PRIVATE SECTOR FOUNDATION UGANDA

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ASSESSMENT OF COST DRIVERS IN THE MANUFACTURING SECTOR OF UGANDA

Case Study of Uganda Manufactures Association and Uganda Small Scale Industries Association

September 2023

In partnership with

mastercard foundation

Vision:

To be the apex body championing inclusive and sustainable private sector development

Mission:

To catalyze business growth and competitiveness for sustainable wealth creation and shared value.

Values

- Integrity
- Teamwork
- Value our People
- Customer Focus
- Passion for Excellence
- Do Business Sustainably.

PROUDLY UGANDAN

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List of Acronyms and Abbreviations

ABC	Activity Based Costing
CET	Common External Tariffs
COMESA	Common Market for Eastern and Southern Africa
EAC	East African Community
FGDs	Focus Group Discussions
MSMEs	Micro, Small, and Medium Enterprise
MDAs	Ministries Departments and Agencies
MDAs	Ministries Departments and Agencies
MoFPED	Ministry of Finance Planning and Economic Planning
MTIC	Ministry of Trade Industry and Cooperative
NPA	National Planning Authority
NTBs	Non-Tariff Barriers
PSFU	Private Sector Foundation Uganda
SMEs	Small Medium Enterprises
UBOS	Uganda Bureau of Statistics
UDB	Uganda Development Bank
UDC	Uganda Development Corporation
UESW	Uganda Electronic Single Window
UMA	Uganda Manufactures Association
UNBS	Uganda National Bureau of Standards
UGX	Uganda Shillings
USSIA	Uganda Small Scale Industries Association

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Foreword

The Private Sector Foundation Uganda (PSFU), the apex body for the private sector in Uganda is mandated to sustain policy dialogue with Government on matters affecting private sector competitiveness for her members. The membership of the PSFU is comprised of 327 associations and corporate companies and associated Government agencies. In fulfillment of this mandate, the PSFU in collaboration with the Mastercard Foundation partnered with two of its members UMA and USSIA to assess the Cost drivers in the manufacturing sector of Uganda. This study aimed to generate new evidence and insights to inform policy development concerning industrialization in Uganda, particularly by ascertaining the role that cost drivers play among manufacturing firms. Specifically, the study sought to:

i. Establish the main drivers of costs in the production process among manufacturing firms.

ii. Identify factors other than the cost of inputs and conversion expenses that drive costs; and

iii. Identify gaps and shortcomings in the current policies that adversely affect the manufacturing sector and propose policy interventions to address the effects.

Data was collected from the manufacturing companies which are members of the UMA, USSIA and PSFU which are recognized as the key business management associations hosting the bulk of the manufacturers. This these firms were located across the entire country.

The study categorizes cost drivers into the following groups: cost of raw materials; conversion costs; costs due to macroeconomic factors; and cost of transport and logistics. The cost of raw materials drive costs high because firms must import them due to poor quality, small quantities, and inconsistencies of the locally available ones. Among the conversion costs, labour and electricity costs are the most significant cost drivers accounting for 60 % of the total cost of conversion. The cost of transport and logistics, especially for inputs and distribution of goods significantly drive the costs high. This is because the country's transport and logistics value chain are very weak, a factor that leads to inefficiency. It is noted that these negatively affect the capacity utilization of the manufacturing firms in Uganda.

The PSFU has used these findings to develop key policy proposals geared towards influencing the Government policy on matters relevant to unlocking logistics competitiveness thereby reducing the cost of doing business. The paper will be presented to key MDAs for consideration and action.

Sincerely,

Stephen Asiimwe

CHIEF EXECUTIVE OFFICER

The cost of raw materials drive costs high because firms must import them due to poor quality, small quantities, and inconsistencies of the locally available ones.

Executive Summary

Background

Uganda's manufacturing sector is small, applies limited technology and is characterized by the production of basic, simple consumer goods. The sector has low-capacity utilization at less than 50 % of installed capacity for most manufacturing production units, and this is compounded by the fact that most of them are high-cost producers -hence uncompetitive. Costs such as electricity, transport and logistics, traffic jams, interest rates on credit and corruption, among others, have been frequently cited as key drivers of costs in the sector. Despite such challenges, the sector has a high potential to create significant forward and backward linkages with other sectors, generate higher economies of scale and foster greater diversification into better product spaces (related, better, and high-value products). However, very little information exists in terms of the extent to which these cost drives impact the production costs and profitability margins of firms.

Purpose and objectives

This study aimed to generate new evidence and insights to inform policy development concerning industrialization in Uganda, particularly by ascertaining the role that cost drivers play among manufacturing firms. Specifically, the study sought to:

i. Establish the main drivers of costs in the production process among manufacturing firms;

ii. Identify factors other than the cost of inputs and conversion expenses that drive costs; and

iii. Identify gaps and shortcomings in the current policies that adversely affect the manufacturing sector.

Methodology

The study used a mixed methods approach involving primary and secondary data sources. The primary sources involved the collection of data from 199 manufacturing firms (Uganda Manufacturers Association-UMA and Uganda Small-Scale Industries Association - USSIA) and key stakeholders (Government, manufacturers, and development partners) in the manufacturing sector. UMA and USSIA were purposively selected by the Private Sector Foundation Uganda (PSFU) to represent large and medium and small firms, respectively. The secondary sources involved desk reviews as well as secondary data sources available (national and external sources).

Findings

Acquisition of raw materials is one of the biggest drivers of costs among manufacturing firms, attributed to: poor quality of raw materials; unreliable and/or insufficient supply domestically; unavailability and high prices. This leads to most firms importing raw materials and relying on this source implies increased costs owing to import duties and other related costs.

The cost of electricity is high, explained by two major factors. First, there are frequent power outages during the most productive time of the day and secondly, the tariffs are high making firms uncompetitive. About 70 % of the firms reported that they experienced power outages during their regular production process. Some firms had to resort to use of generators as an emergency measure to produce which imposes an additional cost in terms of both the procurement of the generator and fuel.

Logistics costs are expensive for firms because the different services (transport, storage, handling, sorting, packaging, loading, clearing) are provided by different actors and these have to be sourced separately. Costs of cross-border logistics services provided by Ugandan logistic companies are higher compared to those of their Kenyan counterparts, and this is attributed to high taxes, user fees and inefficiencies in road transport. The key informants estimated that logistics services account for 40 % of the manufacturing cost.

Customs clearance process still remains a challenge in spite of great progress registered in improving systems: The one-stop border posts (OSBPs) have reduced the dwelling times and the time it takes for customs procedures, consequently leading to reduction in queuing times. However, Uganda's efficiency at customs is still low, ranked 76 out of 139 countries, compared to Rwanda and Kenya ranked 64 and 67, respectively in 2021. Therefore, even with great improvements regarding customs clearance, there is room for improvement.

Transport infrastructure: The road network from Mombasa to Kampala and other points in Uganda is considered inefficient in terms of cost of transport and safety. As a result, manufacturers incur losses in the form of theft, breakage and spoilage estimated at 47.4 % of the value of goods on board. The fact that over 90 % of goods are transported using this mode of transport which is expensive compared to water and railway and associated with losses implies that transport is a significant cost driver.

Cargo movement experiences longer transit time due to delays at weigh bridges and inefficiencies associated with congestion along transit routes. There has been a significant reduction in time taken to move between Mombasa and Kampala owing to the interventions of Trademark East Africa to shorten the time taken to export and import. However, the informants mentioned that sometimes it takes two days to clear a backlog of trucks at the weigh bridges and this increases the cost of handling.

Conclusion and recommendations: The study categorizes cost drivers into the following groups: cost of raw materials; conversion costs; costs due to macroeconomic factors; and cost of transport and logistics. The cost of raw materials drive costs high because firms have to import them due to poor quality, small quantities and inconsistencies of the locally available ones. Among the conversion costs, labour and electricity costs are the most significant cost drivers accounting for 60 % of the total cost of conversion. The cost of transport and logistics, especially for inputs and distribution of goods significantly drive the costs high. This is because the country's transport and logistics value chain are very weak, a factor that leads to inefficiency. It is noted that these negatively affect the capacity utilization of the manufacturing firms in Uganda. Therefore:

i. Uganda's logistics sector (such as freight forwarding, transport, warehousing, etc.) is fragmented and needs to be organized and integrated both internally and regionally to significantly lower logistics costs. The Ministry of Works and Transport needs to set up a unit responsible for the entire logistics value chain rather than focus on transport only. In addition, there is a need to enhance skills of the logistics workforce including truck drivers, clearing agents and weighbridge operators to increases efficiency of the sector.

ii. Existing NTBs should be addressed through enforcement of existing frameworks (Monitoring Committees and the 2017 EAC Act on NTBs) to reduce the cost of movement of both inputs and products in order to increase competitiveness of Ugandan goods, especially in the international market. Unilateral decision to block free entry of products in the EAC partner states should be addressed through strengthening the trade dispute resolution mechanisms with possible punitive actions as a deterrence

iii. Although the process of decentralizing quality infrastructure and standards testing services by the UNBS registered good traction, equipping and coordinating them needs to be addressed for both inputs and final products. Relatedly, strengthening the ties between UNBS and its global counterparts and embracing globally competitive standard regimes is inevitable in addition to putting in place an accreditation body to improve standards of Uganda's products internationally.

iv. Conduct an in-depth analysis of the unavailable raw materials and inputs to pinpoint potential sources and subsequently foster policy-driven investments in those sectors. This may leverage the current government drive and intervention of import substitution to create backward and forward linkages within the manufacturing sector to reduce on imports of inputs.

v. The government efforts to reduce the cost of electricity through investment in energy infrastructure have been significant. However, this should be matched with efficient transmission and distribution infrastructure to address power outages. The Presential Directive to further reduce the cost of power to US$ 0.05 for manufactures should be implemented. Relatedly, locating industries in residential places should be discouraged.

vi. Transport services pose a challenge to manufacturers as it significantly increases the cost of doing business. There is a need to

   a. Increase the cargo transported by rail by investing in the system (meter gauge and standard gauge)

   b. Consider investing in more cargo planes to increase air transport, linking it to the ground cargo transport systems and different destinations in Africa.

   c. Promote a multimodal transport system that links roads, rail and water transport, particularly Lake Victoria to significantly lower the cost of transport.

   d. Improve the road network within the country with specific focus on locations of priority value chains in support of industrialization and export development.

vii. High cost and limited access to long term finance should be addressed through segmenting and tailoring the finance and credit terrain to be inclusive according to the needs of large, medium and small manufactures. This is because different manufactures require different financing models and approaches which should be exploited.

1.0 Introduction

The changing nature of the business environment has greatly impacted the cost structure of manufacturing firms worldwide (Navak *et al.,* 2014). According to Glad and Becker (1996), the changes in the cost structure of manufacturing firms can be attributed to the use of more expensive materials; greater competition and, increased marketing costs of distribution and communication, and technological development, among others. To that effect, firms are increasingly creating new products and inventing new modes of distribution and sales for products (ibid). According to the Global Manufacturing Competitiveness Index (2016), the growth of the manufacturing sector is determined by factors such as human capital costs, networks of suppliers, and local demand, among others. Therefore, cost is perceived as a major challenge to firm growth in manufacturing, particularly for Small and Medium Enterprises (SMEs) (Signé, 2018). Transport costs, infrastructure quality and administrative processes can drive up firms' costs. In addition, the quality and access to inputs such as raw materials in the domestic market significantly contribute to costs and, consequently, the growth of the manufacturing subsector.

"The core question addressed is: Which specific costs drive Uganda's manufacturing landscape? The study focusses on manufacturing firms with membership of the USSIA and UMA."

Uganda's manufacturing sector, while small, remains relatively modest in scale, applies limited technology and is characterized by the production of basic simple consumer goods: beverages, tobacco, textiles and apparel, leather and leather products, wood products, metallic products, clay products, cement and chemicals and small-scale processors of agricultural products (PSFU, 2021). The sector operates at a low-capacity utilization of less than 50 % for most industries (UMA, 2017). This underperformance is exacerbated by a range of challenges. According to the National Development Plan III (NDP III) by the National Planning Authority (NPA, 2020), the constraints faced by the manufacturing sector include:

i. Inadequate infrastructure tailored for manufacturing.
ii. Limited access to financial resources.
iii. Weak presence of SMEs within the industrial framework.
iv. Proliferation of substandard goods and counterfeits.
v. Poor coordination between trade and industrial growth.
vi. Lack of systems to foster innovation.
vii. High operational costs and diminished labour productivity.
viii. A legal framework that inadequately supports and promotes manufacturing.

Addressing these challenges is crucial for bolstering the sector and ensuring its sustainability.

Despite such challenges, the sector has a high potential to create significant forward and backward linkages with other sectors, generate higher economies of scale and foster greater diversification into better product spaces (related high-value products). Given that the manufacturing sector is a significant part of the national real economy, it attracts a lot of attention in the development process. The state of the manufacturing industry is an effective indication of the national economic development, national employment and a direct reflection of a country's productivity level (Lui et al, 2017). This study focuses on cost drivers due to their influence on Uganda's manufacturing development: labour costs, financing costs, tax and rental costs, energy and raw materials, foreign trade exports and business environments. The core question addressed is: Which specific costs drive Uganda's manufacturing landscape? The study focusses on manufacturing firms with membership of the Uganda Small Scale Industries Association (USSIA) and Uganda Manufacturers Association (UMA).

1.1 Purpose and Objectives

The study seeks to establish how the drivers of costs critically affect manufacturing firms' performance in Uganda. Costs such as electricity, transport, traffic jams, interest rates on credit, corruption and training of staff, among others, have been traditionally reported as key drivers of costs in the sector. A number of these are driven by policy measures. However, very little information exists in terms of the extent to which these costs (both individually and aggregate) drive the production costs and profitability margins. These lead to high business costs compared to Uganda's major trading partners in EAC and COMESA.

The main objective of the study is thus to ascertain cost drivers in the manufacturing sector in Uganda and identify critical areas for policy interventions. Specifically, the study seeks to:

i. Establish the main drivers of costs in the production process among manufacturing firms;
ii. Identify factors other than the cost of inputs and conversion expenses that drive costs to increase and
iii. Identify gaps and shortcomings in the current policies that adversely affect the manufacturing sector.

1.2 The manufacturing sector in Uganda

Uganda's Vision 2040 envisions transforming the manufacturing sector by upgrading technology among firms, among many other interventions. This is envisaged to be achieved through Government reforming and optimizing the industrial structure while establishing a modern industrial system that will give impetus to industrial transformation. It targets the promotion of manufacturing of consumer goods, investment in Hi-Tech goods, and achieving value addition to agricultural products. Achieving this will enhance the sector's competitiveness, generate employment opportunities, enhance technology development and hence achieve resilience in the Ugandan economy. In the Third National Development Plan (NDP III), manufacturing is a priority to boost industrialization in the country, focusing on both light and heavy production.[1] In addition, the NDP III pinpoints the need to support and promote manufacturing activities, more so transport[2] (road and railway) and the energy sector, as they contribute to increases in the cost of production and reduce firm revenue. This is because the high production costs are mostly attributed to high energy tariffs, high costs of transport, and high cost of imported inputs.

The manufacturing sector comprises largely MSMEs (over 90 per cent), engaged in the production of food, beverages and tobacco, textiles, petroleum, clothing and footwear, paper and printing, chemicals and other chemical products, non-metallic minerals, basic metals and metal products and others.3 Manufactured products in Uganda are mostly for the domestic rather than the export markets. Many firms import raw materials for production, and low value is added to the end products, mainly agricultural and mineral products. Thus, the manufacturing sector is largely made up of small-scale producers with low-value addition and predominantly uses low-level technologies, explaining the low productivity. The low use and adoption of technology is mainly due to high technology costs, inadequate research and development, an unsuitable innovation environment, and information asymmetry on technology, among others.

The contribution of Uganda's industrial sector to GDP has been increasing overtime (Table 1), with a growth of 27 per cent from Ugx 15 billion in FY 2016/17 to Ugx 21 billion in 2021/22. The manufacturing sub-sector is the highest contributor to industry GDP, standing at 52 per cent in FY2021/22, followed by Construction (30 %), Electricity (10 %), Mining and Quarrying (4 %) and Water (2 %).

Table 1***: Formal Sector contribution to GDP at current prices (Ugx billion)***

	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22
Industry	15,677	17,275	18,665	18,585	18,890	21,702
Mining & quarrying	570	708	674	638	622	852
Manufacturing	8,777	9,649	9,944	9,809	9,801	11,481
Electricity	1,379	1,546	1,743	1,932	2,134	2,183
Water	352	385	409	427	454	539
Construction	4,599	4,987	5,895	5,779	5,879	6,648

Source: UBOs, 2022

According to UBOS (2022), in the CY 2021, the index of production for the manufacturing sub-sector, increased by 8.7 %, (Table 2). This was mainly attributed to increases for bricks and cement (15.9 %) owing to a 36.7 % increment in the volume of concrete articles of manufacturers. The volume of drinks and tobacco equated to 12.7 %, due to increased beer production (13.4 %). The composition for chemicals, paint, soap and foam products was 12.5 % due to a rise in the production of chemicals and pharmaceuticals equating to 11.3 %).

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1 The focus is on industries such as; textiles & apparels; shoes; assembly of electronic and medical items; paper and paper products; chemicals, petrochemicals and pharmaceuticals; and cereal and cereal products; tiles, sanitaryware, plumbing, fixtures & fittings, Iron and steel; cement production; tractor and automotive manufacturing and assembly.

2 Business related transport costs are at 40 % compared to other countries where the cost is two times lower (NPA, 2020)

3 Diagnostic Trade Integration Study (DTIS) report June 2022

Table 2*: Index of production, annual %age changes (2002=100), 2017 – 2021*

	Weight	2017	2018	2019	2020	2021
Total manufacturing	1000	4.5	9.4	3.5	6.1	8.7
Food processing	400	-3.5	29.3	-4.7	2.5	11.8
Drinks and tobacco	201	10.8	3.7	11.8	-4.4	12.7
Textiles, clothing and footwear	43	8.9	2.1	19.7	39.4	-34.3
Sawmilling, paper and printing	35	18	9.8	-8.6	-7.8	4.2
Chemicals, paint, soap & foam products	97	18.5	-24.6	21.3	14.8	12.5
Bricks & cement	75	1.8	14.1	2.6	37.6	15.9
Metal products	83	3.4	168.5	154.1	162.8	-3.6
Miscellaneous	66	-5.6	14	3.2	4.6	-12.2

Source; UBOs, 2022

1.3 The structure of the report

The rest of the paper is structured as follows. Section two provides a theoretical background to the concept of cost drivers and then delves into business policy environment literature. Sections three details the methodology adopted for the study including the analytical framework, sampling, data collection and analysis approaches. Sections four provides the results of the study, specifically the status drivers of costs in the manufacturing sector in Uganda. Finally, section five provides the conclusion of the main findings and the accompanying recommendations.

2.0 Concept of cost drivers and the policy environment

2.1 Cost drivers in the manufacturing sector

A cost driver is any activity that triggers a cost of something else (Estermann & Claeys-Kulik, 2013). It can be anything that influences the cost of business activity, both directly and indirectly (Sheng, 2009). It is that variable or factor which has an effect and causes the relationship with the total cost (Toopuu and Polajevu, 2014). Cost drivers are an essential part of keeping a company's finances in order and determining future profits. Analyzing cost drivers helps businesses to ensure that their cost of production does not exceed their earned revenue. It identifies all the possible drivers for a particular type of activity or cost etc. and explains their cause-and-effect relationship with the event (Ravaş & Monea, 2009).

Literature on cost drivers in the manufacturing sector is quite extensive. Lindemann et al, (2012) argue that in the manufacturing context, cost drivers are the elements of a business that cause an overhead cost against the goods manufactured or services provided. However, the work of Lundberg and Söderbäck (2018) analyzing the Swedish manufacturing sector gives the best perspective. Accordingly, some cost drivers are necessary and unchangeable while others place a higher than needed overhead cost against production. In this case, the unnecessary cost drivers ultimately drive down the margins and revenue produced. It is argued that the more accurately a company can determine the cost drivers for its products, the more accurate the costing information will be, which in turn allows management to make better use of the cost data in making decisions. Thus, a company can differentiate among costs that drive overheads and have value, from those that do not drive overheads but still add value, and those that may or may not drive the overhead but do not add any value.

Related to cost drivers are conversion costs during the transformation of inputs into finished products. Conversion costs is a term used in cost accounting to represent the combination of direct labour costs and manufacturing overhead costs, necessary to convert raw materials into products (Shivajee et al., 2019). Examples of costs that are considered conversion costs are: direct labour and related benefits and payroll taxes, equipment depreciation, equipment maintenance, factory rent, factory supplies, factory insurance, machining, inspection, production utilities, production supervision, small tools charged to expense and etc. The higher the conversion cost ratio, the higher the cost contribution by a particular cost to the overall cost. The conversion cost allocated to each cost item explains the distribution of the costs and hence identifies the drivers of the cost of production.

2.2 A review of the traditional and Activity-Based Costing cost management systems

Managers need certain information to improve their efficiency and keep cost drivers in check, and quite often they use management accounting, a well-recognized tool that assists them to make decisions, formulate plans and operate controls. For that matter, they often seek answers to two very important questions: what are the sources of costs and consequently profitability, and how can the firm's performance be improved? Making such decisions requires reliable information about costs and a number of reporting systems are employed. Accordingly, Aranoff *et al.,* (1998), there are two broad systems employed, namely, the traditional systems and the Activity-Based Costing (ABC).

The traditional system reports what money is spent on and by whom but fails to report the cost of activities and processes. Activity-based costing (ABC) on the other hand was developed to overcome the systematic distortions of traditional cost accounting and to bring relevance back to managerial accounting. Many organizations in the manufacturing industry have adopted the new costing method. It is argued by Aranoff *et al.,* (1998) that ABC has two purposes: Firstly, it prevents cost distortion. In this case whereas traditional costing combines all indirect costs into a single cost pool, ABC adopts multiple cost pools (activities) and cost drivers. Secondly, it minimizes waste or non-value-adding activities by providing a process view.

Authors like Chen, 1996 & Chewen *et al.,* (2003) have expressed that the traditional system is geared toward satisfying auditors interested in some evidence of financial accountability, and ABC is interested in evaluating the effectiveness of resource allocation decisions in their companies. Clere (2000) and Chen (1996) argue that ABC is a better tool for pricing than the traditional costing system because for each unit, batch or product level activity, a cost driver is identified which determines cost per unit. For that matter Chewen *et al.,* (2003) concludes that the traditional standard costing systems are irrelevant in most cases for management decisions because they are "too late to aggregate and too distorted for management use".

2.3 Policy environment and cost drivers

Manufacturing is one of the prioritized program areas of the NDP III. The plan identifies and acknowledges the current constraints in the sector. It goes further to set goals to grow the sector at a fast rate to contribute to economic growth. These include increasing the share of: manufactured exports from 12.3 to 19.8 %; share of manufacturing jobs from 9.8 to 10 %; manufacturing value added as %age of GDP from 8.3 to 10 %, among others. It prescribes interventions to grow the sector to achieve the set goals and these include developing requisite infrastructure; increasing access to regional markets, adding value, strengthening the legal and institutional frame to support manufacturing. Aside from this there are other interventions as detailed below.

Uganda formulated the industrial policy of 2020 with a theme "sustainable industrialization for inclusive growth, employment and sustainable wealth creation". It targets to double manufacturing growth from 8.3 % to 16 %, and consequently increase industrial GDP from 27.1 % 2018/19 to 31.7 % by 2030. To achieve this, initiatives and policy interventions were formulated to promote the growth of the manufacturing sector. They include: establishment of fully serviced industrial parks across the country, revival and capitalization of UDC which is the Government Investment arm. Relatedly, the Government revived and capitalized the UDB to enhance access to long-term development financing for industrialists.

The Uganda Investment Authority (UIA) was initially tasked to build 22 Industrial Parks with special emphasis on completion of Namanve and construction of Nakasongola Industrial Parks. This number has since increased to 27 industrial parks. A review of the status by office of the president (Republic of Uganda, 2022) reveals that only 8 public industrial parks were operational with only 2 serviced up to 70 % and none of them is operating at full capacity. The capitalization of UDC and UDB remains low compared to the need which constrains the sector growth.

"Sometimes, some EAC partner states, implement unilateral blockades on goods from Uganda and the process of withdrawing such decisions is lengthy with a weak dispute resolution mechanism."

Uganda has other policies in place to support industrial activities, and the process of formulating others relevant ones is ongoing. However, the gaps lie in the procedures of developing policies and laws. The PSFU (2022) points out that bills such as, the National Local content bill and competition bill, among others have not been endorsed whereas those that were passed have not been made operational. Note that the National Local content bill has been sent back to Parliament by the President for further considerations and its objectives can be achieved if the proposed Amendments to the PPDA law regarding preference and reservations are addressed. The Competition Law was passed and accented to but in its current form, it is weak regarding institutional provisions. Instead of a fully-fledged body, the provisions only allow for a committee supervised by MTIC, defining its weakness at inception. Thus, there is need to fast track the enactment of laws and policies and involve the private sector in policy design and implementation for efficient and sustainable development. The legal and regulatory regime should also support the growth of the manufacturing sector via the provision of an enabling business environment.

"The Competition Law was passed and accented to but in its current form, it is weak regarding institutional provisions. Instead of a fully-fledged body, the provisions only allow for a committee supervised by MTIC, defining its weakness at inception."

Some tax related policy issues that affect the performance of the manufacturing sector deserve mention. Uganda as part of the EAC implements the Common External Tariff (CET) on goods imported from outside the community with the intention to promote domestic value addition by applying the lowest tariff rate (zero %) to raw materials and the highest (25 %) to finished products. In addition, through the duty remission scheme, Uganda like other EAC Partner States continue to stay execution of EAC CET to offer protection to her manufacturing sector. Under the related arrangement, Uganda can be granted stay of application of the CET rates for a given list of products geared towards supporting and or offering extra protection to the industrial sector. Tax policy measures have therefore been used continuously to provide temporary protection to the emerging manufacturing sector. Although significant results are observed, long-term growth and competitiveness will mainly be driven by improvement in the business environment and development of a supportive infrastructure (MTIC, 2022). Another policy gap lies in the tax system where high and multiple taxes impede the expansion of enterprises given the reduced profit margins. Therefore, the tax administration system needs to be properly implemented to support private sector development as opposed to its detriment.

Intra- EAC trade stands at below 20 %, partially explained by NTBs. This is caused by the inadequate operationalization of the existing NTBs legal framework which constrains intra-regional trade and increases the cost of operation. The amendment of the EAC Elimination of NTBs Act, 2017 and its

regulations were finalized but not implemented as should be (PSFU, 2020). Sometimes, some EAC partner states, implement unilateral blockades on goods from Uganda and the process of withdrawing such decisions is lengthy with a weak dispute resolution mechanism. The treaty establishing the EAC and the attendant protocols lack quick and decisive procedures on such matters.

Over 60 % of the annual national budget in Uganda is allotted to the procurement of goods and services which should benefit local manufactures (MoFPED, 2022). As an affirmative action for local manufacturers and suppliers to benefit from this market, Uganda proposed a local content bill. It is observed that local firms have not benefitted from the envisaged local content provisions. The local content bill has suffered setbacks to the extent that the President has referred it back to parliament to include clauses that among others promote not only Uganda but the entire EAC. The Bill was also supposed to strengthen relations between SMEs and the service sector, via subcontracting to meet the procurement requirements. As a result of this stalemate, preferences are given to foreign service providers, as opposed to local firms which limit the latter's active participation and performance.

"It is an expensive venture to depend on foreign standards bodies to certify products for foreign markets to the extent that some manufacturing firms may not muscle sufficient financial resources to benefit from them."

There is a prevalence of low quality and cheap counterfeit imported manufactured products on the Uganda market that outcompete genuine products. This is caused by a weak existing legal framework and inadequate funding to facilitate the surveillance and enforcement agencies such as Police and Uganda Revenue Authority. The Anti-counterfeit Bill to fight counterfeits has been drafted and is currently before Parliament but this has taken too long to salvage the sector.

The current policy constraint regarding the certification of products is the weak capacity to ensure international certification. It is an expensive venture to depend on foreign standards bodies to certify products for foreign markets to the extent that some manufacturing firms may not muscle sufficient financial resources to benefit from them. The process of creating a product certification body in Uganda is in advanced stages with a law passed in 2023 by parliament and accented to by the President. In an era of rationalization of government Ministries, Department and Agencies, the argument for a new body faces an uphill task and may never see day light. Besides, it is an expensive project that will require a lot of financial resources. Stark between two expensive alternatives of seeking certification from external standards bodies and establishing a local body leaves certification of products for export markets in balance in Uganda

Relatedly, the EAC standards bodies have not harmonized their standards implying that products face chances of rejection in partner states market.

Finally, there are inadequate deliberate mechanisms to effectively support manufacturing companies (especially MSEs) to comply with quality standards to become competitive. The current position of revenue collection in form of user fees by UNBS during the standards certification process should be replaced by actions aimed at helping firms to comply with standards other than generating revenue.

2.4 Challenges faced by the manufacturing sector

Despite the great strides made, the role of the manufacturing sector in job creation and structural transformation of the economy has been minimal. MTIC (2022) identifies the following constraints to the growth and performance of the manufacturing sector in Uganda which should be addressed.

The last two decades have witnessed significant progress in transportation infrastructure in the country. Notwithstanding, it is observed that inadequate infrastructure remains a key constraint to the growth and competitiveness of the manufacturing in Uganda. This is because expensive transportation increases the cost of sourcing inputs from rural areas and distributing goods across the country. According to PSFU (2022) report, transport accounts for 45 % of the total production and distribution costs. MTIC (2022) puts this figure at 40 %, a cost twice for the same services in other countries. Road transport accounts for over 90 % of the cargo haulage leaving out cheaper transport systems like water and rail. This in effect erodes manufacturing firms' competitiveness at all levels including national, regional and international.

Uganda has consistently invested in electricity energy following the deficits that negatively impacted the country to the extent that production has outstripped the consumption. However, a number of issues still affect the sector, such as frequent power outages, low voltage for large consumers and high electricity tariffs. This inevitably increases the cost of production, disrupts production and lowers the sales revenue of manufacturing firms. MTIC (2022) points out that during July to September 2021, the Electricity Regulatory Authority announced electricity tariffs of US$ 0.17 per kWh) for commercial industrialists, US$ 0.15 per kWh for medium size industrialists/consumers, and US$ 0.08 per kWh for extra-large industrialists/ consumers. These rates are comparable to regional economies such as Kenya US$ 0.15 per kWh and Tanzania US$ 0.1114 per kWh, except Rwanda ($ 0.095 per kWh). These are

relatively higher than rates of some industrialized countries like China ($ 0.084 per kWh), Pakistan (US$ 0.056 per kWh) and India (US$ 0.077 per kWh).

Access to long-term development financing for manufacturing sector remains a key binding constraint to manufacturing in Uganda (MTIC, 2022 & MoFPED, 2022). Although there is a proposal to create an Industrialization Fund (section 28 of UDC Act) this has not yet been operationalized. What has so been achieved is the recapitalization of the Uganda Development Bank (UBD) and the revival of the Uganda Development Corporation (UDC). The UDB was capitalized with approximately $140m which is still very small to create significant impact on the development financing of the manufacturing sector.

The Ugandan market occasionally gets flooded with low quality and cheap counterfeit imported manufactured products that outcompete genuine products manufactured in the country. The positive impact of the pre-export verification for conformity to standards (PVOC) that Uganda adopted to counter such products has not yielded the expected results. Unscrupulous traders are exploiting this loophole to import low quality and counterfeit manufactured products, which outcompete genuine locally manufactured products (MTIC, 2022). The Anti-counterfeit Bill to fight counterfeits has been before Parliament for a long time. The law enforcement agencies such as Policy, Uganda Revenue Authority and UNBS should be strengthened to achieve the intended objectives of ensuring compliance with quality standards.

The standards and quality assurance infrastructure remain underdeveloped to support emergency of a competitive manufacturing sector in Uganda. According to MTIC (2022) the national quality infrastructure capacity is at about 40 %. The UNBS experiences difficulties in supporting the private sector in terms of laboratory testing capacity, quality certification of the products and elimination of substandard goods on the market. The decentralization of the standards quality facilities to regional levels is a welcome innovation but it is riddled with inadequate capacities and lack of requisite facilities partly due to insufficient funding.

Uganda heavily relies on imported intermediates in the manufacturing process. This is why the Common External Tariff (CET) is rated at 10 % for intermediate products to encourage industrialization. However, it is observed that the cost of importing inputs is high, another binding constraint to Ugandan manufacturing sector. As alluded to this is partly explained by the high transport costs given that Uganda is a landlocked country. For Ugandan firms, importing inputs and exporting outputs take longer and cost more than for their coastal counterparts (MTIC, 2022). Expensive inputs consequently lead to highly priced products reducing the competitiveness of the manufacturing sector domestically and internationally.

In addition, NTB related costs often affect firm productivity and market access directly. For example, border delays largely increase transport costs for goods in the EAC in comparison to direct monetary measures. Cargo transport in East Africa ranks among the highest in the world, approximated at $ 1.8 (6,700 shillings) per km per container in comparison to commended international average of $ 1 per km per container (3,722 shillings). The high costs of transport are also frequently attributed to kickbacks and unofficial payments. Much as large firms may be in a better position to allocate resources to address NTBs compared to smaller firms (Cernat, 2005), the costs of compliance with NTBs should be addressed in such a manner that enhances the productive capacity and reduces costs of firms.

"Cargo transport in East Africa ranks among the highest in the world, approximated at $ 1.8 (6,700 shillings) per km per container in comparison to commended international average of $ 1 per km per container (3,722 shillings). The high costs of transport are also frequently attributed to kickbacks and unofficial payments."

In addition, the Covid-19 pandemic adversely affected the sector and had vast effects particularly on MSMEs in Uganda (Odokonyero *et. al.,* 2022). Uganda's lockdown measures were rated among the most severe worldwide (Hartwig and Lakemann 2020). It significantly disrupted imports of intermediate goods registering a decline of 20 per cent between January and February 2020. Whereas some enterprises in Uganda were able to withstand the Covid-19 interruptions, their performance has been below expectation and recovery has been difficult. Other global impediments such as the Russia-Ukraine war have also disrupted supply chains globally for products such as petroleum and petroleum products, cereals, edible oils among others and fertilizers, increasing the cost of inputs for production.

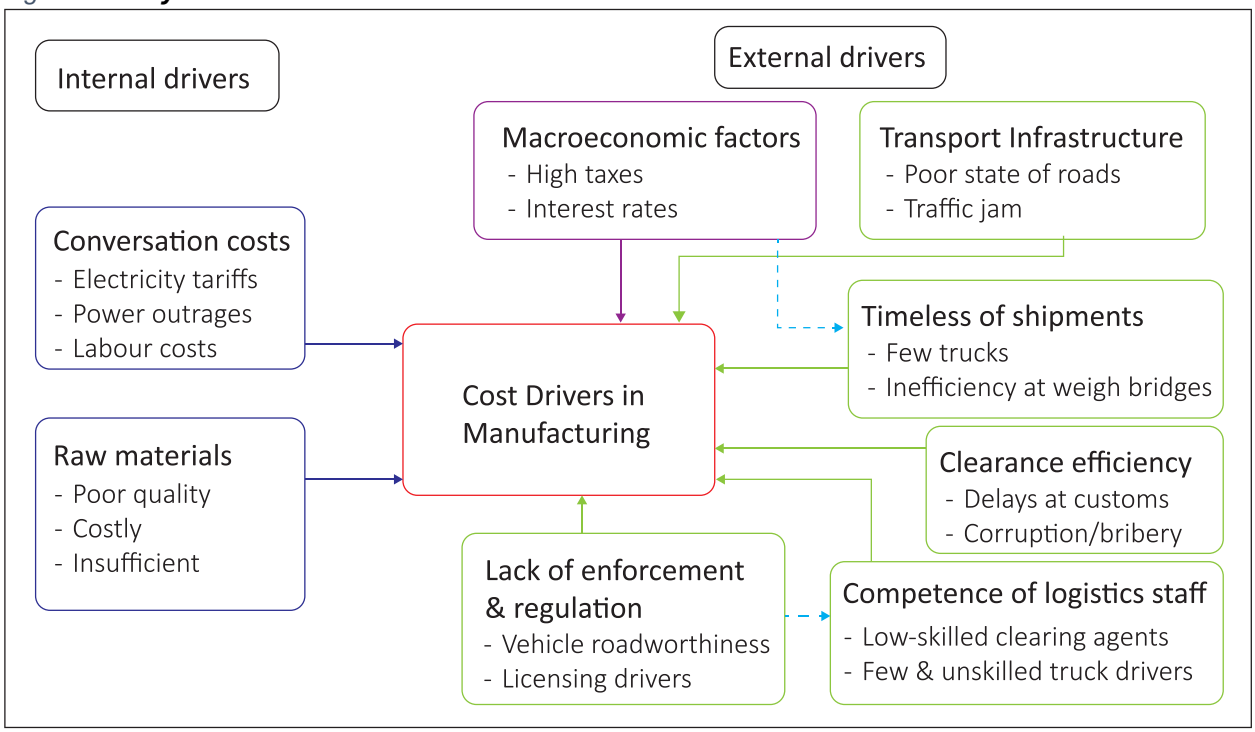
3.0 Methodology

This section describes the actions that were undertaken to investigate cost drivers in the manufacturing firms of Uganda. The section starts by presenting the analytical framework upon which the study is premised followed by a description of the study design, data sources, sample selection and size, data collection tools, data analysis and risks/challenges encountered during the study.

3.1 Analytical framework

To accomplish the study's goals, we use a combination of methodologies. However, before we discuss the different methods, we present the analytical framework that guided the analysis (Figure 1). The framework depicts factors that drive costs of manufacturing. The drivers can be classified as either internal or external cost drivers. Internal cost drivers can be regulated by the firm while external drivers cannot. Internal factors include the raw materials used to manufacture a finished product and conversion costs, which are the costs that a firm incurs to convert the raw materials into a finished product. Poor quality and costly raw materials are some of the critical drivers of costs for manufacturing firms in Uganda. With regard to conversion costs, high electricity tariffs and labour costs are some of the items that manufacturers expend most of their financial resources to convert the raw materials into finished products. On the side of eexternal cost drivers, macroeconomic factors and the poor performance of the transport and logistics sector are responsible for much of the cost burden on manufacturers. The macroeconomic environment alluded to includes taxes, interest rates, exchange rates among others. High import taxes on trucks for example hinders acquisition of efficient transport vehicles. Inevitably, the manufacturers purchase old vehicles which have higher maintenance costs. Similarly, high cost of financing due to relatively high interest rates hinder both the manufacturers and logistics companies from investing in efficient transport and logistics equipment. The poor performance of the transport and logistics sector compels manufacturers to set up their own departments to manage logistics, hence adding additional costs including staffing and buying equipment. Otherwise, if the transport and logistics sector was efficient, manufacturers would not need their own logistics department. Inefficiency of the transport and logistics sector is attributable to poor transport infrastructure characterized by poor state of roads; long shipment timelines; clearing and forwarding delays at customs; low-skilled manpower in the sector; and lack of enforcement and regulation by the Government. Lack of enforcement and regulation in particular is responsible for low skilled truck drivers and clearing agents.

Figure 1: ***Analytical framework***



EPRC Construct, 2023

3.2 Study design

The study adopted a mixed methods survey approach to understand the cost drivers in Uganda's manufacturing sector. The survey approach facilitated the usage of insights generated from interviews with manufacturing firms regarding costs that the firms can control and those for which the firms have no control over. Emphasis was put on the existing records, observation and how the current firms work to minimize costs in manufacturing. Relatedly, secondary information/data sources were used to fill information gaps that could not be obtained from the surveys.

3.2.1 Primary data sources

This involved conducting a firm survey focusing on the manufacturing sector to collect both quantitative and qualitative primary data. Quantitative data was collected from manufacturing firms under the membership of Uganda Manufacturers association (UMA) and Uganda Small Scale Industries Association (USSIA). Qualitative data was needed because there are many external factors beyond the control of firms that are critical drivers of costs. This type of data was collected through Focus Group Discussions (FGDs) with key informants representing manufacturers, MDAs, and the transport and logistics sector.

3.2.2 Secondary data sources

The research process involved a desk-based review to understand cost drivers, especially conversion costs and the business environment. This was augmented by the review of national enabling laws, polices and frameworks that relate to costs in manufacturing. The aim of undergoing this process was to identify critical information to provide advice to policy actors in the manufacturing sector.

We also used secondary data, notably, the World Bank Indicators data (2023) to analyze the performance of Uganda's transport and logistics sector. The performance is assessed using the Logistics Performance Index (LPI). The LPI is a benchmarking tool that helps countries to identify the challenges and opportunities they face in their performance on trade logistics. The index is generated when a country's trading partners evaluate its speed of trade in six key dimensions, that is: (i) efficiency of the clearance process (speed, simplicity and predictability of formalities) at customs; (ii) quality of trade and transport-related infrastructure ((e.g., ports, railroads, roads, information technology); (iii) ease of arranging competitively priced shipments; (iv) competence and quality of logistics services (e.g., transport operators, customs brokers); (v) ability to track and trace consignments; and (vi) timeliness of shipments in reaching destination within the scheduled or expected delivery time. We had to rely on secondary data because we could not obtain primary data since the assessment on the six dimensions is done by trade partners who are foreign.

3.2.3 Sample design

The ***target population*** was all the formally registered manufacturing firms under the membership of UMA and USSIA, which are also members of the Private Sector Foundation Uganda (PSFU) that commissioned this study. A full list of all the manufacturing firms from the aforementioned membership institutions was generated to form the sampling frame. While listing the firms, information about firm size (number of employees), sector and location was collected to aid sampling.

The ***sample size*** for a particular survey is determined by the accuracy required for the survey estimates, as well as by the resource and operational constraints. The accuracy of the survey results depends on both the sampling error, which can be measured through variance estimation, and the non-sampling error from all other sources, such as response and other measurement errors, coding and data entry errors. The sampling error is inversely proportional to the square root of the sample size, implying the higher the sample size, the small the sampling error. On the other hand, the non-sampling error may increase with the sample size, since it is more difficult to control the quality of a larger operation. Based on the total number of firms from the sub-population, the research team employed a statistical formula to determine the appropriate sample size for the study. The formula is given by as proposed by Solving [4];

"The sampling frame contained two strata (2,879 manufacturing firms listed under USSIA and 1,126 firms listed under UMA) with a total of 4,005 firms. Obtaining the sample was done through a two-stage stratified random sampling design as shown in Figure 3."

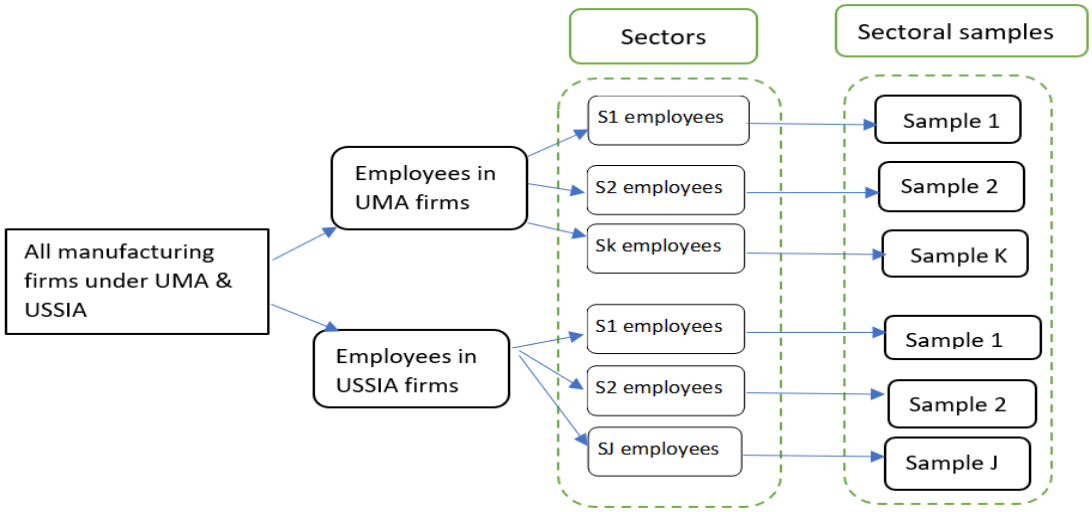
Where; is the sample size in each association population, is the total number manufacturing firms in each association population, is the margin of error (the preferred being 5%). Based on the formula above, a sample of 205 manufacturing firms was required.

Sampling procedure: The sampling frame contained two strata (2,879 manufacturing firms listed under USSIA and 1,126 firms listed under UMA) with a total of 4,005 firms. Obtaining the sample was done through a two-stage stratified random sampling design as shown in Figure 3. The first stage is the USSIA and UMA firm stratification. At this stage, proportions were used to obtain the required sample size for each stratum. The proportions were

4 https://www.statisticshowto.com/probability-and-statistics/how-to-use-slovins-formula/

computed as the %age of the total number of employees in the stratum to the total number of the employees in the sampling frame. The proportions were applied on the sample size computed in the previous sector to obtain stratum sample size. In the second stage, the firms within each stratum were categorized by sector. Again, proportions were used to obtain a sample size for each sector. The proportions were computed as the %age number of employees in the sector to total number of employees in the stratum. The proportions were applied on the stratum sample size obtained in the first stage to obtain a sample size for each sector. A simple random sampling was used to select firms within each sector. The diagrammatic presentation of the sampling procedure is shown in Figure 2.

*Figure 2**. Summary of the sampling procedure***



Worth to note is that much as the required sample size was 205, we sampled 324 firms to have enough room for replacement. From experience, most studies involving manufacturing firms report non-response/ declining interviews as the main reason for not attaining the required sample. We circumvented this by drawing a big sample to allow us replace firms that decline interviews. Table 3 summarizes the geographical distribution of the firms in the sample. The sample summary at sector level is shown in Figure A1 in the appendix section.

Table 3*: Structure of the study sample and geographical location of the firms.*

Category	USSIA sample	UMA sample
Number of manufacturing firms	2,879	1,126
Number of employees	18,587	107,962
Number of sectors	20	43
Region		
Kampala Metropolitan	65	189
Mid-Eastern	16	21
Mid-Western	4	-
Northern	4	5
South-Western	6	6
Western	6	-
Eastern	-	2
Total of sampled firms	**101**	**223**

3.3 Development of survey instruments

A standard structured questionnaire was used to collect quantitative data from the sampled manufacturing firms. We modified the World Bank Enterprise Survey questionnaire to tailor it to Uganda's context. The questionnaire was programmed on the tablets using the Open Data Kit to enable timely data collection, reduce data collection errors and data losses in the field. The tool was pretested and refined before commencement of the actual fieldwork.

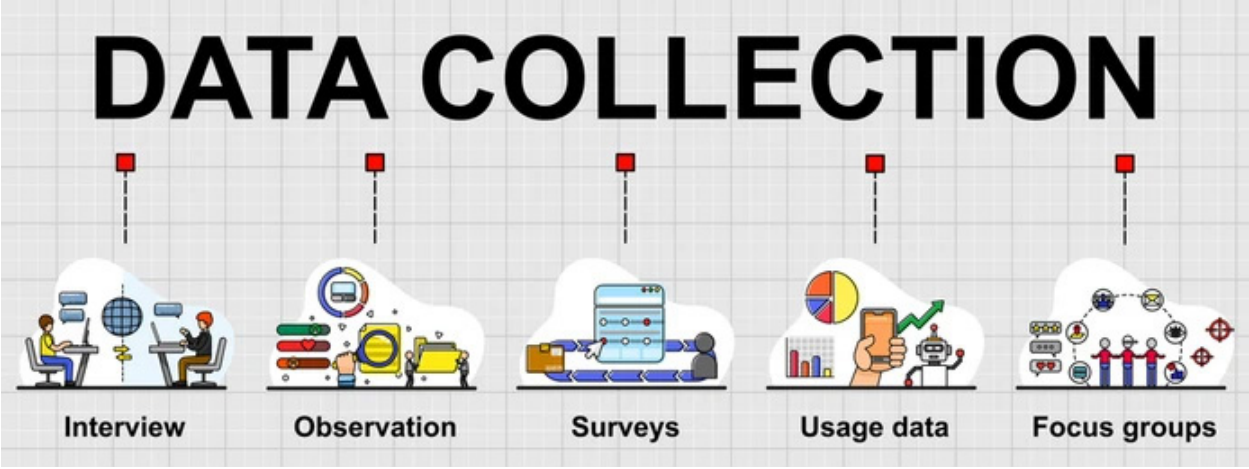
Relatedly, separate interview guides for Focus Group Discussion (FGDs) were designed to collect qualitative data. The focus of this tool was to solicit qualitative information on capacity utilization and cost drivers among manufacturing firms in Uganda. The respondents were drawn from manufacturers (UMA and USSIA), Ministries, Departments and Agencies and Development Partners (MDAs) and actors in the transport and logistics sector. The study adopted thematic analysis procedures in managing collected data from these interviews. This involved coding, categorization of themes as well as development of extracts.

3.4 Data analysis

Data analysis started with of a design of a data analysis plan for both qualitative and quantitative data. The research plan was designed in such a way that the findings from FGDs and the industry-wide surveys complemented each other. Quantitative data analysis entailed use of descriptive statistics and several statistical tests on key indicators of cost drivers. On the other hand, qualitative data involved adoption of themes through coding, categorization as well as development of extracts. Finally, both qualitative and quantitative resulted were integrated by triangulating the statistics and themes generated to explain drivers of costs among manufacturing in Uganda.

3.5 Challenges experienced

Failure to find some firms due to change of location. Much as a provision was made to replace such firms by having a large sample, it took time because significant time was put in to locate a firm before a decision is taken to replace it. There were also some non-responses and/or incomplete responses from some firms that were not willing to disclose information on costs. Lastly, the sampling was of a spatial nature and widespread across the country implying high cost of collecting data.



4.0 Findings

In this section, we present the drivers of costs of manufacturing and how they affect capacity utilization among the UMA and USSIA manufacturing firms in Uganda. We attempt to disaggregate the analysis to see whether the findings are significantly different between UMA and USSIA firms.

4.1 Drivers of costs in manufacturing firms of Uganda

The cost structure of a manufacturing firm refers to those costs or expenses (fixed and variable costs) that a firm incurs to produce the desired products (Vishal, 2023)[5]. They include the cost of raw materials, labour costs, and other overhead costs such as transportation cost, marketing cost, water cost, electricity cost among others. In the process of production, there is a tendency for some of the identified costs to either increase or decrease the overall cost structure and hence the term cost drivers. Managers of production units have a keen interest in identifying the trends in the cost structure of their production to devise means of lowering high production costs and leverage on those that are lower. The following is the presentation and discussion of the analysis of cost drivers among the sampled firms.

4.1.1 cost of raw materials

One of the biggest drivers of costs in manufacturing firms in Uganda is difficulty in acquiring raw materials. This is attributable to several factors including poor quality of domestic raw materials; unreliable and/or insufficient supply domestically; completely unavailable; and pricey raw materials. These reasons are clearly articulated by firms as cause for importation of raw materials (Table 4). The findings of this study revealed that over 81 % of the firms that import raw materials do so because they are not available domestically. Even when they are available, some firms still opt to import because the domestic raw materials are either of poor quality (15.9 %) and/or not sufficient to meet the firms' demand (21.1 %).

Table 4***: Reasons for importing raw materials/production inputs.***

	UMA		USSIA		All firms	
	Frequency	%	Frequency	%	Frequency	%
Low standards of domestic supplies	184	28.8	17	2.7	201	15.9
Unreliable supply domestically	206	32.2	61	9.7	267	21.1
Expensive locally	100	15.6	60	9.6	160	12.6
Not available locally	445	69.5	584	93.1	1,029	81.2
Others	1	0.2	0	0.0	1	0.1

Another 16 % of the firms, particularly UMA firms, import raw materials because the domestic ones are deemed expensive.

Due to inconsistencies in quality and quantity, this study shows that 16.3 % of the firms import some raw materials, most of which are UMA (37 %) (Survey 2023). For the firms that import, the study further reveals that the raw materials of foreign origin constitute 52.2 %. The %age is higher for UMA firms indicating that over 60 % of the raw materials are imported (Figure 3a).

5 *https://www.wallstreetmojo.com/cost-structure/#h-example-of-cost-structure*

Figure 3 a. Origin of raw materials

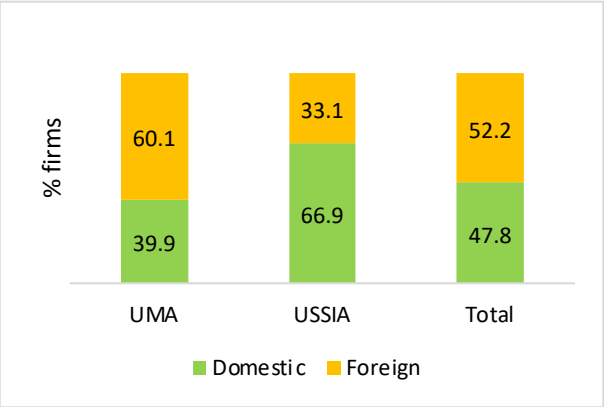
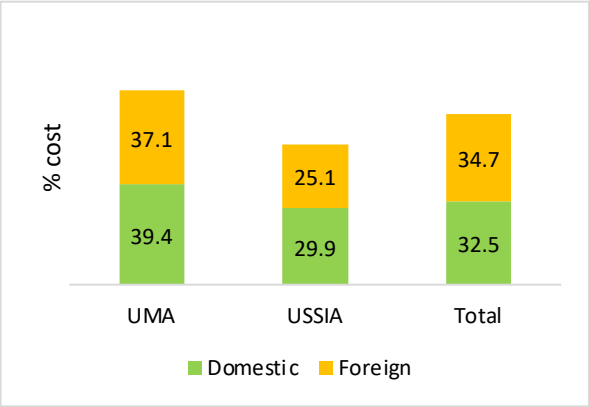


Figure 3b. Cost contribution by origin



The implication of relying on imported raw materials is that it increases the cost of acquiring them given that they are subjected to import duties and other logistics costs. This is exacerbated by the fact that most of the raw materials are imported from outside the East African Community (EAC) region from countries such as India, China, Japan, South Africa among others. Indeed, the evidence shows that imported raw materials account for 34.7 % of the total cost of raw materials, just slightly above the domestic ones (Figure 3b). Conversely, UMA firms spend less on imported raw materials than the domestic ones.

4.1.2 Conversion costs

This sub section delves into the costs necessary to convert raw materials into products, including direct labour and related benefits and payroll taxes, equipment depreciation, equipment maintenance, firm rent, firm supplies, firm insurance, machining, inspection, production utilities, production supervision, small tools charged to expense etc. Conversion costs are reported in Table 5. Labour costs account for 31.4 % of the cost of converting raw materials into finished products followed by electricity (29.5 %). Whereas labour cost is known to be low in Uganda, the high labour cost could be attributable to the fact that manufacturers hire many workers to accomplish a certain task given that Uganda's labour productivity is low. According to the International Labor Organization (ILO) data, labour productivity in Uganda is $3.53 (UGX 13,200) per one hour of work while that of Kenya is ($4.75).

Taxes and transportation costs also have a significant contribution to the total conversion cost accounting for about 13 %. According to the report of the UMA key informants, the high cost of taxes was attributed to the fact that the manufacturers source their materials from companies that are informal. These companies do not pay Value Added Tax (VAT) while selling the materials to the manufacturers. This burden is borne by the manufacturers. The key informants reported that if the companies that sold them the raw materials had proof VAT payment, they wouldn't be burdened with VAT on the materials.

Table 5:***Proportion of item cost to total cost and correlation with capacity utilization***

	UMA	USSIA	Total	Correlation between % cost and capacity utilization
Electricity	31.8	27.7	29.5	-0.1556*
Water	6.4	12.9	9.3	0.2916*
Taxes	18.8	9.1	13.1	-0.3456*
Communication	3.3	5.3	4.6	0.5175*
Labour	26.3	33.8	31.4	0.1830*
Transportation	11.1	13.7	12.8	0.2948*
Marketing	6.2	8.1	7.2	-0.0610*
Security	3.6	3.7	3.7	0.1761*
Business insurance	3.9	2.9	3.8	-0.4636*
Certification	3.5	7.3	5.4	0.0458
Automobile expenses	4.3	4.7	4.6	0.2749*
Equipment maintenance & repairs	8.2	8.4	8.3	-0.2806*
Fuel	6.4	12.8	9.4	0.4042*

The proportion of item cost to total cost is found to be significantly correlated with capacity utilization. For example, there was a significant negative correlation between electricity cost and capacity utilization (Table 5), implying that the higher the %age contribution of electricity cost to total cost, the less the capacity utilization. The %age cost of taxes also has a significant negative correlation with capacity utilization. Conversely, %age cost of labour has a significant positive correlation with capacity utilization.

The impact of electricity in the sample as a cost driver is traced in two ways, - frequent power outages and high tariffs. Power outages pose a significant cost because some firms resort to other alternatives like generators to produce which imposes an additional cost in terms of fuel. About 70 % of the firms reported that they experienced power outages that affected production (Table 6). About 52 % of those affected said that the outages were either high or severe. Consequently, 40.8 % of the firms consider power outage as a major or very severe obstacle to their operations. The effect of power outages was more pronounced in the UMA firms, where about 73 % consider it as either a high or severe obstacle and 56 % perceive it as a major or very severe obstacle to their operations. When asked to estimate the losses that resulted from power outages, survey findings show that the losses account for 21.7 % of the total losses that firms incur (Firm Survey, 2023). The losses in USSIA firms were relatively higher accounting for 23.7 % compared to 18.7 % in UMA firms.

Table 6. ***Electricity and water challenges by firm membership***

	UMA	USSIA	TOTAL
Firm Experience power outages	83.5	62.3	69.9
Extent of the impact of outages			
Moderate	27.3	64.0	48.3
High	62.7	23.2	40.1
Severe	10.1	12.8	11.6
Degree of electricity outages obstacle			
None	3.1	2.5	2.8
Minor	13.6	34.8	25.8
Moderate	27.3	33.2	30.7
Major	41.3	19.1	28.6
Very Severe	14.7	10.4	12.2
Experience insufficient water			
Firm Does Not Use Water for Production	5.8	28.3	20.3
Yes	19.3	19.6	19.5

According to the FGD with key informants from MDAs, frequency of power outages is associated with location of the firms. It was voiced that some manufacturing firms are located in residential areas which constrains accessibility to adequate stable power supply. The participants in the FGD were quoted as follows:

"Some factories are in an area where power is connected for domestic use or residential use and is not suitable for manufacturing,", (Policy makers, 2023).

The participants further affirmed that the same firms that are mislocated in residential areas are responsible for some power outages especially those with heavy machinery that overrun the capacities of stationed transformers that are meant for domestic purposes. Beside outages, power tariffs are high, making electricity one of the items that drives cost of production. It emerged from the FGDs that tariffs vary across firms. The participants from UMA had this to say regarding the tariffs:

"Our capacity utilization in Uganda cannot increase because the electricity tariff is not evenly levied among manufacturers", (UMA respondents, 2023).

Another insight emerging from the FGDs is that high power costs also arise because some manufacturers do not know how to operate the equipment while for others, they imported equipment that are not suitable for Uganda's context. Regarding use, the participants mentioned that some manufacturers switch on the equipment even when they have small quantities to process and every time the system is switched off, the starting process consumes a lot of energy. Concerning the adequacy of the equipment to the local context, the participants said that some of them are intrinsically too big for our local context, hence consuming a lot of power but producing little. The participants attributed this to the fact that most of the equipment are purchased when already made and thus not tailored. Regarding water, very few firms (19.5 %) reported insufficient water as a constraint (Table 6).

4.1.3 Transport and logistical costs

The transport and logistics value chain consists of many activities including transport, storage, handling, sorting, packaging, loading, clearing and forwarding. Transport and logistics costs are one of the key drivers of costs in manufacturing firms of Uganda. This is so because the Uganda's transport and logistics sector is inefficient, costing the country UGX 3 trillion annually[6]. At the firm level, transport and automobile expenses alone account for 17.4 % of the manufacturing firm's cost (Table 5).

In Uganda, there are two main logistics providers: own account (1PL) and third-party logistics (3PL) providers. Own account operations entail a company establishing its own transport and logistics department to manage its goods on its own, while in the latter, a firm hires a third party to perform the logistics activities on its own.

Uganda's third-party logistics sector is generally weak (World Bank, 2016). The sector is largely informal, the providers are small-scale, fragmented, unsophisticated and offer only one service. This results into fragmentation of the sector, a factor that complicates the quantification of service providers in the sector, the services that the small companies can provide and the skills needed to grow the sector. According to the FGD with key informants in the transport and logistics sector, it was reported that transport and logistics services are expensive in Uganda because the various logistics services are provided by different actors. For instance, if a manufacturer has goods to transport, they must lease a container, a truck and different clearing agents at different points if the goods have to cross borders. The key informants estimated that logistics services account for 40 % of the manufacturing cost. The key informants reported that some manufacturers have tried to circumvent logistics costs by creating their own logistics departments.

"The key informants estimated that logistics services account for 40 % of the manufacturing cost. The key informants reported that some manufacturers have tried to circumvent logistics costs by creating their own logistics departments."

Globally, the performance of a country's logistics industry is gauged using the Logistics Performance Index (LPI) (World Bank, 2023). This is an index generated when a country's trading partners evaluate its speed of trade in six key dimensions, that is: (i) efficiency of the clearance process (speed, simplicity and predictability of formalities) at customs; (ii) quality of trade and transport-related infrastructure ((e.g., ports, railroads, roads, information technology); (iii) ease of arranging competitively priced shipments; (iv) competence and quality of logistics services (e.g., transport operators, customs brokers); (v) ability to track and trace consignments; and (vi) timeliness of shipments in reaching destination within the scheduled or expected delivery time.

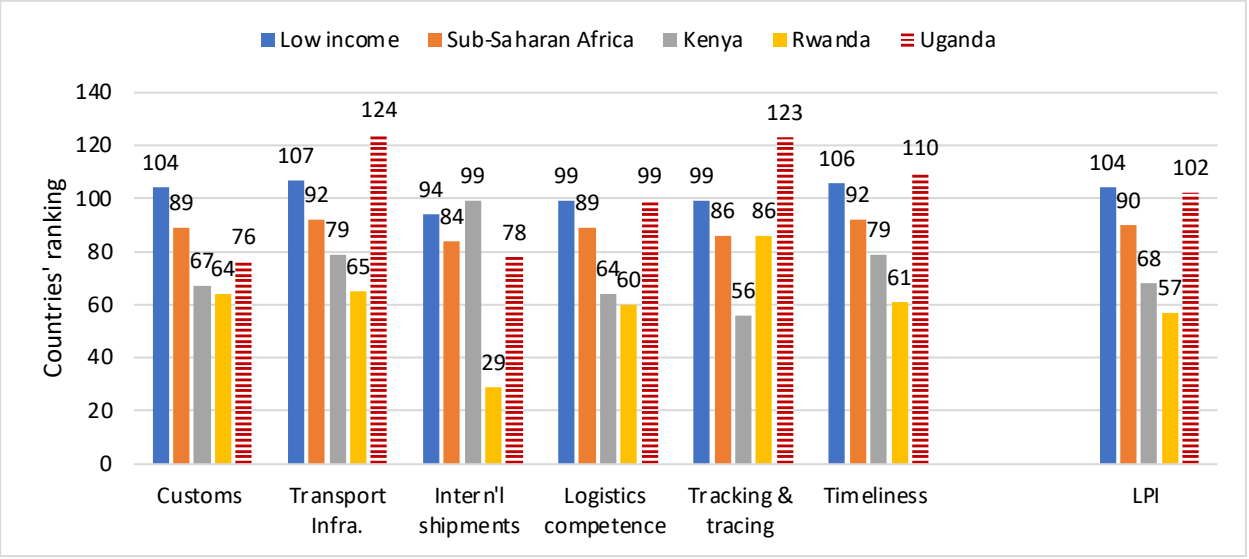
4.1.3.1 Efficiency of the customs clearance process

Secondary data analysis shows that Uganda's efficiency at customs is very low. Uganda ranks 76 out of 139 countries, being outperformed by Rwanda and Kenya ranking 64 and 67 respectively (Figure 4). Uganda's ranking is reflected in the results of primary data from firms, showing that it takes an average of 18 days to clear goods at customs. Respondents in the FGD with logistics actors mentioned that the customs clearance and tax payments are handled by agents. This alone is a cost to the manufacturers because they must pay the agents. Secondly, given that different agents are involved, this increases the cost of handling. For example, if a manufacturer imports goods, the agent that manages clearance at Mombasa port is different from the one managing the goods at Malaba (Kenya - Uganda border). In addition, almost a quarter (24 %) of the firms that imported raw materials paid an informal gift (bribed) to have their goods cleared at customs (Table 1 in Appendix). Such constraints result in non-tariff barriers (NTBs) at border points posing a big obstacle. It is no wonder that 58 % of the firms perceive the barriers at customs and trade regulation as a moderate to very severe obstacle (Table 1 in Appendix).

"Uganda ranks 76 out of 139 countries, being outperformed by Rwanda and Kenya ranking 64 and 67 respectively (Figure 4). Uganda's ranking is reflected in the results of primary data from firms, showing that it takes an average of 18 days to clear goods at customs."

6 https://www.monitor.co.ug/uganda/business/prosper/logistics-inefficiencies-cost-uganda-shs3-trillion-1777454, *Monday, September 10, 2018 — updated on January 03, 2021*

Figure 4: ***Comparison of Uganda's logistics performance indicators with other countries***



Source: Authors' analysis using World Bank Indicators (2023)

4.1.3.2 Transport infrastructure

Analysis of World Bank data shows that Uganda ranks 124 out of 139 countries in terms of transport infrastructure (Figure 4). Among the six key logistical indicators, Uganda's worst performance relates to poor transport infrastructure. This resonates well with the findings from the survey. First and foremost, almost all firms (99 %) use road transport to deliver the imported goods from the border to the firm (Table 1 in Appendix). According to the key informant interview with Uganda Freight Forwarders Association (UFFA)[7], road transport from Mombasa to Kampala and other points in Uganda is considered inefficient in terms of costs of transport, safety and protection of the environment. UFFA mentioned that road transport in Uganda is plagued with bottlenecks and inefficiencies, including the poor state of roads, traffic congestion along the key transport corridors and checkpoints which increase time and cost of logistics. The Association estimates that these inefficiencies cost Uganda $827 million annually, accounting for over 20 % of the sale price of goods. This discussion collaborates well with quantitative survey findings regarding firms' perceptions about road transport, where 61 % of the firms rated the mode of transport as a moderate to very severe obstacle to their operations (Table 1 in Appendix).

Besides being inefficient, road transport is expensive. From the FGD with logistics actors, it emerged that transporting goods by road say from Mwanza to Kampala costs US$ 21 cents per km per tonne while the same consignment costs US$ 2 cents when water transport is used and US$ 12 cents by rail. The actors mentioned that cost of road transport is exacerbated when fuel tariffs go high, a common phenomenon in Uganda.

"Besides being inefficient, road transport is expensive. From the FGD with logistics actors, it emerged that transporting goods by road say from Mwanza to Kampala costs US$ 21 cents per km per tonne while the same consignment costs US$ 2 cents when water transport is used and US$ 12 cents by rail. The actors mentioned that cost of road transport is exacerbated when fuel tariffs go high, a common phenomenon in Uganda."

It also emerged from the FGD that Uganda's transporters lack capacity (in terms of number of trucks) to serve all the manufacturers. The key informants reported that Ugandans own only about 20 to 30 % of the trucks used to transport goods between Kampala and Mombasa. The rest are owned by Kenyans which Uganda manufacturers hire to transport goods between Kampala and Mombasa. This implies that manufacturers in Uganda face competition due to scarcity of trucks, which hikes the hiring price charges. The scarcity in Uganda also explains why some firms opt to have their own trucks, a factor that presses undue pressure on manufacturers in terms of managing the fleet, paying drivers, maintenance, and repairs. The key informants reported that the high vehicle registration costs in Uganda explain why few trucks are in Uganda and the majority are registered in Kenya with lower registration costs.

7 *UFFA is an umbrella association of transport and freight logistics companies in Uganda. Their activities include customs clearance, transport, shipping, ICD/freight terminals and warehouses/storage operations. The Association membership handles over 90% of Uganda's import and export cargo.*

UFFA further reported that costs of cross-border logistics services provided by Ugandan logistic companies are higher compared to those of their Kenyan counterparts. The association attributes this to high taxes and user fees, expensive finance, and inefficiencies in road transport. Taxes in Uganda, particularly in regard to the importation of vehicles are relatively high compared to Kenya. In addition to import taxes, there are other indirect taxes (through fuel charges and tolls) that place Uganda haulers at a commercial disadvantage over Kenyan haulers.

Regarding expensive finance, it was reported that Ugandan logistics company that want to invest in new equipment face high interest rates between 20 % and 24 % whereas their Kenya counterparts can access financing at interest rates ranging between 11 % and 16 %. This limits Ugandans' ability to invest in new assets, instead they buy second or third hand vehicles that do not only use a lot of fuel but also make them incur high maintenance costs.

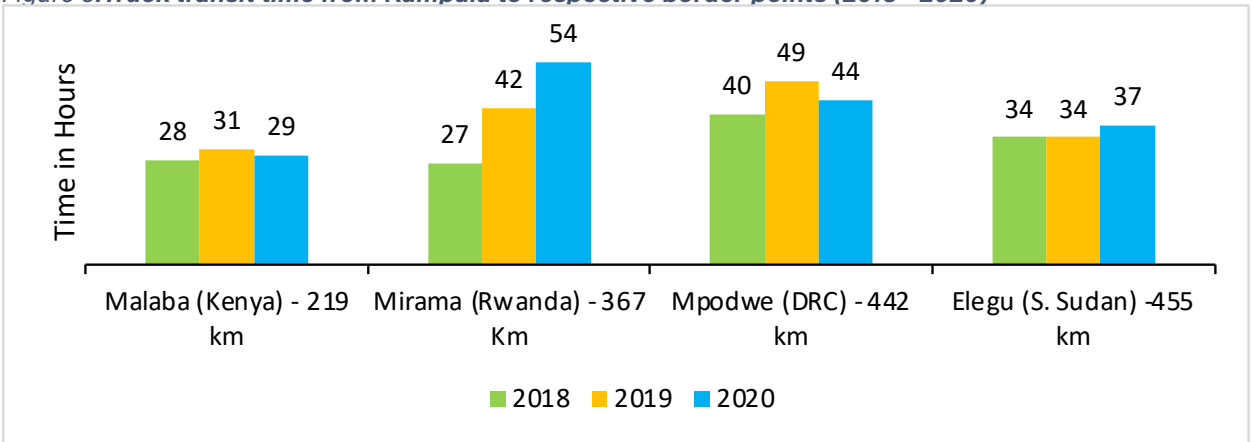
High import taxes coupled with the high cost of acquiring financing compels the transport and logistics providers to purchase their logistics provision from neighboring countries like Kenya. This explains why over 70 % of the trucks used in Uganda are registered in Kenya (World Bank, 2016).

Another factor that makes Uganda's transport sector relatively expensive is that there are fewer products to export in comparison to imports. It was mentioned that 70 % of the trucks that come to Uganda to deliver imports from Mombasa return with empty containers. This makes importation expensive because the manufacturers are charged twice when negotiating since the transport owners anticipate returning empty. The actors informed us that other countries have logistics hubs where cargo is centralised, and information is provided for trucks to pick cargo as they make the return journey.

4.1.3.3 Timeliness of shipments in reaching destination within the scheduled delivery time.

Poor transport infrastructure is associated with negative impacts on the timeliness of shipments to planned destination, which in turn has a direct eeffect on the costs of goods. According to the World Bank data, Uganda ranks 110 out of 139 countries in terms of timeliness (Figure 5). Compared to Rwanda and Kenya that rank 61 and 79, respectively. Figure 5 shows the driving distance and transit time for various goods from Kampala to several borders (One-Stop-Border-Posts) by road. Two insights emerge from the analysis. First, transit time to all the border points increased between 2018 and 2020. For example, transit time from Kampala to Mirama (Rwanda border) was 27 hours in 2018 but doubled in 2020. Similarly, transit time to Mpondwe (Kasese border) was 40 hours in 2018 but increased to 44 hours in 2020. The increase in transit time is an indicator that transport conditions are deteriorating, which in turn depicts an increase in transportation costs. The second insight emerging is that some shorter routes require more time to be covered than longer routes. For example, distance from Kampala to Elegu (South Sudan border) is the longest route with 455 km and it took about 37 hours for a truck to cover the distance in 2020. Conversely, Mirama which is only 367 km away from Kampala takes trucks the highest time (54 hours). Also, Mpondwe which is shorter than Elegu (442 km vs. 455 km) requires more transit time (44 hours) compared to Elegu (37 hours). The findings shed light that transport challenges exist on some routes, which explains why shorter routes require more time for trucks to cover.

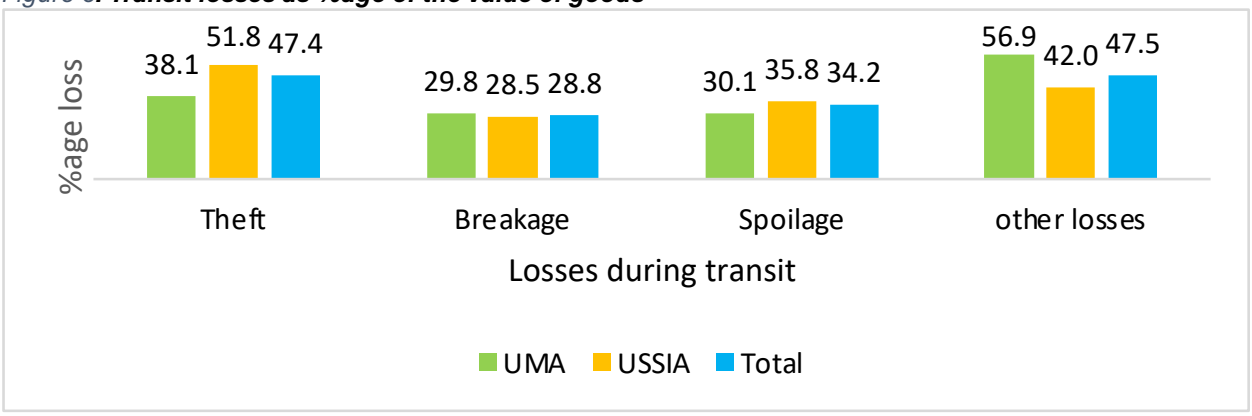
*Figure 5:**Truck transit time from Kampala to respective border points (2018 - 2020)***



Source: EPRC construction using URA-RECTS data

Besides poor transport infrastructure, inefficiency at weigh bridges also explains longer transit time. Key informants in the FGD mentioned that weigh bridges are usually congested with trucks. The informants mentioned that sometimes it takes two days to clear a backlog of trucks at the weigh bridges. Further evidence by a World Bank report (2016) indicates that the weighbridge infrastructure is inconsistent in displaying vehicle weights that vary from weighbridge to weighbridge and the staff working at the stations require up-skilling to increase their competence and productivity. Thus, the weigh bridges are regarded as non-tariff barriers. Due to poor transport infrastructure coupled with high transit time, manufacturers incur losses of many forms, including theft, breakage and spoilage. Survey findings show that firms incurred losses during transit that are estimated to be 47.4 % of the value of goods on board (Figure 6). This type of loss was relatively higher among USSIA firms (51.8 %). Losses due to breakages and spoilage were estimated to be 28.8 % and 34.2 % respectively.

Figure 6: ***Transit losses as %age of the value of goods***



4.1.3.4 Competence and quality of logistics services

The efficiency of the transport and logistics sector depends on the assured supply of a range of support services and people. The effectiveness of the sector is assessed on the performance of transport operators, custom procedures and warehouse facilities. The FGD revealed that there is a shortage of skilled manpower in various activities of the logistics supply chain. The biggest shortage was reported to be drivers of heavy goods vehicles, cold storage managers, heavy equipment operators, and warehouse managers. Regarding truck drivers, there is virtually no advanced driver training that encompasses defensive and fuel-efficient driving techniques. There is only one licensed private provider of truck driver training and no public provider. The private provider can only train 20 truck drivers per year at most because the training is expensive (costing about UGX 1, 250,000.00 ($340)), hence unaffordable for many truck drivers. Lack of training has often resulted into mechanical breakdown and accidents all at the expense of the manufacturers. Training of truck drivers is also hampered by low levels of education attainment. Most truck are school dropouts who are less likely to speak English. This discourages the drivers from attending trainings, which are usually conducted in English. Low education attainment has a knock-on effect on manufacturers because it hinders effective communication between the drivers and manufacturers most of which are foreigners.

> ***"There is only one licensed private provider of truck driver training and no public provider. The private provider can only train 20 truck drivers per year at most because the training is expensive (costing about UGX 1, 250,000.00 ($340)), hence unaffordable for many truck drivers."***

Relatedly, there are very few professional vehicle maintenance workshops in Uganda provided by vehicle distribution companies such as SPEAR motors and Toyota Uganda but these are only used by large manufacturers that can afford to buy brand new trucks. Smaller manufacturers, typical of UMA and USSIA firms rely on smaller facilities with no modern equipment and facilities to service modern goods vehicles. Just like truck driver training, there is a limited supply of trained truck mechanics and maintenance manpower. It is estimated that over 70 % of the truck maintenance workers and mechanics staff are not trained and not sufficiently skilled (The National logistics Platform, 2018).

Another logistics area that is grossly inefficient due to low-skilled staff is weighbridge operators. The World Bank (2016) reported that most staff require skilling-up. The responsibility of training weighbridge operators is with UNRA but reports by the Regional Lorry Drivers and Transporters Association (RLDTA) indicate that the authority has not conducted the training.

It was also revealed that there are a lot of inefficiencies in the logistics sector due to slow adoption and inability to use ICT to execute logistics services, a factor that does not only cause delays but also expensive to rely on traditional/manual technologies. Activities like transport management system, warehouse management system, web-based container management system require ICT which most actors have not adopted leading to un competitiveness when compared with other EAC states.

Shortage of skilled professional truck drivers and quality logistics services in general is hampered by lack of effective enforcement and regulation in the sector. For example, there are no licensing and registration requirements for companies offering logistics services, a factor that explains why there are many companies offering poor quality, low-cost services thriving. Notably, productivity and effectiveness of the sector is affected by failure to enforce the regulation of testing vehicle roadworthiness and licensing of truck drivers (World Bank, 2016). This lack of enforcement explains why there is a lack of demand for support skills such as vehicle mechanics and lack of incentive by the international logistics firms to invest in the country. Beyond the checking at the time of importation, vehicles are never tested for roadworthiness which poses a risk of having many defective vehicles on the road, and subsequently high logistics operational costs. Since the test for roadworthiness is not enforced, there is demand for vehicle inspection and maintenance facilities. Similarly, since there is no requirement for testing truck drivers, there is no demand for training provision for truck drivers. Currently, the only requirement to get a truck driver license is that one must have held a Class B license for at least three years and must be at least 25 years. Secondly, in Uganda, there is no distinction between rigid and articulated trucks. The implication is that there are low-skilled truck drivers who cannot provide quality logistics in their driving.

4.2 Costs in accessing foreign markets

Some of the firms (65 – 33.9 %) that participated in the survey were involved in exporting commodities to intra-regional markets including EAC, COMESA and AfCFTA. Such firms faced challenges which have a bearing on costs during export (Table 7). The biggest challenge was cumbersome customs and border procedures (66 %) followed by restrictive practices tolerated by Governments (59.2 %) and high logistical costs (54.5 %). These findings further confirm Uganda's poor ranking in the logistics performance indicators discussed in section 4.2.2. A new insight coming in this Table is government participation in trade as reported by 36 % of the firms.

Table 7. ***Constraints experienced during export trade***

Constraint	Total
Cumbersome customs and border procedures	65.9
Restrictive practices tolerated by Governments	59.2
High logistical costs	54.5
Procedural Problems (Transport, Clearing and Forwarding)	52.5
Limited access to export trade finance	47.2
Low production	42.9
Technical barriers to trade	41.1
High costs of standards compliance	38.2
Government Participation in Trade	35.9
Political factors leading to closure of borders	26.0
Sanitary & Phyto-Sanitary Measures	11.7

5.0 Conclusion

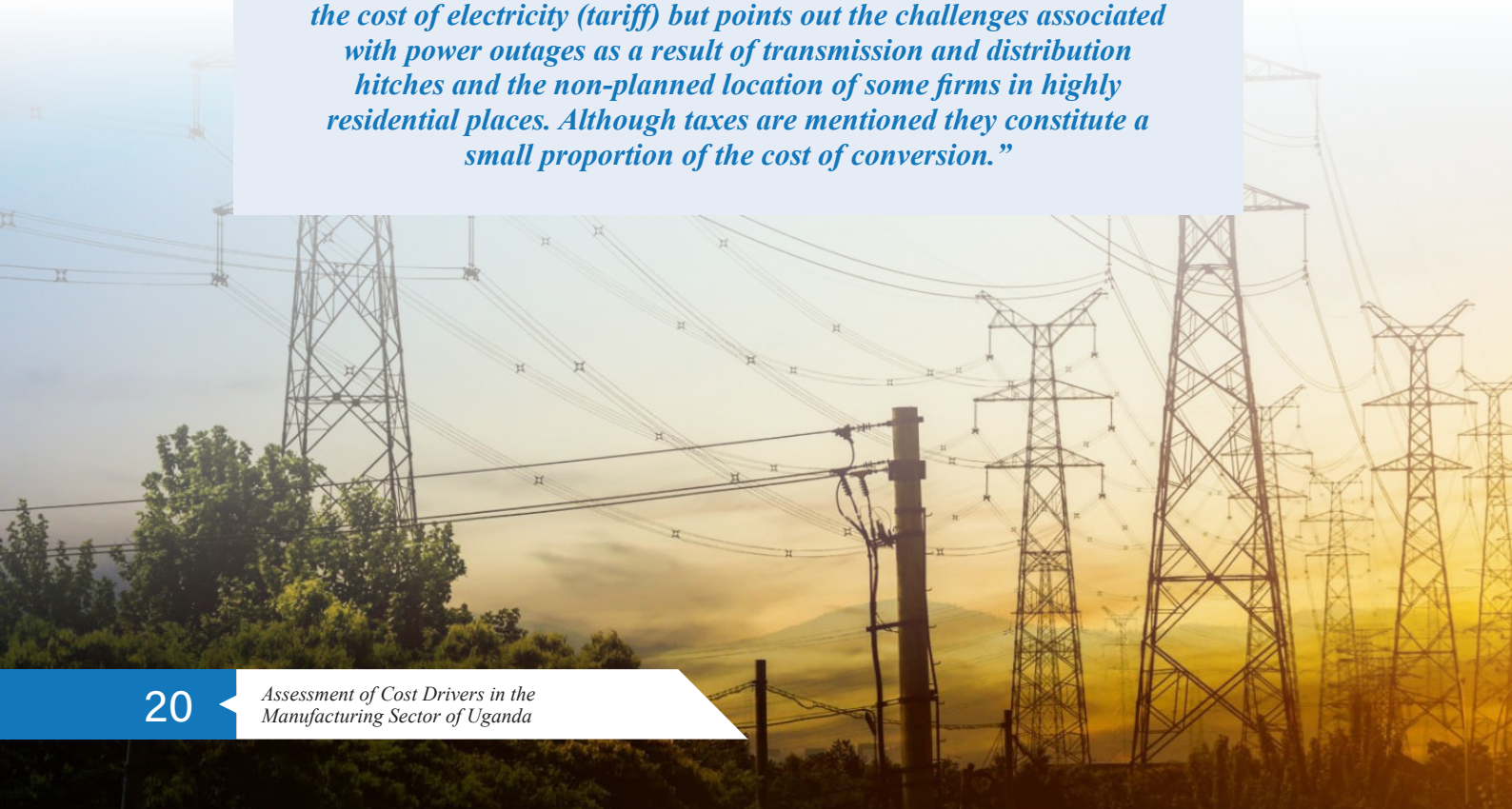
The study categorizes cost drivers into the following groups: cost of raw materials; conversion costs; costs due to macroeconomic factors; and cost of transport and logistics. It is established that the cost of raw materials drive costs high because firms have to import them due to poor quality, small quantities and inconsistencies of the locally available ones. Relatedly, it emerged that some locally available raw materials are significantly expensive to some manufacturers. Given these factors, imported raw materials constitute 52.2 % of the total amount used by firms, with the %age being higher for UMA (60 %). The associated costs of importing, such as logistics and taxes partially explain why imported raw materials drive costs higher than should be.

Among the conversion costs, labour and electricity costs are the most significant cost drivers accounting for 60 % of the total cost of conversion. The study confirms the efforts by Government to reduce the cost of electricity (tariff) but points out the challenges associated with power outages as a result of transmission and distribution hitches and the non-planned location of some firms in highly residential places. Although taxes are mentioned they constitute a small proportion of the cost of conversion. It is noted that these negatively affect the capacity utilization of the manufacturing firms in Uganda.

The last category of cost drivers is basically outside the manufacturing firm establishment and is reasonably beyond the control of the manufacturers. The cost of transport and logistics, especially for inputs and distribution of goods significantly increases the costs. This is because the country's transport and logistics value chain are very weak, a factor that leads to inefficiency. It is not integrated and is segmented and fragmented with informal owner-operated companies that provide just single services out of the entire transport value chain. This implies for a single transport activity; a manufacturer has to hire different segments of the logistics operators increasing transaction costs and consequently losses during transportation. It is therefore not surprising that key informants in the sector estimated that logistics services account for 40 % of the manufacturing cost. Relatedly, the other factors that explain the poor performance include, delays at customs; poor transport infrastructure; congestion and delays at weighbridges; low skilled staff managing logistic services account for the inefficiency with the knock-on effects on the manufacturers.

Therefore, the factors that drive costs of manufacturing in Uganda cannot be attributed to a single cause. Actually, a number of factors contribute to driving costs high with differing magnitudes. It is established that whereas some of these cost drivers such as labour and overheads are within the control of the manufacturing firms, others like logistics are completely outside their control making it difficult to handle. This implies that policy interventions should be specific to a cost driver.

"Among the conversion costs, labour and electricity costs are the most significant cost drivers accounting for 60 % of the total cost of conversion. The study confirms the efforts by Government to reduce the cost of electricity (tariff) but points out the challenges associated with power outages as a result of transmission and distribution hitches and the non-planned location of some firms in highly residential places. Although taxes are mentioned they constitute a small proportion of the cost of conversion."



5.1 Policy Recommendations

Table 8: Action Oriented Policy Recommendations

No	Challenge	Action Required	Justification
1	Deficiencies in the supply of inputs and raw materials	- Equip UNBS Technical & Administrative Capacity to regulate inputs - UNBS should fast-track accreditation of Uganda's goods internationally on the aspect of quality. - Conduct an in-depth analysis of the unavailable raw materials and inputs to pinpoint potential sources and subsequently foster policy-driven investments in those sectors.	- UNBS is currently under funded and facilitated to effectively implement their mandate - This may leverage the current government drive and intervention of import substitution to create backward and forward linkages within the manufacturing sector to reduce on imports of inputs
2	Expensive and unreliable transport and logistics services	- The Ministry of Works and Transport should set up a unit responsible for the entire logistics value chain with a view to regulate the different stakeholders. - There is a need to professionalize the logistics sector by enhancing skills of the logistics workforce including truck drivers, clearing agents to increases efficiency. - There is need to install in warehousing the requisite facilities to meet the recommended standards to ensure the quality of products under transportation and storage - There is a need for more cargo planes and negotiation of fair rates to increase air transport - There is need for an integrated mult-model system to leverage water (lake Victoria), rail and air in addition to road - Integrate the Railway systems of Uganda, Kenya and Tanzania to lower costs owing dealing multiple agencies - Reviews and amend the law that bars transporters from carrying cargo on the return to reduce the cost of transport.	- Uganda's logistics sector (such as freight forwarding, transport, warehousing, etc.) is largely informal, providers are small-scale, fragmented, unsophisticated and needs to be organized and integrated both internally and regionally to significantly lower logistics costs. - There is currently heavy reliance on road transport which has many challenges and is expensive
3	High cost and limited access to long term finance	- Ensuring that industrialisation drive is intentional as envisaged in NDPIII by easing processes of on-boarding especially priority sectors as enshrined in NDPIII. - Repurposing UDC/UDB to focus and catalyse industrialisation by identifying priority sectors for interventions - Segment and tailor the finance and credit terrain to be inclusive according to the needs of large, medium and small manufactures	- No nation has ever industrialised without Government being intentional to facilitate industrialisation. - Different manufactures require different financing models and approaches which should be exploited

4	High compliance costs to quality standards to penetrate international markets,	- Certification and licensing of private laboratories to undertake some roles of quality standards, - Strengthen the ties and coordination between UNBS and its international counterparts to improve the accreditation process of Uganda's products in markets where the country has market access opportunities. - Equip and coordinate the regional UNBS offices to address standards related issues for both inputs and final products.	- Standardisation of goods is the gateway for International Trade. - Although the process of decentralizing quality infrastructure and standards testing services by the UNBS registered good traction, there are outstanding challenges that need urgent actions:
5	Difficulty in accessing EAC Market on account of NTBs	- Enforce existing NTB counter measures framework (Monitoring committees and the EAC 2017 NTB law) - Strengthen the trade dispute resolution mechanism by reviewing the relevant protocols and including punitive actions for perpetuators - Increase awareness about existing market opportunities especially for SMEs	- NTBs have persisted in spite of the existence of strong legislation and frameworks to counter them, especially in the EAC region. This has resulted in manufacturers of affected products engaging in protracted processes with relevant agencies and often at the political level to resolve such disputes.
6	Power cost, quality and reliability issues	- Implement the bulk power purchase option for manufacturers and heavy power consumers since the legal and regulatory environment permits it now. There is no need for a "distribution" intermediary. - Allow for PPPs to facilitate works related to network up-grades and transmission infrastructure development given shrinking fiscal space for GOU	- This automatically eliminate middlemen/distribution to result into power cost reduction. - The PPP Law and Policy allows this. Most of sub-Saharan Africa is taking this route in light of shrinking fiscal space post COVID 19 and in the midst of global economic uncertainties.

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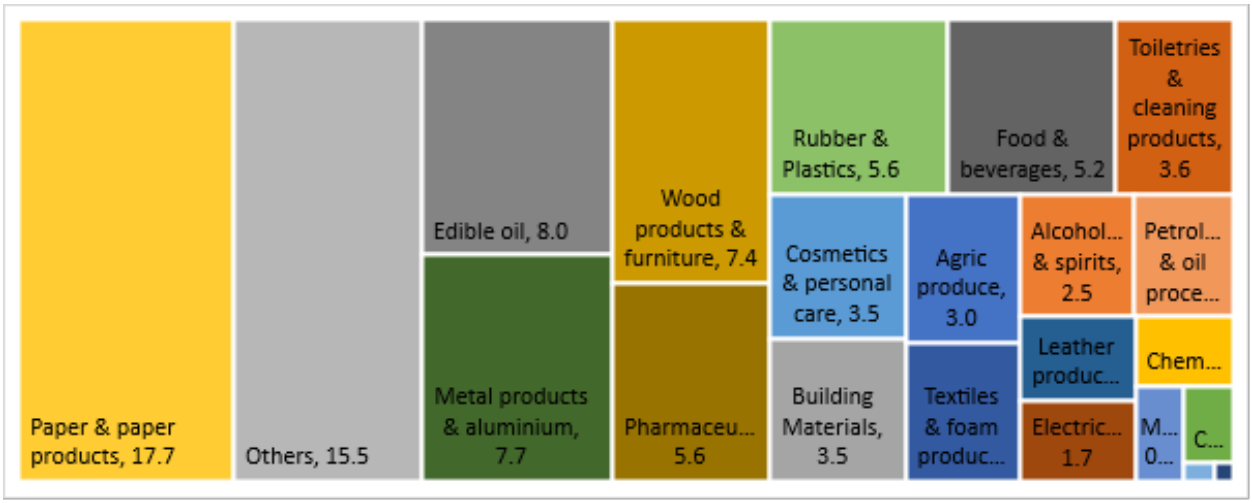
Appendix

The manufacturing firms were clustered into 22 sectors as illustrated in Figure A1 suggesting a fairly good representation of all the manufacturing sectors from the sample. It is observed that firms in the paper and paper products sector dominate the sampled manufacturing industry of Uganda, accounting for 17.7 %. This is followed by firms involved in edible oils (8 %), metal products (7.7 %), wood products (7.4 %) etc.

*Figure A1. **Manufacturing Sectors in the sample***



Notes: 'Others' include firms manufacturing cigarettes, gas, match sticks, smoking grill and mobile homes.

Source: EPRC construction from Manufacturers survey 2023

Table A1. Constraints involved while importing raw materials.

Variable	UMA firms	USSIA firms	All
Bribed at customs	25.00	14.29	24.05
Days to clear goods	17.78	17.38	17.74
Mode of transport			
Road	98.34	100	98.50
Railway	50		50
Water	24.33		24.33
Extent of obstruction by transport mode			
No Obstacle	13.51	25.00	14.63
Minor Obstacle	27.03	0.00	24.39
Moderate Obstacle	35.14	37.50	35.37
Major Obstacle	17.57	12.50	17.07
Very Severe Obstacle	6.76	25.00	8.54
Extent of obstruction by customs & trade regulations			
No Obstacle	13.70	50.00	17.28
Minor Obstacle	27.40	0.00	24.69
Moderate Obstacle	30.14	25.00	29.63
Major Obstacle	17.81	12.50	17.28
Very Severe Obstacle	10.96	12.50	11.11

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LEAD FIRM STRUCTURE PROJECT

PROJECT FACT SHEET

The Private Sector Foundation Uganda (PSFU), Uganda's apex body for the private sector in Uganda, is collaborating with the Mastercard Foundation's Young Africa Works to implement the Enhancing the Lead Firm Structure for Youth Employment Project.

As the Anchor partner, PSFU will coordinate with the Government as the Secretariat of the Steering Committee on one hand and facilitate all partners under Young Africa Works Uganda to deliver their interventions successfully while implementing its specific interventions.

Intervention Title:

Enhancing the lead firm structure for youth empl oyment.

A Lead Firm can either be an organisation driven by private interests such as profit or one whose purpose is furthering shared prosperity through the promotion of private enterprise/business.

Intervention Goal:

The in terventions in this p roject are aimed at holistically add ressing different growth challen ges of Lead Firms in high value-chain products and the MSMEs and grassroots producers engaged in their respective value chains.

Project Budget:

$41 **million**

Duration:

5 **years**

Project Objectives

- Increase production and growth at household, MSME and Lead Firm levels.
- Increase incomes of the population which will stimulate greater demand for goods and services
- **Secure direct dignified and fulfilling work** for 281,960 for young people

Expected Project Outcomes

70%
young women in dignified and fullfilling work

$1,040
in youth annual income

281,960
direct work opportunities for young women and men.

Project **Implementation Strategy**

Implement the Lead Firm Structure (LFS) Model

Promote market Lead and production linked value chains that enable youths to gradually have four revenue sources and increase their income.

Build Capacity of Enterprise/Firm Level growth enablers.

By improving the competences of leaders and entrepreneurs through specially designed workshops, mentoring and coaching interventions.

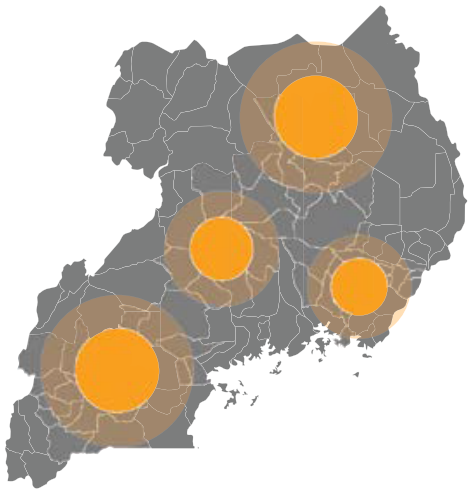
Create a conducive ecosystem for new and existing businesses to grow.

Work with Young Africa Works Uganda partners to identify challenges, conduct analysis and research, build consensus and seek dialogue with policy makers aimed at creating a conducive and sustainable business environment.

Establish a Private Sector Catalytic Fund which will provide entrepreneurs and SMEs with affordable, appropriately structured capital financing accompanied by technical assistance.

Districts Of **Operation**

The intervention intends to cover all major regions of the country



Focus **Sectors**

- **Agriculture**
- **Manufacturing**
- **Tourism**
- **Trade & Allied Services**
- **Construction**

Actors In **Route To Market**

Provide a market and determine quality and standards that enable the value chain strive.

These support Lead Firms and MSMEs in reaching, mobilising and sustaining young women and men in their transformation.

Lead Firms

MSMEs

CBOs / MBOs /Support Associations

Households

Provide goods and services that facilitate production of input or distribution of output for the Lead Firms.

Households are empowered to produce or distribute individually or collectively according to the quality and standards set by the Lead Firm.

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