



Original Research Article

Assessing the importance of fish exports in the economies of Uganda and the Gambia: A supply-side constraint analysis

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Much literature on fisheries industry focused on super exporters of China, Vietnam, Chile and Norway and in Sub-Saharan Africa, limited works have emerged on Ghana, South Africa and Kenya. In this study, we examine fish production and exports support to socio-economic development in least developed countries of Uganda and The Gambia. The study adopts a quantitative approach sourcing information from Central Banks, Fisheries and Statistics Departments of the two countries. The findings show that despite much recognised improvements in post-fish export crisis in Uganda, the lack of participation in frontier phase of high value added products, control of supply chains and product development remains a challenge and the adverse supply-side constraints inhibit further developments in the industry. The artisanal orientation in The Gambia, inadequacies in policies and low presence of industrial fisheries prevented the industry from exploiting its exports potentials. With acute challenges of business environment, physical and financial infrastructure, effective collaboration in the industry to resolve collective action problems remain crucial for both countries to realise their potentials in global fish trade.

Key words: Uganda, Gambia, fish, economic, development

JEL Classification: 01, 02, 05

INTRODUCTION

Agricultural products have been a major source of income for most developing countries through exports of primary agricultural products. Most countries earn their foreign exchange through such exports and use the foreign exchange to import capital goods, raw materials necessary for rapid growth and low-cost food stuff to support local food security (Valdimarsson et al. 2001; Kurien 2005). However, many researchers such as Lall (1992); Stevens (2003); Chandra and Kolavalli (2006) and Sachs (2002) have argued that relying on primary products would not help boost the export value for economic development unless countries implement industrialisation strategy as

terms of trade declines with time. As a result, many developing countries including Kenya, Indonesia, Philippines, Bolivia, Mexico, Argentina and Brazil among others, have over the years implemented industrialisation strategy to diversify the industry switching away from primary goods exports to value addition in an attempt to create wealth, increase employment and enhance economic growth. This is based on the consensus that countries grow more slowly by relying on export of primary goods than countries that have grown very fast (Stiglitz 2002, Lall 2001, 2005). The successes of salmon farming in Chile (Katz, 2004, 2006, Rasiah et al., 2012), the development of

oil palm and electronics in Malaysia (Rasiah, 2006), the boost in Nile perch exports in Uganda (Kiggundu, 2006) and increased grapes and maize production in India (Naik, 2006) owed their growth and development to sustained government policy support, firm capability building, R and D and value addition.

International fish trade in promoting economic growth, income distribution and development has attracted much debate in the development economics literature (Stevens 2003, Kaczynski and Fluharty 2002, Bene 2008, 2010). However, the real effect of global fish trade on economic growth and development remains contentious (Edward, 2006; Wade, 2004) with many policy analysts and scholars arguing for the crucial role of fish export revenues in the economy (Abila, 2000, 2006; Basu, 2006; Kalwij and Verschoor, 2007) while other studies (Petersen, 2003; Kurien 2004; Jansen et al., 1999; Bene 2008, 2010; Fulgencio, 2009; Kiggundu, 2006) argued on the contrary. Global trade has significant impact on welfare and economic growth in countries with developed infrastructure and institutions, firms and national technological capabilities (Lall, 1992, 2005). Despite the opportunities created in the trade theory argument, most developing economies could not produce and export agricultural products to significant levels and add value due to acute supply-side constraints and absence of systemic pillars (UNCTAD, 2008; Fulgencio, 2009; Rasiah 2007; Rogers and Pointus, 2009).

The two views of international fish trade co-existed in the literature, arguing on the importance of fish trade on economies of exporting economies in terms of job creation, household incomes, increase government tax revenue, foreign exchange earnings through exports and increased GDP contributions (Thorpe et al. 2004; World Bank, 2004). Apart from being a rich source of animal protein and fishmeal for animal feeds, the development of sector does facilitate fisheries industrialisation with huge investments in plant and machinery, technology and physical infrastructure. This is true of Uganda and The Gambia where over USD\$200 million was invested over the years in fishery industrialisation, physical infrastructure, laboratory testing centres and social infrastructural development (Abila et al., 2000; Fugencio, 2009; Mendy 2009).

Until the late 1980s to early 90s, Uganda and The Gambia's fisheries sectors were largely subsistence and artisanal, serving the local and regional markets. Structural adjustment programmes (SAPs) introduced in both countries in the late 1980s help to revamp the sagging economy by liberalising trade and removing all the barriers that hindered full participation in global fish trade. With increased investments and supportive trade policies in Uganda, the fisheries sector catapulted to become a leading non-traditional export commodity overtaking the dominance of coffee (Abila et al. 2006) and contributing to about 2.5% to Uganda's GDP (Fulgencio, 2009:436). The sector grew very fast with export earnings reaching

USD\$90million in 2003 from USD\$1.9 million in 1990, surging to its highest at USD\$147.2 million in 2006 (Bank of Uganda, 2011) and provided direct employment to 175,890 fishermen in 2004 and 199,242 fishermen in 2008. The developments of fisheries sector in The Gambia took a different trajectory with artisanal fisheries dominating the sector with its inherent capability constraints. Fish exports reached its highest at USD5.3 million in 2010 with great potentials for growth, major source of employment and other strategic livelihood support.

However, the anti-fish trade group such as Abila and Jansen (1997, 1999) Jansen et al. 2000), Geheb et al. (2007) and Dollar and Kraay (2004) argued its negative impact with food security, local national economic development and livelihoods of people who depend on it. Petersen (2003) argued that due to capacity and management constraints, export revenues are hardly ploughed back into the sector and even if they do, barely small amounts are reinvested fetching minimal economic benefits. Jansen (1999); Kaczynski and Fluharty (2002); Abila (2006); Bene (2008), Bene et al. (2010) claimed that international trade fishery policies amounts to job losses as artisanal fishermen are often marginalised by large industrial fisheries and to a large extent the policy authorities support export-oriented fisheries. Similar cases of capital flight by multinational corporations (Jansen, 1997; 2000 Abila et al., 2006; Bene, 2008), threat to ecological and environmental conservation (Fulgencio, 2009) and overfishing¹ (Kiggundu, 2006; Kaczynski et al., 2002; Alder and Sumaila, 2004; Dollar and Kraay 2004; Geheb et al., 2007) are the eventual consequences of fish exports in most developing countries.

Despite the two countries rich fish resource endowments, sustainable production and exports of fish products remains a challenge. The conditionalities and complexities in terms of stringent technical barriers and strict quarantine are considered in most developing countries as disguise trade protection constraining their exports. Building skills, technologies and connectivity in global supply chains through high presence of industrial fisheries, attract foreign direct investments in the industry, support from international development agencies and close collaboration among key stakeholders are crucial in boosting exports.

While much of the literature on the fishing industry has focused on the super exporters of Norway, Chile, Vietnam and China (Kurien, 2004; Cheong et al., 2008; Katz, 2004, 2006), there has been increasing importance of the industry in the socio-economic development of Sub-Saharan Africa.

¹ EU vessels activities led to excessive overfishing and often disregard the Coastal States' laws governing responsible fishing. It is reported that in 1993-96, 45 million tons of fish was caught by EU vessels with a total value of USD\$78 million compared with licence fees and compensation payments of USD\$8.25 million (Kaczynski & Fluharty, 2002), representing 10.5% of total value caught by EU vessels in the exclusive economic zones (EEZs) of some West African countries.

Export markets have become increasingly important in driving production in Uganda, in particular. The study shows the importance of working in a collaborative manner, the dominance of industrial and artisanal fisheries in Uganda and The Gambia respectively, thus resulting to the different outcomes between Uganda and The Gambia.

The objective of the study is to examine the importance of fish export revenues in supporting socio-economic developments in Uganda and The Gambia. In Sub-Saharan African countries, low institutional developments and physical and financial infrastructure are key challenges constraining fish production and exports in the two countries.

This section introduces the study followed by the background of the fish industry in the two countries. This is followed by a review of literature and methodology adopted in the study. Data presentation and analysis followed. The paper concludes with summary of findings and implications.

Background of Fisheries in Uganda and The Gambia

The importance of fish-based SMEs in economic development cannot be over-emphasized as countries, such as Uganda and The Gambia rely on these firms to support a significant segment of their populations. Over 2 million and 200,000 people respectively in Uganda and The Gambia depended on fish for their livelihood in 2006. The industry supports food security, supply of animal protein, incomes of players and major earner of foreign exchange for the two countries. Fishery industry forms a crucial part of poverty alleviation strategy in both countries being the largest agricultural export commodity in Uganda, second in The Gambia after groundnuts, also meeting fish nutrient needs of about 22 million people in East Africa (Ishengoma and Koppel, 2008; Hammerle et al., 2010; Jaabi and Esemu, 2013).

Uganda is a landlocked country in East Africa bordered to the east by Kenya, north by South Sudan, west by the Democratic Republic of the Congo, southwest by Rwanda and to the south by Tanzania. Uganda is the second most populous landlocked country (Keizire, 2004) See Figure 1. The southern part of the country includes a substantial portion of Lake Victoria, shared with Kenya and Tanzania, situating the country in the African Great Lakes region. Uganda also lies within the Nile basin, and has a varied but generally equatorial climate.

The growth of Ugandan fish exports was briefly interrupted by EU ban on fish imports from Lake Victoria region during the period 1997-2000 through its directive 97/296/EC arising from the discovery of salmonellae bacteria in samples of Uganda's fish exports. This coupled with an outbreak of cholera became a huge setback to Uganda's fish exports to the EU. This triggered the joint response from key stakeholders including government, international development agencies, private sector,

financial institutions, universities, research centres, industry association, overseas' importers association in EU to institute technological and institutional changes. By the end of the crisis period in 2000, fish processors and exporters had upgraded their standards and processing systems to meet EU's health, sanitary and food safety requirements (Kiggundu, 2006). The industry policy in banning the export of unprocessed fish² also attracted international and regional foreign firms into Uganda to exploit opportunities in the industry (Kiggundu, 2005; 2006; Fulgencio, 2009). This has culminated into a phenomenal growth in Uganda's fish exports rising from USD1.9 million in 1990 to USD\$88 million in 2003 further to USD\$147.2 million in 2006 before declining to USD\$131 million in 2010 (see Figure 2) due to increasing competition in the main export markets of EU and USA as well as threats of overfished Nile perch (UBOS, 2011).

The Gambia is the smallest country on mainland Africa in West Africa. It is surrounded by Senegal, apart from a short strip of Atlantic ocean coastline at its western end. The country is situated on either side of the Gambia River, the nation's namesake, which flows through the country's centre and empties into the Atlantic Ocean with a total area of 10,689 square kilometres, See Figure 3.

Fish production is dominated by artisanal fishermen in The Gambia with weak capabilities in meeting overseas fish quality and sanitary conditions, access to finance, increase production and exports. The low fish export is associated with small-scale artisanal fisheries and limited industrial activities which could be considered a lost opportunity despite its natural fish resource endowments. Over 90% of industrial fisheries legally operating in marine waters of The Gambia are foreign vessels landing their catches in overseas ports. Quite apart from the significant fish exploitation through fishing agreements between EU and The Gambia from 1986 – 1997 on bilateral fisheries trade agreements and the Senegal-Gambia Fishing Agreement, The Gambia until in 2009 does not have an industrial fishing port to attract industrial fisheries landing and further processing of fish within the country. Significant fish caught in The Gambia's EEZ are transported, processed, packaged, labelled and branded as exports of foreign countries depriving The Gambia of much needed foreign exchange, employment and other spillovers in the economy. Most of the industrial fish firms from Greece, Spain, South Korea, China and Italy, among others, licensed in The Gambia also operate in neighbouring countries, thus eligible to fish in Gambia's EEZ and transport their catches to neighbouring

²Similar policy initiatives by Indian government triggered technological upgrading in maize production to support its poultry industry by lifting a ban on maize seed technology that unleashed healthy competitions between public and private laboratories to adapt imported technology to local conditions, (see Naik 2006) and Rasiah (2006) on oil palm in Malaysia. Past public investments in science and technology enabled local scientists to participate in technological adaptation, the potential missing in most LDCs of SSA.

countries or overseas for processing. This explains the poor fish export revenue base of The Gambia with export earnings showing erratic levels from USD2.33m in 1990 declining to USD1.68m in 1995 falling further to its trough at USD0.33m in 2006 due mainly to targeting high value fish species coupled with weak artisanal capabilities (see Figure 2).

Despite technological improvements in Uganda, there is still room for further changes as fish exports enter EU with limited value addition (semi-process products) which are processed further and repackaged for overseas markets according to customer preferences. However, the challenges are daunting not only associated with increasing competitiveness in the market but also the rapid technological change which requires sophisticated skills and capabilities. Even more daunting is the path facing artisanal fisheries in The Gambia with weak technologies, skills, bank financing and other associated capabilities to transform to competitive exporting industry.

Literature Review

Classical economists argued that international trade theory is a desirable goal as it increases welfare and enables players to trade in their areas of comparative advantages. However, the literature on international trade is not robust enough as it fails to protect important social and environmental objectives. The unacceptable ecological damage and other negative social impacts often associated with illegal and unregulated trade are very much relevant in Lake Victoria of Uganda and marine fisheries of The Gambia, resulting to considerable huge costs (Odongkara 2001:6; Abila, 2006, Fulgencio, 2009). Again, food security and poverty reduction are rarely featured in global free trade. Overfishing of Nile perch in Uganda and demersal fish in The Gambia's exclusive economic zone (EEZ) puts in danger the future water resources and livelihoods of the communities in pursuit of foreign exchange earnings through fish exports (Jansen 1999, 2000; Abila et al. 2000, 2006; Fulgencio 2009). Calls for managing competing objectives of economic growth, food security, ecological conservation, the welfare of the communities and sustainable fishery resource management are more than urgent.

Kurien (2004), Thorpe (2004), Wade (2004), Kalwij and Verschoor (2007) argued that to realise the full benefits of fish exports revenues, an efficient distribution mechanism must be in place. It is noteworthy to argue that an inefficient redistribution mechanism of fish and its revenue generated may contribute less to industry development. The case justified the assertion that most developing SSA countries derived huge revenues from agricultural exports with surprisingly limited impact on economic and development indicators, thus putting serious challenges on the effectiveness of its distribution (Bene, 2008; Bene et al.,

2010). The fish supply and availability alone (Borton and Shoham, 1991) are not enough, they must be affordable and accessible by the people

Severe supply-side constraints have also significantly reduced developing countries' abilities to produce commodities in large quantities, participate and compete better to exploit the gains of global trade (UNCTAD 2008, Fulgencio 2009, Rasiah 2006, 2007). Accordingly, supply-side constraints are viewed as the main causes of LDCs' weak participation in global trade associated with high production costs, low export performance, weak global competitiveness and connectivity. This has no doubt result to economic stagnation turning SSA into world's poorest region (Sachs, 2002). Calls for action suggest various corrective policy agendas including infrastructural development as a top priority. An adequate supply of physical and financial infrastructural services and other enabling institutions have long been viewed both in policy debate and academic literature as key pre-requisite for economic development (World Bank 1994). Consensus has emerged on related empirical literature that under the right conditions, infrastructural development can play a major role in promoting economic growth and equity.

The high transport costs associated with SSA with explicit and implicit costs in shipping delays particularly for landlocked countries like Uganda coupled with a relative higher cost of doing business (Gelb et al., 2007), poses a major barrier to trade across borders. In Uganda, large tonnes of fish are transported by land to Kenya seaport of Mombasa for shipment to overseas markets with significant transport costs reducing margins and sustainability of processing and exporting firms³. The weak infrastructural, financial and policy frameworks have affected The Gambia from sustainably exploiting its fisheries resources, producing far below its maximum sustainable yield. Hence, the fishery industry in the two-country study continues to face three major challenges.

- i. Sustainable exploitation of capture fish.
- ii. Upgrading landing sites, efficient hygiene standards and meeting sanitary and phyto-sanitary conditions, a key requirement of European Union and Unites States markets
- iii. Develop fish farming to enhance sustainable fish resource supply to meet local and overseas demands in the face of declining capture fish.

The technological upgrading in the industry remains weak to compete fully in global fish markets. Despite a recognisable development in Ugandan fisheries performance, further product development, reaching frontier phase and control of supply chains in global markets remain a huge challenge (Kiggundu, 2006; Jaabi and Esemu, 2013). Accordingly, Rasiah (2007) argued that to participate in the global trade and remain competitive

³ It takes 20 days to move export container from the factory to the nearest port in Shanghai or Kuala Lumpur but 96 days in Kampala, 116 days in Bangui and 71 days in Ouagadougou. (Djankov et al., 2007),

requires the presence of four systemic pillars of network cohesion, conducive environment (macroeconomic stability and greater financial inclusion), role of governments and global connectivity. The ability of economies to address systemic four pillars stand to benefit from increase production, sustained exports, rapid growth, employment creation, value addition and wealth creation.

With infrastructural and business environment constraints associated with LDCs, Uganda was able to expand its fish exports through collaborative response to address fish export crisis and addressing collective action problems. Similar response from The Gambia was lacking as there was no monumental pressure in the industry.

METHODOLOGY

Using descriptive statistics and OLS regression models, Bene (2008) and Bene et al. (2010) found no demonstrable correlation between five fisheries indicators⁴ and economic development indicators⁵. Again, the low fish exports to GDP and its impact on social and economic indicators may be constrained by structural weaknesses, poor management of public institutions, official corruption and infrastructural weaknesses. With these weaknesses in the works of Bene (2008) and Bene et al. (2010), this study will employ intra-trade balance, elasticity of exports on output, imports in domestic demand, fish imports to total imports, fish exports to total exports and fish exports to GDP to assess the importance of fisheries industry in the two economies.

The information presented in this study is generated through secondary data research conducted by reviewing records on fisheries industries in the two countries. Data on fish exports, fish imports, gross domestic product, total exports and total imports were accessed from Uganda Bureau of Statistic, The Gambia Bureaus of Statistic, Bank of Uganda, Central Bank of The Gambia, Uganda Department of Fisheries Resources, The Gambia Department of Fisheries, World Bank website and FAO fishstats.

In an attempt to assess fish trade and other industry performance indicators, use will be made of the following:

i. Using Intra-Industry Trade (IIT) to measure trade performance and also as a gauge to increase specialisation and competitiveness.

$$\text{Trade Balance} = X_{it} - M_{it} / X_{it} + M_{it}$$

Where X_{it} = Exports of industry (i) in period (t)

M_{it} = Imports of Industry (i) in period (t)

Trade Balance lies between 0 and 1

Zero indicates lower export in trade balance (implying more imports, meaning the industry did not cater entirely

for the domestic market) and values close to 1 indicates high rate of exports than imports,

ii. Imports in Domestic Demand – represented as $M_{it} / (Y_{it} - X_{it} + M_{it})$

Where: M_{it} - Imports of Industry (i) in period (t)

Y_{it} - Output of industry (i) in period (t)

X_{it} = Exports of industry (i) in period (t)

iii. Exports Elasticity of Output (lower level indicates large part of production consume locally and vice versa) = (Change in Exports/Change in Output)

iv. Fish imports/Total Imports

v. Fish exports/Total Exports

vi. Fish Exports/GDP

Supply-side constraints are key obstacles that limit economies' production and exports of agricultural products. Issues of macro-economic stability, infrastructure, good governance, business environment, skilled labour and technology (see Figure 4) are identified as major constraints to fish enterprises in producing large quantities and export to high value markets.

Despite preferential trade agreements at regional and international levels like the U.S African Growth Opportunities Act (AGOA) and EU's Everything But Arms (EBAs), exports of most SSA failed to compete in global markets due to weak capabilities in meeting product standard compliance requirements. This has over the years forced most LDCs, Uganda and The Gambia without exception, to rely on the export of primary fish products which according to several studies (Chandra and Kolavalli, 2006; Akanni, 2006; Sachs, 2002) slow down industry growth and development.

FINDINGS

In this section, we present and analyse data from the two countries to assess the performance of the fisheries industries based on key determinants such as trade balance, imports in domestic demand, exports elasticity of output, fish imports and exports to total imports and total exports, fish production exported, fish exports to GDP and employment.

Fish trade balance

The trade balance shows increasing growth in Uganda from 1990 through to 2010 as shown in Figure 5. It rose sharply from 1990 until 2002 when it dropped slightly in 2003. The value is closer to 1 throughout the period to reach 0.9956 in 2010 in Uganda relative to the erratic situation in The Gambia, meaning more efficiency in the former's fish export market relative to the latter. This is associated with relative development of fishery industry in Uganda compared to The Gambia. The joint response in Uganda from Uganda Fish Processors and Exporters Association (UFPEA), greater

⁴ Fish production exported, per capita fish export, fish export as percentage of agricultural export, per capita fish production and presence of fishing agreements

⁵ Mortality rate, Malnutrition, mean monthly per capita income and per capita GDP

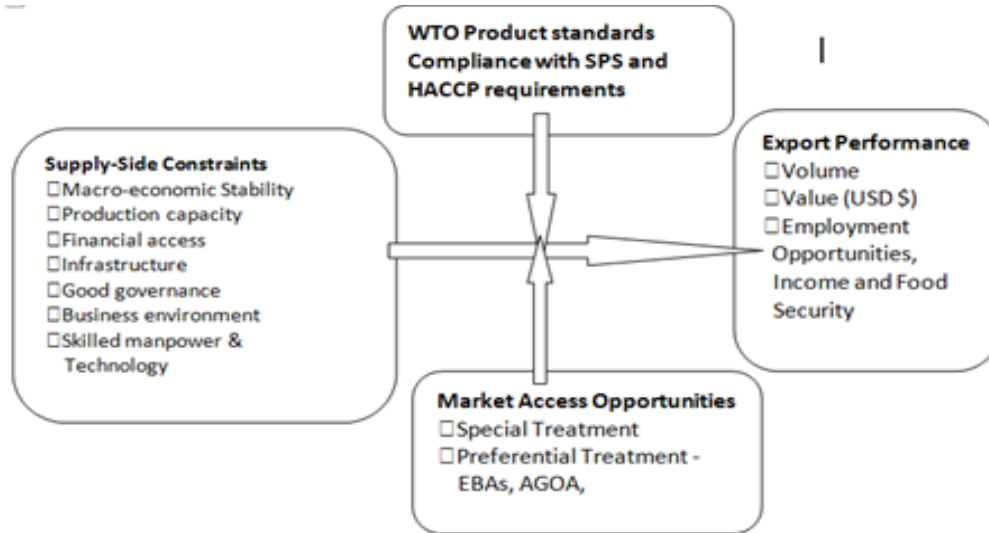


Figure 4: Conceptual framework of Supply-Side Constraints
 Source: Developed from Rogers & Pontius (2009: pp230)
 Note: Everything But Arms (EBAs), African Growth Opportunity Act (AGOA)

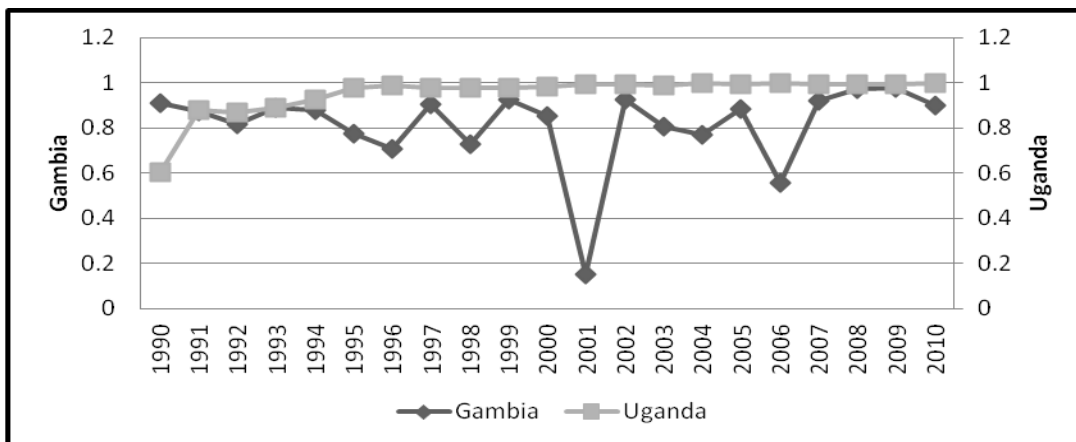


Figure 5: Fish Trade Balance, The Gambia and Uganda 1990-2010
 Source: Uganda Bureau of Statistics (2011), The Gambia Bureau of Statistics (2011)

dominance of industrial fisheries, public sector agencies, meso-organisations and the effective collaboration with international development agencies such as UNIDO which supported in upgrading the laboratories and trained fisheries officials help facilitated the resumption of Uganda’s fish exports to the lucrative EU markets in 2000 after the export crisis. Its fish imports show insignificant levels relative to fish exports.

On the other hand, The Gambia shows sharp changes in its trade balance throughout the period due mainly to volatile export revenues as detailed in Section 2. This is explained by the targeting of high valued fish species by exporters as evident in 2001 and 2006 when export fell to its trough and imports rose. It recovered thereafter

recording increasing levels from 2007 through to 2010. The weak artisanal fisheries lacking basic capabilities in meeting EU fish exports sanitary standards and the limited industrial fisheries are associated with relative lower export and erratic trend in The Gambia compared to Uganda. Policies targeted at attracting industrial fisheries, building capabilities of artisanal fisheries and addressing key supply-side constraints will go a long way in boosting exports and productivity of the industry

Imports in domestic demand

To meet domestic demands, fish and fish products are imported to complement local production in meeting in-

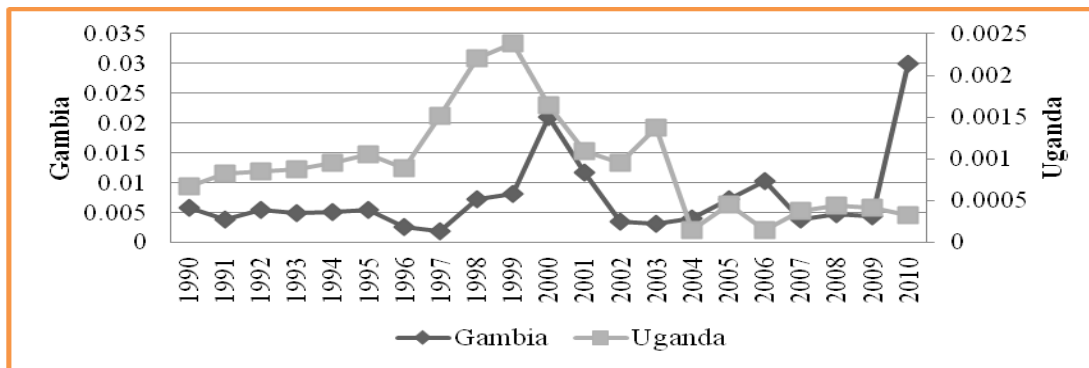


Figure 6: Imports in Domestic Demand, The Gambia and Uganda 1990-2010
 Source: Uganda Bureau of Statistics (2011), Gambia Bureau of Statistics (2011)

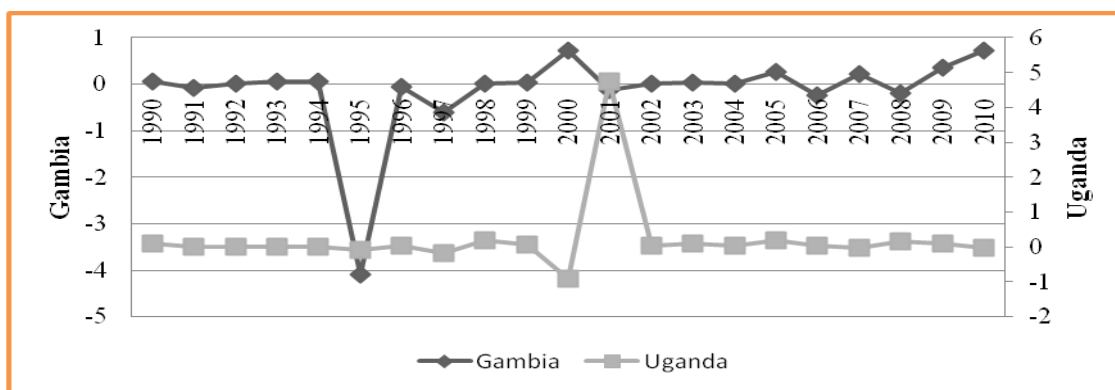


Figure 7: Export Elasticity of Output, The Gambia and Uganda 1990-2010
 Source: Uganda Bureau of Statistics (2011), Gambia Bureau of Statistics (2011)

country consumption demands. In Figure 4, Uganda shows relative lower imports in domestic demand from 0.0007 in 1990 increasing to 0.0011 in 1995. It grew marginally to 0.0016 in 2000 dropping through to a level of 0.0003 in 2010. It was at its highest in 1999 explained by the export crisis as discussed in Section 2. However, compared to The Gambia, Uganda has a relative lower fish imports in domestic demand during the period. The Gambia recorded higher levels of imports in domestic demand registering 0.0058 in 1990 growing to 0.0073 in 1998 to a high level of 0.0211 in 2000. It thereafter surged up through to its highest at 0.0299 in 2010. This is associated with under-developed industry to sustainably exploit the fish resource endowments. The low presence of industrial fisheries, weaknesses in complying with sanitary standards, poor connectivity in the supply chains, policy inadequacies and other supply-side constraints (see Figure 6) had adverse effects on The Gambia’s fish exports.

Due to The Gambia’s erratic levels of fish exports, imports also show similar trend with higher levels in 2001, 2006 and 2010 to supplement domestic fish production in meeting local demand.

Export elasticity of output

Lower levels of export elasticity of output show higher local consumption than exports and vice versa. The level is more stable in Uganda than in The Gambia except in 2000 and 2001 when it dropped to its lowest at -0.9156 and to its highest at 4.7533 respectively.

These were due to greater changes in output relative to export quantities. From 1990 through to 2010 except for those two years (2000 and 2001), the levels ranged from -0.1746 to 0.0038, quite insignificant in the review period manifesting greater local consumption. Many of the fish species that attract low commercial value and others rejected by processing and exporting firms find their way in local markets. It is the high valued fish species such as Nile Perch, Dagaa and Nile Tilapia that are targeted for the international markets. The Gambia also recorded inconsistent levels throughout the period, falling to its trough at -4.087 in 1995 to its highest level of 0.7358 in 2000 (see Figure 7). These have been due to negative changes in export quantities in 1995 and 2000 coupled with low output change in 1995. The change in output is greater

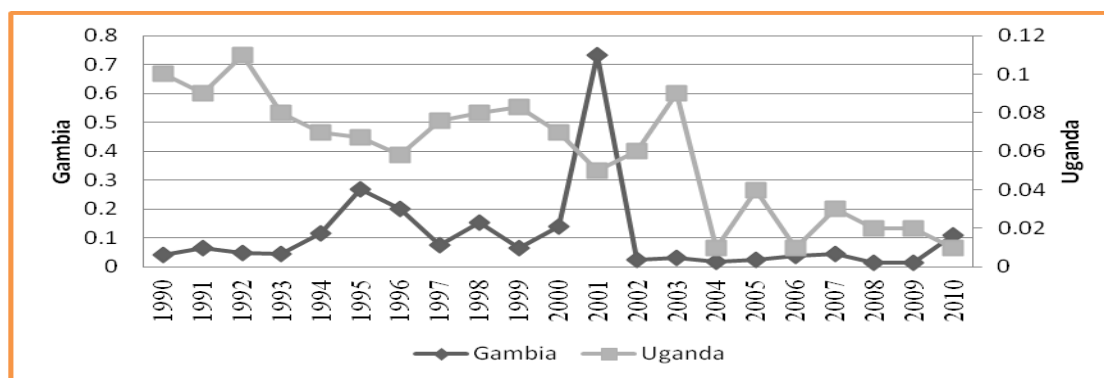


Figure 8: Fish Imports in Total Imports, The Gambia and Uganda 1990 -2010 (%)
Source: Uganda Bureau of Statistics 2011, Gambia Bureau of Statistics 2011

than change in export quantities in both countries but greater change is registered in Uganda than The Gambia. With lower levels in both countries affirms higher quantity of fish and fish products for local consumption than fish exports.

Fish imports in total imports

In Figure 8, fish imports show greater proportion of total imports in The Gambia relative to Uganda though both countries recorded less than 1% of fish imports to total imports. Uganda shows a range of 0.11%, its highest in 1992 through to 0.01% in 2010 due mainly to lower imports of fish and fish products with local production largely meeting domestic demand. The level dropped from 1992 through to 1996 when it rose up during 1997- 1999 due to Uganda's fish export crises. Fish imports rose during the crisis period as the local fish production was not safe for both domestic consumption and exports.

The Gambia shows a more stable trend except in 2001, reaching its highest level at 0.73% in 2001 to its lowest 0.015% in 2009, reflecting the highest fish import bill of USD\$0.93 million and the lowest at USD \$0.04 million respectively. The relative higher proportion of fish imports to total imports in The Gambia is associated with underdeveloped industrial fisheries and weak capabilities of the dominant artisanal fisheries to capture fish in right quantities and species demanded in domestic market relative to Uganda.

Fish exports to total exports

The fishing industry is crucial to the economies of both countries as mentioned earlier. Fish export is the second largest agricultural export commodity after groundnuts in The Gambia constituting 15% of merchandise export earnings (Fisheries Department, 2011), The level of The Gambia's fish exports to total exports

grew rapidly from 6.47% in 1990 through to 18.58% in 1999. It grew to its highest at 26.1% in 1997 due to significant drop in total exports. Fish exports to total exports was high at 20.69% in 2000 before declining sharply to its trough in 0.31% in 2004, marginally up to 0.33% in 2006 explained by considerable drop in fish export volume and value associated with targeting high valued fish species. It picked up in 2007 at 2.7% rising marginally to 3.9% in 2010.

In Uganda, graduating from EU fish import ban of 1997 – 2000, the level jumped from 7.9% in 2000 to record 18.3% in 2001 and to its highest at 18.7% in 2002. It experienced a continued decline through to 2004 and a further sharp drop to 4.7% in 2010 explained by overfished high valued Nile perch and increasing denominator (total exports). With the over-exploitation of Nile perch, Dagaa and Nile Tilapia species continue to fill the fish export basket but these are not highly valued in overseas markets as Nile perch (Fulgencio, 2009).

It is important to note that fish exports from The Gambia and Uganda are either unprocessed or semi-processed with further processing carried out in overseas markets. The absence of significant value addition in the two industries has led to loss of increased export earnings, employment creation, tax revenue, industry deepening, wealth creation, among others thus constraining the fish industrial development in the two economies.

Fish Exports to Gross Domestic Product (GDP)

Fish exports to GDP for the two countries show varying proportions throughout the period from 1990 – 2010. The Gambia recorded an improved 0.89% in 1990 above Uganda's 0.1% due to relative higher GDP in Uganda. (Figure 9).

This continued till 1992 when both countries converged through to 1994. From 1996, Uganda grew its level recording 0.71% relative to Gambia's declined level of

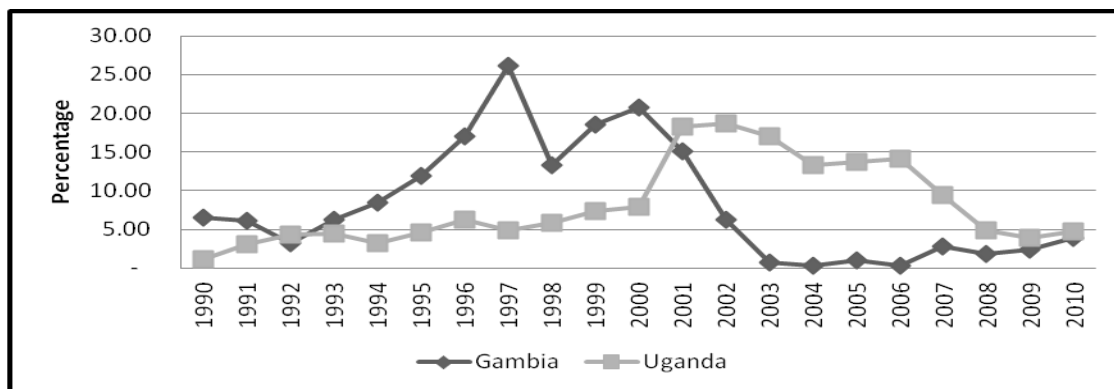


Figure 9: Fish Exports to Total Exports, The Gambia and Uganda 1990-2010
 Source: Uganda Bureau of Statistics (2011), Gambia Bureau of Statistics (2011)

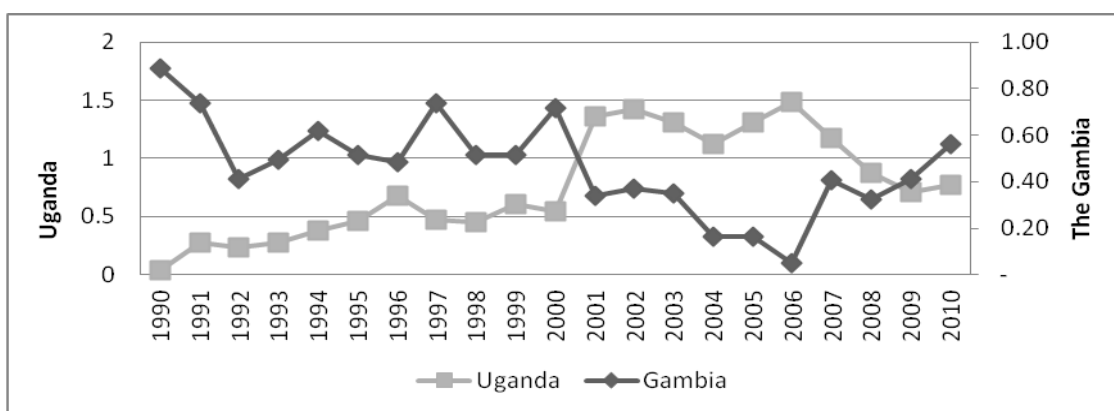


Figure 10: Fish Exports to GDP, The Gambia and Uganda 1990-2010
 Source: Bank of Uganda (2011), Central Bank of The Gambia, (2011)

0.48% during the same period. In 1997 through to 2000 showed the fish crisis period in Uganda recording a drop from 0.71% in 1996 to 0.49% in 1997 through to 0.55% in 2000. Growing out of the crisis, 2001 recorded a sharp growth (see Table 10). Uganda’s level declined through to 2004 at 1.08% due to greater expansion in GDP by 20% relative to an upsurge in fish exports of just 2.86%. It continued to grow thereafter to its highest level of 1.4% in 2006 when Uganda realised its highest fish export ever, at a level of USD147.04 million. The level thereafter dropped through to 0.74% in 2010 associated with uncontrolled overfishing of the main commercial fish species (Nile perch) and increasing global fish market competitiveness.

The levels show quite an erratic situation in The Gambia, attaining its highest level in 1990 at 0.89%, thereafter dropped through to its trough at 0.05% in 2006 explained by a considerable decline in fish exports. This is explained by the low export volume targeting high valued fish species, weak capabilities of dominant artisanal fisheries in meeting overseas market conditionalities and the high number of industrial fish vessels landing their catches overseas. Both

the value and volume of fish exports nose-dived through to 2006 due to acute supply-side constraints. Both economies need to address the supply-side constraints, harness support from meso-organisations, international development agencies, promote linkages, enhance industrial deepening by adding value, attract industrial fisheries and build the required technological capabilities if the industry is to remain relevant in the two countries’ socio-economic development.

Fish production exported

Fish production and exports of Uganda by far outstripped that of The Gambia as shown in Figure 11 due largely to better developed industry, institutional developments and industrial fisheries dominance in Uganda as opposed to artisanal fisheries in The Gambia. However, fish production exported shows less than 12% in both countries suggesting much of the fish produced is consumed locally to meet the fish nutrient needs of the population. Uganda recorded higher levels than the Gambia except during the export

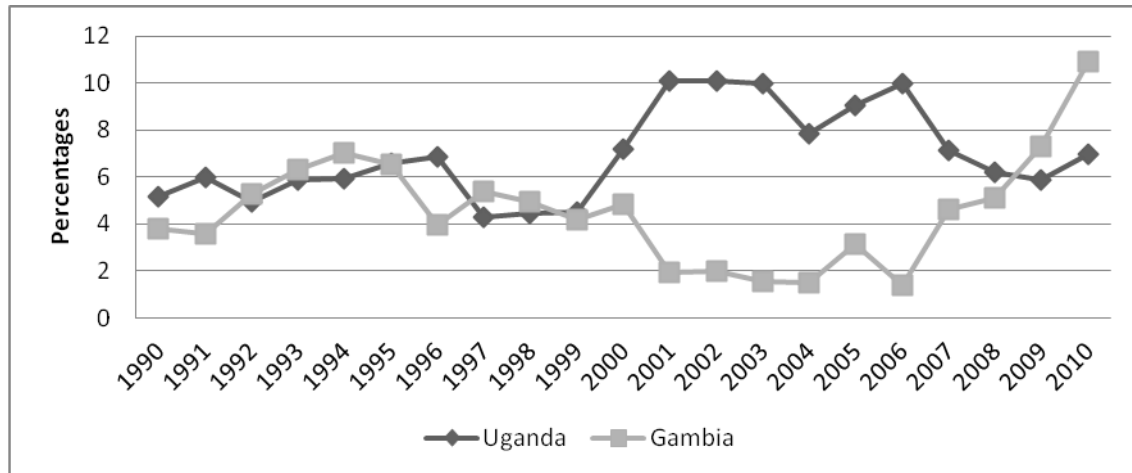


Figure 11: Fish Production Exported, Uganda, The Gambia, 1990 - 2010
Source: Uganda Bureau of Statistics, (2011), Gambia Department of Fisheries, GBOS (2011)

crisis period of 1997 to 2010 when The Gambia recorded higher percentage levels of production exported.

The Gambia reported low levels of fish production and exports (volumes and values) during the period due to weak capabilities and the general lack of linkages, network cohesion and policy support to push the industry further to global competitiveness.

Uganda exported not more than 10% of its production in 2006 making available 90% of fish production available for local consumption. Similarly, The Gambia's highest fish production exported reached only 10.9% in 2010 suggesting 89.1% was made available for local consumption. The large proportion of fish for local consumption may also be associated with fish species that do not attract high values in the global markets such as Nile tilapia, Dagaa, and cuttlefish unlike the most attractive Nile perch and shrimps. As mentioned in Section 3, the inability of the two countries to address supply-side constraints and systemic pillars, severely limited the economies' capacities to record higher levels of fish production exported as in Norway with 75% level.

Job creation

Fishing, processing and exporting sub-sectors of the industry benefitted substantially from the enhanced fisheries regime in Uganda. It provided direct jobs for 153,066 fishermen in 1990 up to 141,674 in 1994, 175,890 in 2004 and 199,242 fishermen in 2008 (Fulgencio, 2009; Jansen, 1999; Abila, 2000). By extension, the sector has provided employment to vast number of people related to the fisheries activities from 700,000 jobs in 2002 to 803,251, 1,150,000 and 1,020,000 in 2005, 2006 and 2008 respectively (Keizire, 2004; Fulgencio, 2009). The sector employs about 3.5% of Ugandan population in 2008 relative

to 2.4% in The Gambia. Over 2 million and 200,000 people depend on the industry for dynamic livelihood support in Uganda and The Gambia respectively.

Direct employment of fishermen in The Gambia reached 1834 in 2002 grew to 2649 in 2005 further to 4844 and 5301 in 2007 and 2009 respectively. Total employment reached 18,521 in 2002 through to 33,421, 39,086, and 43,251 in 2005, 2007, and 2009 respectively (GBOS, 2011).

Conclusions and Implications

The importance of global trade, particularly in fish and fishery products cannot be over-emphasised as it stimulates economic growth and development. Huge investment in the sector is required to realise the full benefits of production, exports and other livelihood support. The severe supply-side constraints limit fish industrial developments in the two economies. Despite recognisable improvements in the fish industry of Uganda, further developments to reach frontier phase remains a challenge associated with low technological capabilities, low skill human resources and the lack of state-of-the-art equipments in fish processing. Also, the fact that export revenues are paid into national treasury to finance government projects, national debt obligations and other emergency imports instead of investing back to develop the industry. Calls for better management of fisheries resource is urgently required to sustainably exploit water resources for industry development.

The development of the industry in Uganda is associated with strong industrial fisheries being the main driver coupled with network cohesion, support of meso-organisations, effective government leadership role and the significant support provided by the international

development agencies such as UNIDO. These were crucial in improving the physical and knowledge infrastructure, product development support, adaptation of technology in the fish processing chain coupled with stable and enabling macroeconomic environment in Uganda.

The dominance of artisanal fisheries in The Gambia constrained the industry to produce, process and export fish products in large quantities to sophisticated EU markets and compete effectively in global fish trade. In this regard, broad strategies and supportive measures are required to realise full benefits of increase production, exports and adopting technologies through spillovers in the supply and value chains. Fish export potentials in The Gambia are huge but seriously under-exploited due to acute absence of the right systemic pillars to stimulate production, exports and competitiveness in the global fish markets. In this regard, substantial surpluses exist for increased foreign exchange earnings, value addition and diversification of the economy from reliance on groundnut exports. This can be achieved through addressing acute supply-side constraints, effective handling of supply chains, networking, attract industrial fisheries, infrastructural development, R and D and an unrestricted access to formal external finance. Industry policies targeted at value addition as in Malaysia, Chile, Taiwan and India mentioned in Section 1 should be adopted in The Gambia if the industry is to leverage a more meaningful socio-economic development in the country.

At the level of policy, a broad-based macro-economic stability aimed at creating a more dynamic economy must be in place to facilitate growth and development in the industry. Efforts in addressing severe supply-side constraints and providing supportive policies are crucial in facilitating industry growth. Policies in establishing leasing, factoring and hire purchasing in the industry can avail the needed equipments, finance and receivables to fishermen, distributors, processors and exporters to boost fish production, value addition and exports in the face of collateral requirements in commercial bank lending.

It is crucial for The Gambia to establish a framework to work collaboratively in addressing collective action problems. This was key in Uganda to address the fish export crisis that enabled the industry to regain eligibility to export to high value EU markets, create jobs, raise incomes of players and further deepen the industry for growth.

Building network cohesion within the industry and trade partnerships is essential in international trade and government agencies can play a crucial role in this facilitation. These continue to play an important role in Uganda with the industry association (UFPEA) and EU fish importers association assisted in pre-financing credit schemes, product development, capacity building and information sharing. Similar developments were missing in The Gambia which could have the potential of boosting fish production, exports and industry deepening. Efforts to

address supply-side constraints by stimulating technological change, support R and D and marketing are vital to further facilitate increase fish exports. The study is limited by adequate financing to conduct detail research into fisherman sociological factors and fish species.

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