

JUNE, 2014

Are feasibility studies guiding the Industrialization process?

Overview

A feasibility study is an analysis of the viability of an idea. The feasibility study focuses on helping answer the essential question of “should we proceed with the proposed project idea?” All activities of the study are directed toward helping answer this question.

Feasibility studies can be used in many ways but primarily focus on proposed business ventures. Industrialists and others with a business idea should conduct a feasibility study to determine the viability of their idea before proceeding with the development of a business. Determining early that a business idea will not work saves time and money. A feasible business venture is one where the business will generate adequate cash-flow and profits, withstand the risks it will encounter, remain viable in the long-term and meet the goals of the founders. This policy brief analyses the contribution of feasibility studies in guiding implementation of government industrial projects.

Key Issues

1. Most government industrial projects are not guided by feasibility studies.
2. Implementation of Industrial projects without feasibility studies leads to low project success and hence wasteful expenditures.
3. Feasibility studies of some government industrial projects are undertaken in the middle of project implementation.

Background

The industrial sector is an integral part of the Uganda government’s overall development strategy outlined in the National Development Plan (NDP) and Vision 2040. Experiences from developed and emerging economies show that there is a strong positive correlation between industrialization and development. “The 2008 global financial crisis publicised the need to have a strong industrial base to cushion the economy from external shocks *Uganda Vision 2040 April 2013*. A strong and competitive industrial base is therefore, important to create employment and a resilient economy.”

Experiences from East Asian countries, such as Malaysia, Singapore, Vietnam, Indonesia, Korea, China

and Japan among others provide good lessons of more successful industrialization paths that Uganda can take given the enormous potential. In most of these countries, governments had to directly establish and sustain key strategic/lifeline industries.

Rationale of the brief

Through Uganda Industrial Research Institute (UIRI), Uganda National Council for Science and Technology (UNCST), Ministry of Trade, Industry and Cooperatives (MTIC), Uganda Investment Authority (UIA) and the Ministry of Finance, Planning and Economic Development (MFPED), government has been supporting innovations, research and the development of value addition industries with some success and setbacks.

The brief compares implementation of selected projects monitored by the Budget Monitoring and Accountability Unit (BMAU) between FY 2011/12 and 2013/14. These include: Arua Fruit Factory, Buhweju Tea Factory, Fresh Vacuum Sealed Matooke, Luweero Fruit Factory, Soroti Fruit Factory, and the Presidential Initiative on Banana Industrial Development. The focus is on the extent to which feasibility studies guide implementation.

Level of success of projects with and without feasibility studies.

Project Name	Presence of feasibility study (Yes/No)	Level of success (High, Moderate, Low ¹)
Arua Fruit Factory	No	Low
Luweero Fruit Factory	No	Low
Soroti Fruit Factory	No	Low
Fresh Vacuum Sealed Matooke	Yes	High
Presidential Initiative on Banana Industrial Development	No	Low
Buhweju Tea Factory	Yes	High

Source: Author's compilation

Arua Fruit Factory

Uganda Industrial Research Institute (UIRI) in partnership with an *incubatee* planned to promote fruit production and value addition through processing of fruits in West Nile region.

In FY 2009/10, UIRI approved a proposal to set up the facility in Arua district and the project was expected to be completed in three years. The project was selected because of its viability based on fruit production data from the zonal agriculture office and the *incubatee*. On completion, it was anticipated that 500 litres of fruit pulp would be processed per hour and about 30 people employed in technical, research, administration and marketing. A total of Ug shs 1.3 billion was spent on factory construction and equipment.

The plant was substantially completed in 2012 except the external works that were still outstanding by March 2014. The factory was commissioned in December 2013 with mango juice as the flagship product; however, factory operations had not

fully started. Implementation of this project was not premised on a thorough feasibility study, the *incubatee* did not have sufficient capital to invest in acquisition of raw materials, staff salaries, transport units and other software requirements necessary for business take off. On the other hand, UIRI was not substantially funded to support all the requirements of the *incubatee*.

Buhweju Tea Factory

The idea of building a tea factory in Buhweju was conceived in the early 1970s with the objective of processing the green tea leaf produced from Buhweju, and reducing poverty by improving household incomes.

In 2005, Igara Growers Tea Factory under the umbrella of Uganda Tea Development Association (UTDA) with support from DANIDA conducted a feasibility study to determine the viability of the project. At the project inception, the total estimated project cost was US\$ 7.44 million. Implementation commenced in 2008 and was expected to be completed in 2013. The project was expected to be jointly financed by Government of Uganda (GoU) with a grant of US\$ 3.2 million, a bank loan of US\$2.805 million and residential building and working capital by Igara Growers Tea Factory of US\$1.43 million. With effect from FY 2008/09 to February 2014, GoU had disbursed a total of Ug shs 6.8 billion to the project. Igara Growers Tea Factory (promoters of Buhweju Tea factory) spent Ug shs 9,003,018,182 on machinery and preliminary set up costs.

By March 2014, most of the deliverables on construction of the factory were 100% complete apart from external works. The factory was operational and processing between 45,000Kg to 80,000kg of green leaf per day during off peak and peak seasons respectively and directly employing 283 staff and over 2,820 farmers. In spite of the incomplete external works among other challenges, the project has successfully achieved the set objectives. The feasibility report guided key decisions with accurate information and enabled external funding from financing institutions and equity investment from Igara Growers Tea Factory.

Fresh Vacuum Sealed Matooke (FREVASEMA)

The project started as a science research under Uganda National Council for Science and Technology with the main objective of; establishing ways of industrializing in a fresh form, the post-harvested banana fruit and its by-products. It involves peeling *matooke*, inactivation of spoilage enzymes using a conventional salt; it is vacuum sealed in food grade processing bags to guarantee the shelf life of up to 45 days under chilled conditions. During the four year project duration which started in 2009, GoU invested Ug shs 1.2 billion in research and a feasibility study was undertaken before commercialisation. All the project objectives were met and the key product is regularly shipped to USA as well as major Ugandan supermarkets.

Luweero Fruit Drying Factory

The key needs of the fruit farmers in the Luweero Triangle are: readily accessible markets, fair pricing for their produce, cost effective and easily accessible storage and infrastructure, and value addition. Due to lack of these requirements, the area was experiencing high post-harvest losses during peak production seasons. It is against this background that in February 2008, pineapple farmers in Luweero under the Natural Uganda Cooperative Society Limited (NUCSL) petitioned His Excellency the President for a fruit processing plant, to add value to their organic pineapples in order to attract both domestic and international markets.

During FY 2010/11, a total of Ug shs 115 million was released to the cooperative society to procure five acres of land in Luweero on which the processing plant was to be established. After procuring the land, it was noted that a feasibility study for this project had not been conducted and the cooperative society wanted GoU to contribute 100% to this venture. Uganda Development Corporation (UDC) was tasked to regularize the project activities by transferring the land into the names of Uganda Land Commission (ULC) and conduct a feasibility study; however, NUCSL was not cooperative.

In May 2013, a consultant to undertake the feasibility study was procured and a final report which

confirmed the viability of the project submitted to UDC in December 2013. The report recommended securing an alternative piece of land and conducting a detailed Environmental Impact Assessment (EIA) which had been under looked before.

This project was not originally premised on a feasibility study which greatly affected its implementation. For example land was procured by MFPE and issued to NUCSL which rejected the new arrangement of transferring it to ULC in favour of UDC.

Presidential Initiative on Banana Industrial Development (PIBID)

Resulting from a doctoral dissertation (PhD), this pilot project of the GoU is premised on the theory that rural farmers with access to science-led-processing and value addition enterprises will be able to rapidly access profitable market chains that supply local, regional, and international markets leading into increased household incomes. The key expected outputs of the project are a state-of-the-art rural based banana processing industry constructed at Nyaruzinga (Bushenyi district) based on the technology business incubator framework, model irrigation system and research laboratories.

The Nyaruzinga plant was expected to process about 16 metric tons of raw *matooke* per day. The project commenced in 2003 and was expected to be completed within five years (2008). By March 2014, a total of Ug shs 68 billion had been released for project implementation; however, the project was yet to be completed. One of the key challenges for delayed achievement of the project key outputs identified by a value for money audit was the lack of a feasibility study to thoroughly examine the probability of implementation success, and mitigate any drawbacks in the critical path.

Soroti Fruit Factory

The project is a proposed government direct intervention aimed at providing value addition in fruit processing for promotion of industrial growth, income diversification and increasing household incomes in Teso region. In 2005, citrus farmers under the umbrella organisation of Teso Fruit Farmers' Association asked for support from the

President of Uganda to establish a fruit factory for value addition and reduce post harvest losses. In FY 2008/09, GoU through the MFPEP prioritised the project in the public investment plan with a budget of Ug shs 5 billion. A five acre piece of land was acquired in Soroti industrial park as a proposed site for the factory. However, preliminary arrangements had not been undertaken including a feasibility study and an EIA which restricted project takeoff.

In February 2011, GoU received a grant offer of USD 7.4 millions for a turnkey fruit processing facility from the government of South Korea channeled through the Korean International Cooperation Agency (KOICA). By March 2014, a total of Ug shs 6.1 billion had been released to the project as GoU counterpart funding and no funds had been released by KOICA yet.

In FY 2011/12, a feasibility study was conducted and according to KOICA's technical review, the processing capacity of the proposed facility was estimated at 6.0 tonnes per hour for oranges and 2.0 tonnes per hour for mangoes both at an average of 20 hours per day. The feasibility study identified the type of equipment for the factory, structural designs, analysis of juices and preliminary requirements.

Ground breaking for construction of the fruit processing factory which was originally expected to commence in January 2013 has been twice extended to December 2013 and June 2014 to allow completion of preliminary requirements including; extension of power and water to the project site, construction of paved roads in the industrial park, identification of land for a waste treatment plant and a perimeter fence around the project site. Although the feasibility study streamlined the project viability and critical path, implementation is rather slow as the funders' preliminary requirements are yet to be fulfilled.

CONCLUSION:

A feasibility study is conducted prior to design, procurement and construction stages in order to determine the viability of project, decide whether to proceed with the project or not and avoid undesired losses. In industrial projects, wrong decisions might lead to wasteful expenditures to governments and bankruptcy for private investors. Only two of the reviewed six government industrial projects were guided by feasibility studies at inception and their implementation was generally successful.

Individuals and government agencies might have good initiatives and the resources to establish economically successful projects but without feasibility studies, they might either select inappropriate type of industry that might turn the investment to a failure or might not include some crucial considerations into account. This affects implementation as shown in Arua Fruit Factory, Luweero Fruit Factory and the Presidential Initiative on Banana Industrial Development.

Therefore, for government to appropriately support industrial projects, feasibility studies should be a requirement.

Although feasibility studies greatly contribute to determining the success or failure of business implementation, other factors such as business plans, availability of skilled personnel, capacity of investor and funding ought to be emphasized.

References:

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