# Trade liberalization and the environment: an analysis of hazardous waste in Kampala Central Division of Uganda

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**ABSTRACT:** Trade liberalization is one of the greatest challenges facing environmental sustainability in Uganda. However, this seems to be far from reality because there are indications that trade liberalization as in a number of aspects failed to achieve the desired outcome as there are negative impacts on developing countries. The study was carried out to determine how trade liberalization and environment relate and how they can be mutually supportive with the aim to enhance the existing knowledge and even widen the understanding while developing trade policies to undertake appropriate measures that can enhance environmental sustainability. The researchers employed quantitative method of data collection. The secondary data was obtained through extensive literature review of documents. The results of the study show the need to lobby for more environmental friendly technologies, holding actors and stakeholders responsible for their dubious actions and promote incentives for proper hazardous waste management. The report underlines that to balance the trade policies; environmental standards will require a coordinated public private partnership and multilateral cooperation.

**KEYWORDS:** Trade liberalization, environment, foreign investment, waste management, policies, international trade, globalization.

## 1 INTRODUCTION

In today's globalized world international trade has become a way of survival to nations, just as oxygen is to human beings. According to Irish Aid Key Sheet (n. d.), trade liberalization is central to the global economy. Following crises that engulfed Sub-Saharan Africa, Uganda inclusive in the 1970's, there was therefore a need to help Uganda "foster its capacity, both to reduce import dependence and diversify away from traditional commodities that were subject to long-term decline in terms of trade" (Hoekman, Martin, & Primo Braga, 2009, p. p.2). This eventually led to the evolution of the economic reforms especially the structural adjustment programmes (SAPs) by the International Monetary Fund and World Bank in the 1980's which intensified in 1990's by paving way for trade liberalization, and thus making Uganda to far reach market oriented reforms with the expectations that, improved factor allocation would turn out to be an important ingredient in its integration into a globalizing economy (Daly, 1993; Shafaeddin, 2005). This view is supported by Ministry of Tourism Trade and Industry (2008, p. 14) in its trade policy, which states that:

> The overriding objective of the Government policy on international trade is ensuring effective integration of the economy into the regional economy and multilateral trading system, enhancing national capacity to take advantage… while minimizing the negative effects of globalization

The economic policy measures opened Uganda's economy to foreign competition and technological inflow with a resultant steady growth of the economy (United Nations Environment Programme, 1999; Zake, 2008). Gross Domestic Products (GDP) was estimated at 5.5% p.a for 1997/98 while growth of manufacturing stood at 13% over the same period. The relatively higher growth of manufacturing sector increased the sector's share of the GDP from 0.3% in 1992 to 9% in 1997 (United Nations Environment Programme, 1999). Thus, trade liberalization has become central to the Republic of Uganda's economic progression. The government has continued to pursue foreign investors to come and invest in the economy by reducing trade barriers in an effort to boost country's exports (Ayres, 1996; United Nations Conference on Trade and Development & United Nations Development Programme, 2008; United Nations Environment Programme, 1999).

It should also be understood that trade liberalization has created international cooperation since the international community has helped to channel resources, generated and disseminated information on the different connections between trade and environment; the variety and effectiveness of different sets of supportive policies; and providing capacity building to national governments (National Environment Management Authority & Uganda Bureau of Statistic, n.d). In order to develop the right set of supportive policies, there is the need to analysis both national impacts of trade policies because policies that either increase benefits or minimize harm need to be in place to allow the net positive contribution to be maximized (Irish Aid Key Sheet, n. d.; United Nation Industrial Development Organization, 2008).

However, even though there is strong need for Uganda to effectively integrate into the global economy by opening up its market to the rest of the world, the use of positive trade instruments for environmental sustainability rather than negative to favor both trade and environment should be adopted, since trade liberalization has led to environmental degradation in many parts of the world (Basel Convention, 2008; Shafaeddin, 2005; Zake, 2008). The increased inflow of technologies and growth of manufacturing sector which were meant to benefit Ugandans in both medium and long term, have mainly put most people, plants and animals at risk, through wastes which are improperly handled and unsafely deposed off due to the lax waste management policies in the country that are adverse to both environment and human health (Basel Convention, 2008; United Nations Environment Programme, 1999).

Additionally, Ayres (1996) and (Daly, 1993) argued that competition promoted by free trade encourage lowering of environmental standards and wages at a global level, producing environmental deterioration in both the North and South, lower wages and enlargement of unemployment. Muradian and Martinez-Alier (2001) added that free competition between differing internalizing regimes is utterly unfair because it would produce a 'race' to the bottom. It is evident in Uganda today, that even though the population growth rate is high a situation that has pushed the wages too low, the ruling government has continuously proposed to give away the only centralized rain forest to a foreign investor Metha for sugar cane growing against the will of the nationals and yet the nation depends on natural factors for its agriculture that employees over 80% of its population (CIA World Factbook, 2002; Ministry of Tourism Trade and Industry, 2008; United Nations Conference on Trade and Development & United Nations Development Programme, 2008).

Moreover, it is estimated that the rate of solid waste generation in Kampala city is at 0.2 metric tons per person per annum on average (Zake et al., 2008). Therefore, considering an urban population of 3.7 million people i.e. 13.4% of the total population, it means that approximately 740,000 metric tons of solid wastes are generated in urban areas per year (National Environment Management Authority & Uganda Bureau of Statistic, n.d). Of this, only 41% solid waste generated is disposed of properly. The remaining 59% is left uncollected thereby ending up dumped in drainage and sanitary drainage channels, natural water courses, manholes, undeveloped plots and road sides among other unfit places (Ministry of Tourism Trade and Industry, 2008; Shafaeddin, 2005; Zake, 2008). Basing on the above arguments, trade liberalization and other trade policies greatly impact on environment and thus, there is a need to find the gap that exists and as well determine how the gains derived from trade liberation support and reinforce the protection of the environment since the governments of poor nations have failed to keep up with the liberalization process, calling for a need to guide their policy development and implementation in today's globalized world where international trade is the centre of development.

## MATERIALS AND METHODS

### RESEARCH DESIGN AND STUDY TYPE

This research used cross-sectional approach to study the effects of trade liberalization on the environment. Cross-sectional design type helped the researchers to obtain the needed information on time. It is a study design that is conducted within a short period at a particular point in time (Levin, 2006). In addition, the study employed quantitative data collection method in order to achieve the study objective. Quantitative information was used to measure the degree of trade liberalization influence on environmental damage through hazardous waste disposal.

## AREA OF THE STUDY

The researchers carried out research in Kampala Central Division – Nakivubo drainage channel and industrial Area. The area covers 14.64 square kilometers with a population of 1.18 million people as of 2002 national population and housing census data (National Environment Management Authority & Uganda Bureau of Statistic, n.d). The main activities are both formal and informal trade as well as administration. The National Environmental Management Authority (NEMA) with the help of other supportive bodies holds the responsibility of hazardous waste management and the Ministry of Trade, Industry and Cooperatives with the help of other affiliated bodies is responsible for the overall issue of trade liberalization.

## POPULATION OF THE STUDY

The population was chosen based on three categories. These were as follows: the pollutants, regulators and finally the affected persons as a result of trade liberalization. The study population comprised of the following: slum dwellers, Ministry of Trade, Industry & Cooperatives, National Environment Management Authority, Kampala City Council Authority officials, Uganda Investment Authority, Uganda National Bureau of Standards, Uganda Bureau of Statistics, National water and Sewerage Corporation, Ministry of Water and Environment, Ministry of Health, United Nations Development Programme, United Nations Habitat, Sameer Agriculture Limited , KACITA official and Uganda Manufacturers Association, World Bank .

## SAMPLE SIZE AND SAMPLING TECHNIQUES

The study made use of both purposive and simple random sampling technique. Purposive sampling was used to participants who had knowledge about the issue under discussion while simple random sampling was used to draw the participants recruited from the slums. In all, a total of 120 participants were recruited for the purpose of the study using both sampling techniques.

## DATA COLLECTION METHODS

The study used different instruments to obtain information from the participants. Copies of questionnaires were used to obtain data from participants. This study, to a large extent, used primary data and where necessary some secondary data were used. In the first place, questionnaires were used to collect data from participants recruited for the study. The researcher prepared and administered questionnaires to collect data because the method is relatively cheap, can cover a large number of participants, and because the topic is a bit sensitive, the anonymity of participants was guaranteed. The questionnaire consisted of 31 questions divided into five sections. The questionnaires were distributed to both officials and slum dwellers who were given time to fill it by themselves. The researchers were able to collect data in time since the questionnaires were administered successfully, and most of the participants were willing and open to provide data especially the affected groups. However, some challenges were encountered through the process: some participants were unwilling to provide data to the researcher claiming that the topic was sensitive to handle even though confidentiality was assured; and also some participants seemed too busy and thus, taking long to respond to the questionnaires.

In relation to the secondary sources of data, the researchers conducted an extensive literature review of the documents related to trade liberalization and environment – mainly on hazardous waste management, because a number of studies relating to the study had already been carried out and these would help the researchers to make analysis of the collected empirical data. The popular search engines were google scholar, UNEP and UNCTAD among other websites and other documents were obtained from NEMA and Ministry of Trade, Industry and Cooperatives officials.

## DATA PROCESSING AND ANALYSIS

In order to successfully perform this task than manual, Statistical Package software for Social Sciences Software (SPSS) was used in the analysis phase of the study. The data collected was analyzed by comparing opinions discussed and interpreted using descriptive statistics to form meaningful information that addresses the study objectives.

## ETHICAL CONSIDERATION

The researchers observed ethical issues while at the field, by moving with a letter of introduction to avoid suspicions, built relationships with the interviewees, dressed to suit the nature of participants. The researchers also respected the cultural

values of the participants throughout the research process. The volunteers at Kisenyi were pleased because the researchers addressed them in Luganda, a widely spoken language in Kampala and Uganda in general.

## RESULTS

### BACKGROUND CHARACTERISTICS OF PARTICIPANTS

Table I presents the demographic characteristics of the participants involved in this study. The average age of the participants was 28 years. Majority (28.7%) of the participants were between 41 to 50 years whereas 33.3% were above 50 years. Males (62.5%) were dominant in the study than females (37.5). Asked about participants' educational status, 50 representing 42% had tertiary qualification whereas 14.2% had primary education. About 17.5% had other forms of qualification while 18 participants representing 15% had no formal education as well as 11.7% having secondary school qualification. On participants marital status, majority of the participants interviewed were single (41.7%) with 32.2% being married. Only 9.2% and 2.5% of participants were divorced and widowed, respectively. Co-habitation also constituted 4.2% of total participants. Additionally, the study categorized participants into regulators, pollutants and others who are affected. The study involved 50 regulators which represents 42% while 24.2% were pollutants. Also, 31 participants were recruited who constituted persons affected by the operations of industries on the environment.

*Table I: Socio-demographic characteristics of participants*

| Variables | Characteristics | Frequency | Percentage |
|---|---|---|---|
| Age (n=120) | • ≤30 | 2 | 1.7 |
| | • 31 − 40* | 26 | 21.7 |
| | • 41 − 50* | 52 | 43.3 |
| | • 51 − 60* | 40 | 33.3 |
| | *Mean; Min/Max* | 15/65 | |
| | | | |
| Gender (n=120) | • Male | 75 | 62.5 |
| | • Female | 45 | 37.5 |
| | | | |
| Level of Education (n=120) | • No formal education | 18 | 15 |
| | • Primary | 17 | 14.2 |
| | • Secondary | 14 | 11.7 |
| | • Tertiary | 50 | 42 |
| | • Other | 21 | 17.5 |
| | | | |
| Marital Status | • Single | 50 | 41.7 |
| | • Co-habitation | 5 | 4.2 |
| | • Married | 39 | 32.5 |
| | • Separated | 12 | 10 |
| | • Divorced | 11 | 9.2 |
| | • Widowed | 3 | 2.5 |
| | | | |
| Occupation | • Trading | 22 | 18.3 |
| | • Government (Civil Servant) | 44 | 36.7 |
| | • International Organization | 6 | 5 |
| | • Apprenticeship | 19 | 15.8 |
| | • Industries | 29 | 24.2 |
| | | | |
| Category of participants | • Regulators | 50 | 42 |
| | • Pollutants | 29 | 24.2 |
| | • Affected | 31 | 25.8 |
| Religion | • Christianity | 105 | 87.5 |
| | • Islamic | 12 | 10 |
| | • Other | 3 | 2.5 |

*Source: Field Data, 2014      *Active population*

## BENEFITS OF TRADE LIBERALIZATION

Participants were asked about the benefits the country derived from trade liberalization. Responses revealed that 35% of the participants believe that the nation has been able to gain from both foreign and local investments which has led to increased volume of goods in the country, 23% said that Ugandans have earned employment and as a result they are able to earn a living, while 27% believe that there has been an improvement and increment in consumer goods and choices though only 15% see the improvement in technological transfer into the country.

Also, participants shared their views about the main trade regulators in Kampala. It is worth to note that 80% of participants mentioned Ministry of Trade Industry and cooperatives as the leading trade regulator. It was mentioned further that there were other bodies that assist the ministry. Participants mentioned facilitated bodies such as Uganda National Bureau of Standard (UNBS) among others through development and implementation of policies followed the National Environment Management Authority (NEMA) which handles mainly development and enforcement of environmental regulations and compliance to the environmental standards.

## ENVIRONMENTAL IMPACTS

The study discussed environmental impacts of resulting from activities of both foreign and local industries. Almost all participants agreed that the activities of industries negatively impacts on the environment. Uganda needs strong environmental regulations and legislations to help monitor the effects of trade liberalization such as hazardous wastes. It was observed at Nakivuvo channel in Kampala that there were piles of wastes along the channel and these always serve as a blockade whenever there is a heavy downpour which according to participants causes flooding destructing properties and lives.  A participant stated that:

> "*This place becomes a menace whenever, it rains but because we have no any other place to go and earn a living; we have to continue with our businesses as usual*".

Dumping is the main trade liberalization effect to the environment. About 70% of participants stated that many companies direct their waste openings into water bodies as well as the environment which poses danger to the health of people in the communities. It was observed that many industries release toxic waste chemicals to water channels and bodies. Therefore poor dumping of these wastes has created pollution of air, land and water in the city and thus causing illnesses. The wetlands have also been degraded by investors who have made most of these areas business parks. The Centenary Park in the heart of Kampala is one of the examples which in most cases have caused flooding in the city whenever there's a heavy downpour since there is no proper drainage to allow systematic flow of water.

Most participants stated that the legal and legislative frameworks of Uganda are not well formulated to protect citizens. About 90% of participants mentioned that Ugandans are unprotected by the government from foreign investors as they are most times and their rights infringed upon. One official at NEMA stated in his response that:

> *Uganda has no formulated regulations guiding hazardous waste management but the pollutants are advised to burry these wastes till the regulations are formulated, however, this has given some government officials a leeway to earn big from the polluter investors".*

One of the ladies participants also stated that:

> *We have nowhere to go whenever we see them coming to dump waste around here. We are not comfortable but since we need to make a living, we are forced to stay under this hazardous condition and work"*

These situations are occurring in the society because the "investors" are not given proper labor guidelines, and their actions left unchecked. Moreover, the study results revealed that traders are challenged in their efforts to acquire license to trade which impacts on their ability to adhere to strict environmental standards. Participants revealed that acquisition of licenses are difficult due to competition from larger foreigners with huge resources. Most participants (mainly the affected) stated that the use of many licenses in trade as a way to protect the environment has in most occasions caused delays in daily business transactions which in one way or the other negatively affect their survival.

## DISCUSSIONS

The aim of the study was to investigate the environmental hazards caused by industries as a result of trade liberalization which was embarked upon by Uganda since the late 1980's. The findings of the study made interesting revelations which are

consistence with other studies. In the first place, the study found that trade liberalization in one way or the other impacts positively on Uganda's economy. The implementation of trade liberalization has resulted in investors, especially, foreign companies and individuals putting so much money into the economy of Uganda. This has led to the creation of employment as many persons in the country are able to access jobs in these industries. Additionally, the competition generated as a result of liberation helps in getting the best deal for consumers. Therefore, trade liberalization might be effective as prices of products may be kept low due to the fact that consumers' preference will be taken into consideration by industries. The inflows of foreign investment may probably give the country recognition internally as the international community and foreign governments are likely to encourage their citizens and businessmen to do business in such countries. The results of the study are consistent with other studies by Ayres (1996), Hoekman et al. (2009) and (United Nation Industrial Development Organization, 2008). These studies revealed that free trade is needed by developing countries in order to be able to achieve sustainable economy. The policy of liberalization helps in raising the living standards of people through employment creation and ability to attain competitive advantage.

However, the study found that the environmental hazards caused by free trade are enormous. It was found that the activities of industries, that is, both foreign and domestic are impacting negatively on the environment. The study found that most industries are involved in dumping of waste in both open and water bodies. Citizens or people living in such communities may have no option than to cope or work under insanitary conditions that threaten their health. Even though investment has proved to be high, the technology brought in the country might still not be adequate enough to sustain the Ugandan environment hazards as people are at risk of diseases. This finding was consistent with other studies by United Nations Environment Programme (1999) and Zake (2008). According to their studies, trade liberalization is likely to result in greater exploitation of the environment in the form of toxic waste into the environment. Muradian, J. and Martinez-Alier (2001) argued that there is the need for collective adaptation of reasonable environmental standards in commodity production and increase prices to the cost of environment compliance to increase our terms of trade because the developed world is relatively insensitive to price in their primary sector and would pay a larger share of the environmental costs associated with their consumption.

The study found further that the environmental hazards caused by the activities of industries are as a result of ineffective legal and legislative frameworks coupled with weak supervisory roles played by various agencies that are supposed to monitor the operation of industries. This might be as a result of the fact that the agencies and departments may not be better placed in relations to logistics, motivation and personnel in order for them to effectively execute their functions. It is possible that the laws available give much protection to these companies making it difficult for authorities to challenge them on the harm they cause to the environment. Ayres (1996) and Daly (1993) confirmed that free trade encourage lowering of environmental standards producing environmental deterioration. Therefore there is the need for Uganda to devise means to address the environmental challenges that arise from time to time in international trade in order to address hazards engulfing the environment.

## CONCLUSIONS AND RECOMMENDATIONS

The study was aimed at how trade liberalization affects the management of environment in Kampala Central Division. The results of the study found that trade liberalization have a direct relationship with the promotion of sustainable development. On the other hand, the study found that the gains are acquired at the expense of environment. Trade liberalization negatively affects the environment by its by-products which are not treated and spillover causing threat to animals, human health and plants.

The government needs to focus on in-ward-warding environmental policies development and their strong implementation since the out-ward-looking development policies have caused more harm than good to both the Ugandan environment and its citizens, since the failure to develop and implement strong and mandatory environmental regulations in the name of increasing trade flow in the country greatly jeopardizes environmental sustainability, and the unchecked trade liberalization has at the same time led to the lowering of the standards of living. Also, there is also need to develop a well-coordinated public private partnership with an active oversights and control of wastes from point of production to the point of final disposal, so as to minimize the costs associated with clean-up over a long period of time, since sound waste management practices are significantly lower in order to protect the environment and improve on the living standards of citizens. In order to achieve trade liberalization and environmental supportiveness, there should be mobilization and sensitization of masses as a way to give technical advice to the end users of final products from both agriculture and industries that need proper disposal techniques. There is also need to provide incentives to people who invest in waste management sector as a way to encourage more entrants and self-compliance.

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