these are growing faster than the world average of 7 % per annum. The DRC and Sudan markets are stagnating or even declining. This explains the significant decline in exports by other supply markets, for instance exports from Ireland and Netherlands into the DRC are growing at -40% and -54% per annum. The results however indicate that Uganda's exports of milk and cream into these declining markets are growing faster than exports into growing/ promising markets like Kenya.

## 5. Conclusion, Limitations and Policy Recommendations

The study set out to address the competitiveness of Uganda's dairy exports into its main export markets and thus, establish the extent to which Uganda's exports are growing (declining) in promising (stagnating) markets. The results indicate that the bulk of Uganda's milk and cream exports are growing in promising markets. That is, the Kenyan market that imports 80% of Uganda's milk and cream is growing at a rate of 43 % per annum, and Uganda's market share in the Kenyan market is growing impressively at 17 % per annum. However, Uganda's market share is also growing in stagnating markets (DRC and Sudan). But such growth is pretty insignificant since the declining and stagnating markets only account for a minor proportion of Uganda's milk and cream exports (3.7%).

The findings of this paper should be considered while taking note that the paper used secondary data and considered dairy exports at the national level, therefore failed to capture individual firms' perceptions of the various export markets, thus their export market selection criteria. However, such a limitation serves as a point of departure for further studies into the dairy export sector in Uganda. Despite the above limitations, we recommend that Uganda ought to accelerate its growth into the Kenyan market and decelerate its growth in the DRC market.

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**Annexes**

**Table A1:** Milk and Cream Imports into The East African Community over the Past Ten Years (thousand US \$)

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
KENYA	763	2,533	1,296	3,319	3,586	4,110	9,026	7,960	18,998	24,953
TANZANIA	1,141	1,083	858	1,051	1,251	975	1,167	911	1,663	8,499
BURUNDI	582	361	825	1,953	1,965	873	576	1,181	3,333	1,221
RWANDA	1,094	358	813	556	1,644	810	1,094	-	1,105	556

**SOURCE:** Source: ITC / UN COMTRADE statistics