

**AN EMPIRICAL STUDY ON THE USE OF NEW PRODUCT
DEVELOPMENT PRACTICES: BEST PRACTICES IN SMALL AND MEDIUM
ENTERPRISES BASED IN TANZANIA.**

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List of abbreviations

ADBG	African Development Bank Group
CIA	Central Intelligence Agency
EUFIC	European Food Information Council
NPD	New Product Development
PDI	Product Development Institution
PDMA	Product Development Management Association
R&D	Research and Development
SIDO	Small Industries Development Organisation
SMEs	Small Medium Enterprises
URT	United Republic of Tanzania
UN	United Nations

Declaration of Originality

I, NDERUNGO Nicholas John, thus proclaim that this Independent Report as original and has not been submitted to any other educational institution. The information obtained from other sources have been properly cited and acknowledged.

NDERUNGO Nicholas John

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Abstract

The economic performance of several African countries has created an ‘Africa rising’ narrative where further progress – and catch-up to the developed world – seems probable. Immense contribution of Small and medium enterprises (SMEs) have been recognised in economy. Nonetheless, their survival and strength to compete in the market largely depends on their ability to develop new products. The study of new product development best practices in SMEs could be a possible approach to sustain and improve the product development activities as well as increase product development success in SMEs.

However, literature shows a research gap in product development practices in SMEs in Tanzania and Africa in general. As an effort to fill the gap, this study adapted the Barczak and Kahn, NPD best practice framework (2012), a more recent NPD best practices to study NPD practices in food processing SME’s in Tanzania. We studied how 3 food processing SMEs that are ranked high in NPD success by SIDO (Small Industries Development Organisation) through a public program for SMEs promotion under the Tanzania Government translate these NPD best practices in their actual practice as well as studying the characteristics of two most important dimensions perceived as overly important by SMEs.

The results are insightful and conceivably useful particularly by SMEs practitioners and policy makers in Tanzania. In contrary, the results show that NPD in SMEs in Tanzania also sensitive to these NPD best practices. In fact, they give different level of importance on the seven dimensions of NPD best practices. Overall, they are more sensitive to strategy, commercialization, and research than process, metrics, climate and culture. Furthermore, strategy and commercialization were seen as the most important best practice, and climate and culture as the least important. The paper concludes with results and discussion, limitations and recommendation for further research into this area.

CHAPTER 1: BACKGROUND OF THE STUDY

The economic performance of several African countries has created an 'Africa Rising' narrative where further progress and catch-up to the developed world seems probable. Small and medium enterprises contribute significantly to the income generation and joint creation thus remain the key player for the achievement of inclusive growth in Africa (ADBG, 2012).

In Tanzania, the economy highly depends on SMEs sector. Typically represent over 99% of all business units in Tanzania, a significant source of job creation and produce substantial retributions in domestic and export activities (URT, 2003). Large numbers of SMEs are engaged in the agriculture industry that has remained dominant to other industries such as manufacturing, mining, commerce, and services. Also, dominates innovation and product development particularly in the agriculture sector.

However, the ability of SMEs in Tanzania to develop successfully new products is identified as one of the most serious challenge, facing and hampering further progress (URT, 2003). This can be attested by the relative size of local finished goods and the increase presence of import products in the country as well as customers preference over local products. Companies from giant economies like United States and Japan and emergent economies such as China and India who are described as having best product development practices in place and ability to implement systematically than local SMEs, consequently their products attain higher market successes than local products from SMEs in Tanzania.

Product development is fundamentally the methods or practices applied to lead a product and service to the marketplace and it is vital to the success of any company. (Krishnan, 2001). Krishnan (2001) asserts that, "New product development practices offer great advantage to the consumers and the company. New product refers to 3 main attributes, which are being new to the company, national market and international market (Jensen et al. 2007). But, in this study, it explicitly include, new to the company and the national market. This study has purposively disregarded new to the international market as a measurement of new product since it is not common among SMEs in Tanzania.

The success of creating a unique superior product that conveys exclusive advantages and better an incentive to the customer will lead to the end success of the company which can be gauged as reaching high customer use, stipulated market share, sales growth, and profit. " In this study, the term success in NPD is described as reaching high customer use of the product and stipulated market share, and sales growth.

The successful companies have the ability to develop NPD best practices and implement it systematically (Adams – Bigelow, 2004). It aids companies to enhance their ability to respond to market needs, produce products that meet performance and standards (Gomez, 2007). Inventing new methods is very expensive. It requires a considerable investment of resources and capabilities that are inherently scarce for SMEs in general and even scarcer for SMEs in Tanzania (Jean, 2005). Therefore, companies opt to benchmark the NPD method or techniques from the successful companies to keep up with these evolving and sophisticated practices. All in all, it is necessary for companies to continue learning by inventing a new process or benchmarking from the successful companies

Large body of researchers and product development practitioners have made effort to explain these NPD dimensions that stresses on strategy, research, process, commercialisation, metrics, organisation climate and culture and prescribed them as best practices in NPD (Barczak, 2012). Much of these efforts have been directed towards large companies and countries in developed regions especially such as United States (PDMA, 2003-04). In the contrary, limited work has been directed towards small companies and countries from developing regions such as Tanzania.

On the ‘high way to development’, there is a case to improve the NPD practices and carve a niche identity as innovators in Tanzania. Thus, numerous efforts from public and private sector have been designed to promote innovation and new product development abilities among SMEs in different sectors. This has been accomplished to great degree to support viable administration of NPD practices and systematically implementation of these practices. As result of such efforts, food products development is on the rise. We have begun to see several SMEs launching products that begun to appeal in the marketplace and obtaining high stipulated market share.

Considering the recent success rate of new products in food processing SMEs in Tanzania, increases the desire to understand what drives their new product success. Considering the limitations on studies pertaining NPD practices in food processing SMEs in Tanzania, this study and related research questions attempt to address this gap, feeds into theoretical and practical debate of NPD practices for SMEs particularly in Tanzania.

Three sample SMEs were selected from Small Enterprises Innovation Program for SMEs promotion conducted by the Tanzania Government under SIDO (Small Industries Development Organisation). The SMEs are top performing companies in product development and are successful in each independent food processing products. Top performing companies are described as having best product development practices in place

and implement it systematically consequently they have higher market and commercial successes than bottom performers (PDI, 2010). We attribute their product success to their NPD practices.

For that reason, this study determined to explore their NPD practices. Adapting the Barczak and Kahn NPD best practice framework (2012), a more recent NPD best practices to study NPD practices in food processing SME's in Tanzania. The framework provides seven key dimensions and their characteristics as best practice. We studied how SMEs in Tanzania translate these NPD best practices in their actual practice as well as studying the characteristics of two most important dimensions perceived as overly important. Specifically, with a sample of 3 food processing SMEs, we measured relative importance of each dimension and studied the characteristics of two most important dimensions perceived as overly important.

1.1 Objectives of the Study

The general objective of the study was measuring the relative importance of each dimension of NPD best practices as perceived by the 3 food processing SMEs in Tanzania. Also study the characteristics of two most important dimensions marked as overly important by the three SMEs.

1.2 Questions of the Study

The study used two research questions, which shaped the flow of the study:

- (i) How important is each of the dimensions to the overall NPD success?
- (ii) What are the actual characteristics of two most important dimensions by SMEs in Tanzania?

1.3 Significance of the Study

To Small and Medium Enterprises, the study will build an understanding of the existing NPD knowledge and actual NPD practice and prospects of enhancing SMEs effectiveness in new product development. A better understanding of SMEs and NPD practices provide a chance for stakeholders to instigate superior ways that will result in NPD success and economic growth. This will provide them with a high range knowledge, opportunities, and choices to improve NPD practices in their companies.

Furthermore, the study can lay a foundation for future study towards NPD in Tanzania. The study will be useful since it will add knowledge to other researchers intending to study about SMEs and NPD practice, in theory and practice.

The study will be significant to the policy makers-especially in the Ministry of Industry and Trade to understand how SMEs translate the contemporary NPD best practice into actual practice, with prospects of enhancing SMEs effective practices in Tanzania.

1.4 Organization of the Study

This paper follows the following structure, which shaped the flow of the study. Chapter one introduces the background of the study. Chapter two composed the review of the literature. Chapter three provides the research methodology. Chapter four contains survey results. Finally, Chapter five is about analysis and discussion, limitation of the study, conclusion and recommendations drawn from the findings of the study.

CHAPTER 2: LITERATURE REVIEW

2.1 New product development

It is linked to various activities from the discovery of opportunities in the marketplace and proceeds to the development and selling of the product or service (Krishnan, 2001). The economic success of companies highly rest on their ability to respond to the customer needs (Ulrich, 2012). It aids companies to enhance their ability to respond to market needs, produce products that meet performance and standards (Gomez, 2007). Although much of the activities can be useful in the development of a broad range of products and services, this study explicitly focuses on products that are physically produced in food processing industry.

Jensen et al. (2007) described new product in 3 main attributes, which are being new to the company, national market and international market. But, in this study, it explicitly include, new to the company and the national market. This study has purposively disregarded new to the international market as a measurement of new product since it is not common among SMEs in Tanzania.

Krishnan (2001) asserts that, “New product development practices offer great advantages to the consumers and the company. The success of creating a unique superior product that conveys exclusive advantages and better an incentive to the customer will lead to the end success of the company which can be gauged as reaching high customer use, stipulated market share, sales growth, and profit.” In this study, the term success is described as reaching high customer use of the product and stipulated market share, and sales growth. Even though, all the SMEs were unwilling to provide documented evidence of their success but according to SIDO - Small Industries Development Organisation, they are considered successful SMEs in food processing sector in Tanzania.

In the mix of deep social, economic, environmental challenges, rapid technological changes, competition, increase sensitivity of customer’s needs, and product variety expansion, product development is crucial to the business. Companies need to innovate all the more productively and efficiently for long term survival. Thus, the need for effective new product development practices is on high demand so as to introduce successful products that are based on customer real and future value.

The secret of successful companies to develop and introduce successful products can be related to using the best practices in this field. Top performing companies are described as having NPD best practices consequently their products have higher market share and commercial successes than bottom performers (PDI, 2010). Best performers in NPD have a

tendency to follow certain practices in place to guide NPD efforts and the systematic execution, makes it more efficient and effective (PDMA, 2003-04)

2.2 Best Practices in New Product Development

To understand the new product development best practice, it is important to also define best practice. Meaning to what are “best practices”. The meaning of the word can be broader and narrower than that of original word. ‘Broader’ because it is taken to mean best practices in different spheres of life. ‘Narrower’ because it has come to apply for a particular kind of field. “Best practice is a procedure that has been shown by research and experience to produce optimal results.” (dictionaries.com, 2017). In its contextual meaning, “best practice is a method, technique, process or activity that is more effective at delivering a particular outcome than any other method, technique, process or activity.” (Camp, 1989). In this study, we use best practice to imply optimal methods or activities that guide the NPD success.

Developing a successful new product that achieve high customer use and market share is a challenging task. Approximated 46% of resources channelled to NPD are fruitless (PDI, 2010). In the effort to develop and introduce products to the marketplace, different studies have discovered that companies follow a certain framework to guide their activities. Nevertheless, some products fail and others succeed in the marketplace. In studying successful companies and how they develop and introduce successful products, their methods or activities are revealed as best practices. In spite of high failure rate and having no guarantee of product success, companies need to always innovate to expand productivity and profit objectives. Therefore, these best practices remain crucial for managing development and mitigating the risk.

Top performers in NPD have a tendency to follow certain practices in place to guide NPD efforts and the systematic execution, makes it more efficient and effective (PDMA, 2003-04). “As business and environment evolve, has required continuous refurbishment of the old NPD practices (Paulk, 1993). Proactive companies anticipate the need for new products or process and respond quickly.” Therefore, it is necessary for companies to continue learning and inventing a new process or benchmarking from the successful companies.

Numerous studies have been undertaken as an effort to understand contemporary NPD practice. Large body of researchers and product development practitioners have prescribed several practices as best practices. They made effort to explore NPD dimensions

as best practice, the relative importance these dimensions and their characteristics (Cooper, 1995).

In this study, the seven dimensions of NPD best practices by Barczak (2012) were adopted as a research instrument. The framework originated from the former studies by Product Development Management Association and American Product Quality Centre (Barczak, 2012). It is more recent and relevant NPD best practices in a constant changing body of knowledge. The framework stresses on strategy, research, process, commercialisation, metrics, organisation climate and culture as best practices.” (Barczak, 2012). They are viewed as definable set of practices across increasing levels of performance, including product development management (Adams – Bigelow, 2004). It has been applicable to study both SMEs and large companies (Nicholas, 2011). Therefore, we attribute it with the generalizability across different global contexts.

Limited effort has been directed towards studying companies from developing regions such as Tanzania. For that reason, this paper show results on NPD in Tanzania, based on similar survey conducted by Metikurke for his PhD dissertation paper. His paper presented results from the research on New Product Development (NPD) in New Zealand (Metikurke, 2011). The study made some minor adaptation, mainly to show results from our findings but did not intend to make any comparison from the proceeded study.

The study explored the NPD activities from SMEs in Tanzania. The main objective was to get an overview of how the 3 food processing SMEs in Tanzania translate their actual practice in comparison with the conceived NPD best practices. Specifically, with a sample of 3 food processing SMEs, we measured relative importance of each NPD best practice dimension and study the characteristics of top two most important dimensions as perceived by the respondents.

Under the view that the paper will help SMEs to absorb new inputs about NPD practices, stir up the debate to improve the current practices and last but not least to act as a means to an end towards transforming to contemporary NPD practices by SMEs in Tanzania.

2.3 Seven Dimensions of New Product Development Best Practices

There are seven NPD dimensions such as strategy, research, process, commercialisation, metrics, organisation climate and culture as NPD best practices (Barczak, 2012). They are explained and characterized below.

Strategy is defined as having defined and planned vision. With a strategy, it becomes easier to identify, select, and prioritize projects as well as resources. It is linked to competitive advantage against competition and positive performance (Cooper, 2002). It has a

crucial role in NPD success. I see it as a blueprint that facilitates the activities and the people involved in the NPD. It establishes criteria used for prioritizing projects and allocating resources thus ensures sufficient resources allocation for NPD efforts within the firm (Parry, 2009). Thus, it contributes towards effectiveness and creating harmony among the stakeholders in NPD.

Successful companies in NPD have several characteristics including having clearly defined strategy with long term view of NPD, strategic arenas for new opportunities have been defined, awareness of the NPD strategy within the organisational, continually review and update NPD strategy to reflect changes to the market place (Barczak, 2012)

Processes are organised set of steps that organisation apply to conceive ideas, design and develop, and lastly commercialize a product. Top performers follow a precise and detailed NPD process (Ulrich, 2012).

Successful companies in NPD have several characteristics including have NPD stages and gates for generating ideas, design and develop, and lastly commercialize a product. Clearly pre-defined Go No-Go criteria before each gate (Barczak, 2012). The clearly defined stages should be visible, documented, flexible to adopt and reflect changes in the project (Cooper, 2002)

Process in NPD has tremendous advantages when properly implemented including accelerating speed in NPD, increases the probability of product success, introduces discipline into a conventionally hectic process, reduces waste and rework, wipes out poor projects, and attains efficient and effective resources allocation (Stage-gate.com, 2000)

Research involves the use of methods and techniques to study the marketplace, including understanding the needs and wants of customers, the competition and environmental forces (Barczak, 2012). Strong market and customer orientation, results in more successful products (Martensen, 2000). This continuous activity makes it possible for companies to study the customers, competitors, and throughout NPD. Customers are involved from concept testing, product, and market testing subsequently, develop products that respond to those needs and wants while differentiating from the competitors.

The new paradigm of market research support more involvement of customers in the NPD (Griffin, 1997). While successful companies in NPD spend more time and resources in research, bottom performers move from generating an idea to development with little or no research and their new-product projects end up failing. (Cooper, 2006).

Project climate has been identified as critical to success. It refers to the handling and coordination of the people and team in the NPD activities such as leading, motivating,

managing, and structuring them (Barczak, 2012). Thus, it can influence the success of NPD if well managed, for example through creation of positive organizational atmosphere such as effective problem solving and decision making mechanism.

Successful companies in NPD have several characteristics including having cross-functional teams throughout the NPD process (Cooper, 2002). All the projects have a responsible team leader (Kleinschmidt, 2006). Managers create a positive climate such as rewarding successful projects and promote coordination through formal or informal communication (Cooper, 2009).

Company culture indicates the general customs and values in the organisation that determines the internal and external environment in NPD. It shapes the internal product development ideas and outside collaboration with sources such as customers, suppliers and competitors (Barczak, 2012).

Successful companies in NPD have several characteristics including having positive entrepreneurial culture that use different sources for ideas such as customers, suppliers, and competitors. The management show support and rewards the NPD efforts (Cooper, 1995).

Metrics and performance measurement represents ways which NPD project is measured, track, and reported (Barczak, 2012). Thus it helps to improved product success

Successful companies in NPD have ways to measure and asses itself whether it is improving or declining and deciding on the corrective intervention. Such effort is possible by companies who systematically keeping performance data (Martensen, 2000). Monitoring is done for the duration of the project (Cooper, 1995). A formal stage gate with specific criteria is used to assess the NPD project as it progress (Cooper, 2002)

Commercialization refers to the activities that stimulate and diffuse adoption of new product in the marketplace, including marketing, launches, and post-launch management of new products (Barczak, 2012). Effective commercialisation can be a determine factor for success in the marketplace (Cooper, 2005).

Successful companies in NPD have several characteristics including having a cross functional team responsible for commercialization activities since the initiation of NPD projects (Luoma, 2008). This call for broad collaboration and cooperation between cross functional team including the product engineers, sales, and marketers as well as customers.

It should be noted that the framework has provided several characteristics as best practice in each dimension. However for the convenience of this study we selected average of four characteristic in each dimension, which are basic and overly important characteristics for the study.

Table 1: NPD best practices and characteristics

Source: Barczak and Kahn (2012)

Dimensions	Best Practices
Strategy	<ul style="list-style-type: none"> • Clearly defined strategy with organisational awareness of the strategy • Organisation views NPD as a long-term strategy. • NPD goals are clearly aligned with organization mission and strategic plan. • Opportunity identification is on-going and can redirect the strategic plan real-time in order to respond to market forces and new technologies • All projects must be aligned with the organization’s mission and strategic plan.
Commercialization	<ul style="list-style-type: none"> • The launch team is cross-functional in nature • Cross-functional teams make decisions concerning manufacturing, logistics, marketing, and sales • Logistics and marketing work closely together on new product launch • Customer/user is an integral part of the NPD process • Everyone on the launch team is aware of the new product’s promotional campaign • A launch team is established and responsible for launch planning activities
Project Climate	<ul style="list-style-type: none"> • A NPD group exists and is dedicated to just NPD work • Each project has a clearly identifiable project leader • Each project has core cross-functional team which remains on the project from beginning to end • Team rewards are used to reward successful projects • NPD activities between functional areas are coordinated through formal and informal communication
Process	<ul style="list-style-type: none"> • Go/no-go criteria are clear and pre-defined for each review gate • The NPD process is flexible and adaptable to meet the needs, size, and risk of individual projects • The NPD process is quite visible and well-documented • Knowledge of projects is stored and available to NPD personnel
Research	<ul style="list-style-type: none"> • A formal market research function exists in the organisation undertaken and expected with all NPD projects • On-going market research is used to anticipate/identify future customer needs and problems • Concept, product and market testing is consistently • Customer/user is an integral part of the NPD process
Metrics and performance evaluation	<ul style="list-style-type: none"> • There is a standard set of criteria for evaluation individual projects • There is a standard set of criteria for evaluation of overall NPD effort • A formal stage-gate ® process is utilised to evaluate the projects as they move from one stage of development to another • There is a group charged with the task of evaluation • Metrics are used to continually improve the NPD process
Culture	<ul style="list-style-type: none"> • Top management supports the NPD process • The company actively works with customers to develop new solutions • Management rewards and recognizes entrepreneurship

2.4 New Product Development in Tanzania

Following the unsuccessful search, researcher reached a verdict that there was limited research in NPD practices in Tanzania. However, we managed to obtain a relevant study. Innovation in Tanzania: insights, issues, and policies report from the World Bank Survey 2005 (Jean, 2005). The report recognised the lacking of innovation and product development in Tanzania despite of relatively strong economic growth in recent years. This can be attested by the increase presence of import products in the country and customers preference over local products.

The key challenges obtained from the report are highlighted below:

- Limited access to finance
- The misuse of R&D and technology infrastructure
- Inadequate Innovation Policies and lack of effectiveness and implementation in government
- Undeveloped infrastructure
- Ineffective and poor coordinated institutional support framework and
- Limited access to the market.

There is a case to create conducive environment if need to promote NPD activities in order to carve a niche identity as innovators in Tanzania. Thus, numerous efforts from public and private sector have been designed to promote innovation and new product development abilities among SMEs in different sectors.

Much emphasis has been given to the government to improve the existing environment to stimulate innovation in the country. This has been done through integrated efforts that focus on creating new competitive advantages of SMEs and their production systems. The good examples including the series of public policies and programs such as UKUKUTA policy, SMEs policy and Small Enterprises Innovation program for SMEs promotion conducted by the Tanzania Government under SIDO (Small Industries Development Organisation).

On the other hand, some SMEs have made individual efforts in enhancing their production practices rather than depending on solely on the government to take action. As result of such efforts, food products development is on the rise. We have begun to see several SMEs launching products that begun to appeal in the marketplace and obtaining high stipulated market share (URT, 2012).

Considering the success rate of new products in food processing SMEs in Tanzania increases the desire to understand what drives new product success and stir up discussions to improve the current practices as well as address this research gap.

2.5 Small and Medium Enterprises in Tanzania

The economic performance of several African countries has created an ‘Africa Rising’ narrative where further progress and catch-up to the developed world seems probable. Small and medium enterprises contribute significantly to the income generation and job creation thus remain the key player for the achievement of inclusive growth in Africa (ADB, 2012).

There is no generally accepted meaning of SMEs (Mori, 2012). Countries use different measures in defining SMEs; the commonly used measurements are the aggregate number of employees, the size of the premises, sales turnover, and profit of the company (Young, 2009)

The Government of Tanzania defines SMEs according to the capital investment in machinery, employment size and sector. SMEs account for more than 99% of all business units in Tanzania and a significant source of job creation as well as producing substantial contributions in domestic and export activities (URT, 2003)

Small enterprises consist of 5 to 49 employees and capital investment from 5 million to 200 million Tanzania shillings. Medium enterprises consist of 50 to 99 employees and capital investment from 200 million to 800 million Tanzania shillings (URT, 2002). SMEs engage in various sectors including manufacturing, mining, commerce, and services. For the purpose of this research, the Tanzania definition of SME is adopted.

The figure below gives a breakdown of SMEs by capital investment in machinery, employment size and sector.

Table 2: Breakdown of Categories of companies in Tanzania

Source: SME policy (2002)

Category	Employees	Capital investment in Machinery (Tanzania shillings.)	Sector
Micro enterprise	1 - 4	Up to 5 mil.	<ul style="list-style-type: none"> • Mining • Services • Light-manufacturing • Commerce • Agriculture
Small enterprise	5 - 49	Above 5 mil. - 200 mil.	
Medium enterprise	50 - 99	Above 200 mil. - 800 mil	
Large enterprise	100+	Above 800 mil.	

1 US dollar= 2185.65 Tanzania Shilling

However, the ability of SMEs in Tanzania to develop successfully new products is identified as one of the most serious challenge, facing and hampering further progress (URT, 2003). Product development is vital and requires a considerable investment of resources and capabilities that are inherently scarce for SMEs in general and even scarcer for SMEs in Tanzania (Jean, 2005). This may forces SMEs to decrease efficiency in implementing NPD practices. However, since inventing new methods is very expensive, companies may opt to benchmark the NPD method or processes from the successful companies to keep up with these evolving and sophisticated practices.

Therefore, we can assume that the recent NPD successful SMEs in Tanzania apply certain practices or methods in product development and these methods have been benchmarked from other successful performers. Thus, the current Barczak and Kahn NPD best practice practices (2012) 0obtained from successful NPD practitioners in US may be already in use by SMEs in Tanzania, but to what extent we need to find out.

2.6 Agriculture Sector and Food Processing Subsector in Tanzania

Agriculture remains the dominating and the largest growing sector in Tanzania (Dietz, 2000). Since independence, Tanzania's economy is highly depending on agriculture sector (URT, 2012). The sector accounts for:-

- Approximated 46% of land surface in Tanzania was cultivated in 2012 (URT, 2012)
- Contributes to more than ¼ of country's Gross Domestic Product (CIA, 2012)
- Almost 85% of total exports
- Employs nearly 80% of a total labor force of about 24.77 million (mil) people (CIA, 2012)

The availability of such a large land and growing agriculture sector provide numerous foreseeable opportunities including expanding of food processing industries. Food processing can be defined as operations that make crude foodstuffs ready for consumption by adding more value to the end product (EUFIC, 2017). For example in making preserves from fruit, food processing transforms raw foods into food products by involving one or more steps including washing, chopping, pasteurizing, freezing, fermenting, and packaging. The food processing industry is dominated by SMEs (Ruteri, 2009).

CHAPTER 3: RESEARCH METHODOLOGY

This chapter introduces several methods used in the study include research strategy, research approach, and data collection.

3.1 Research Strategy

It is considered that data collection methods affect the results, so it is important to collect data generated in a good way. As the research methods, quantitative research and qualitative research are widely used to collect the data. This study adopted a quantitative method to answer the research questions. This method can be used for research that requires quantification in the collection and data analysis (Bryman, 2007). It entails a deductive approach to the relationship between theory and research, in which the accent is placed on the testing of theories. This approach is good for measuring the relative importance of each dimension of NPD practices and actual characteristics in SMEs.

The researcher provided questionnaires to the NPD practitioners in the selected companies to explore the research questions. It requires a quantification of the NPD processes from most to least important for each company by collecting primary data. A quantitative approach is the most suitable when the researcher wants to investigate the extent of behavior or attitude (Jonsson, 2009).

3.2 Research Approach

There are two sorts of research approaches, deductive theory and inductive theory, which have always been discussed widely. Deductive theory starts with existing theory view of the things and apply research to support it while an inductive theory starts from observation and follows with generating theory or hypothesis (Bryman, 2007).

In this study, the researcher used deductive approach to support the data collection. Here, Kahn's framework (2012) was adopted representing seven dimension of NPD best practices. The researcher aimed to gather the data on the relative importance of each dimension of New Product Development (NPD) practices to the overall product success while searching for interesting conclusions and implications that could be derived from the theory and the company's actual experience.

3.3 Data Collection

3.3.1 Case Company Selected

The researcher used three SMEs in food processing subsector to obtain combined results and also make comparison among the samples. They were selected from Small Enterprises Innovation programme for SMEs promotion conducted by the Tanzania Government under SIDO (Small Industries Development Organisation). They are ranked by SIDO as high profile in product development and have high market share of each independent food processing products in Tanzania. Herein, the three SMEs will be referred as Company A, B, and C.

3.3.2 Justification for Selection of the Study Area

The study area was in Dar es Salaam, the economy city of Tanzania. It was purposively selected mainly because of its rich in small and medium scale enterprises, particularly the successful ones and based on the awareness that would be convenient to find the required data for the study.

3.3.3 Data Collection Procedure

The data was collected from both primary and secondary sources through the use of questionnaire and reviewing previous related literature. The author provided structured questionnaires contained closed and open ended questions. Each dimension was defined and the respondents were required to quantify how they perceived each dimension from most to least important one. Moreover, the selected characteristics of each dimension were also measure using the Likert scale.

CHAPTER 4: RESULTS OF THE SURVEY

The following chapter shows the findings of the study. The results are structured in three-parts. First part dealt with the demographic information of the samples including the company size, market type, products type and years of experience. The second part dealt with the relative importance of the NPD best practice seven dimensions perceived by SMEs and the third part analyses the actual characteristics of two most important dimensions observed in the study. Data is presented using tables and bar charts where necessary.

4.1 Sector in the study

We limit the study to focus on Food processing in Agriculture sector. Food processing is one of the promising industry leading in new product development in Tanzania and has relatively high involvement of SMEs (Kimambo, 2005). The questionnaires were ministered to 3 SMEs in this sector. All in the headquarters in Dar es Salaam. The respondents belonged to the top management levels that have much experience and high involvement in NPD projects in their particular SMEs. This kept up homogeneity of the sample size.

4.2 Size of Companies

This part shows different size of companies involved in the study as determined by a number of employees in the firm. SME sector in Tanzania comprehensively consist of 1 to 4 employees for micro-enterprises, 5 to 49 employees for small enterprises and 50 to 99 employees for medium enterprises (URT, 2002). The result shows that all three companies had fewer than 100 employees. Additional breakdown of the samples, demonstrates that two of the companies employed between 50 and 99 employees and one company had between 5 and 49 employees. The size of Company A, B and C in this study mirrors the nature of SMEs in Tanzania. It has already been examined in more detail in the part of the Literature Review.

4.3 Type of markets served

Further classification of the samples has been conducted. The companies have been classified according to the type of markets each serve. Two companies are operating in both business to consumer and business to business markets and one company served only the business to consumer market. Knowing the type of customers the company have is very important. Researchers assert that top customers can influence NPD efforts of a company (Ulrich, 2012). Table 3 below illustrate further demographic information under each sample.

Table 3: Demographic information of the samples

Source: Processed from primary data

Sample	Employee Number	Type of Market	Type of Products	Years of Experience
Company A	5>49	Consumer	1. Processed Yoghurt	1 to 5
Company B	50>99	Consumer and Business to Business	1. Corn Flour 2. Instant Cereal Drink 3. Hot Sauce	6 to 10
Company C	50>99	Consumer and Business to Business	1. Processed Tea and Coffee	6 to 10

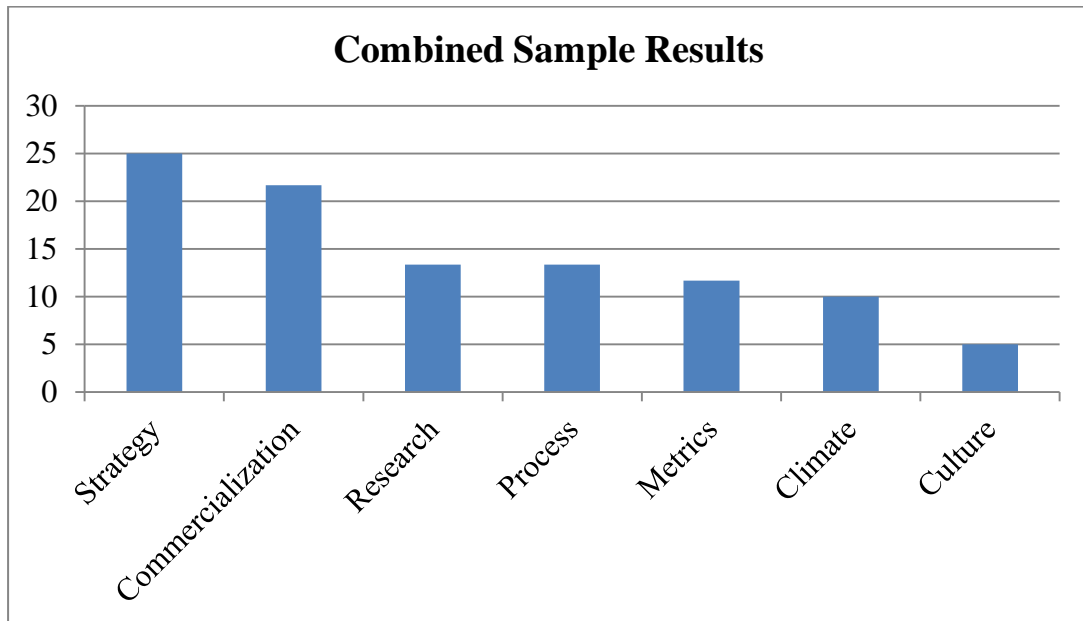
4.4 Relative importance of the seven dimension of NPD best practices for NPD success

This section sought to gather the respondents' view of the seven dimensions of NPD best practices. The respondents were requested to indicate how important each dimension weighting in percentage. With 100 points, they were asked to distribute across the dimensions in a way the respondents believed as demonstrative of how they translate to the importance for NPD success in their company. The sum of total weightings had to be 100%.

The table below presents the results based on combined samples from the Company A, B, and C. It has to be noted that at times, they recorded equal weighting among the dimension and sometimes different weighting or sometimes gave no points at all to some dimensions.

Figure 1: Relative importance of NPD Dimensions across combined samples

Source: Processed from primary data

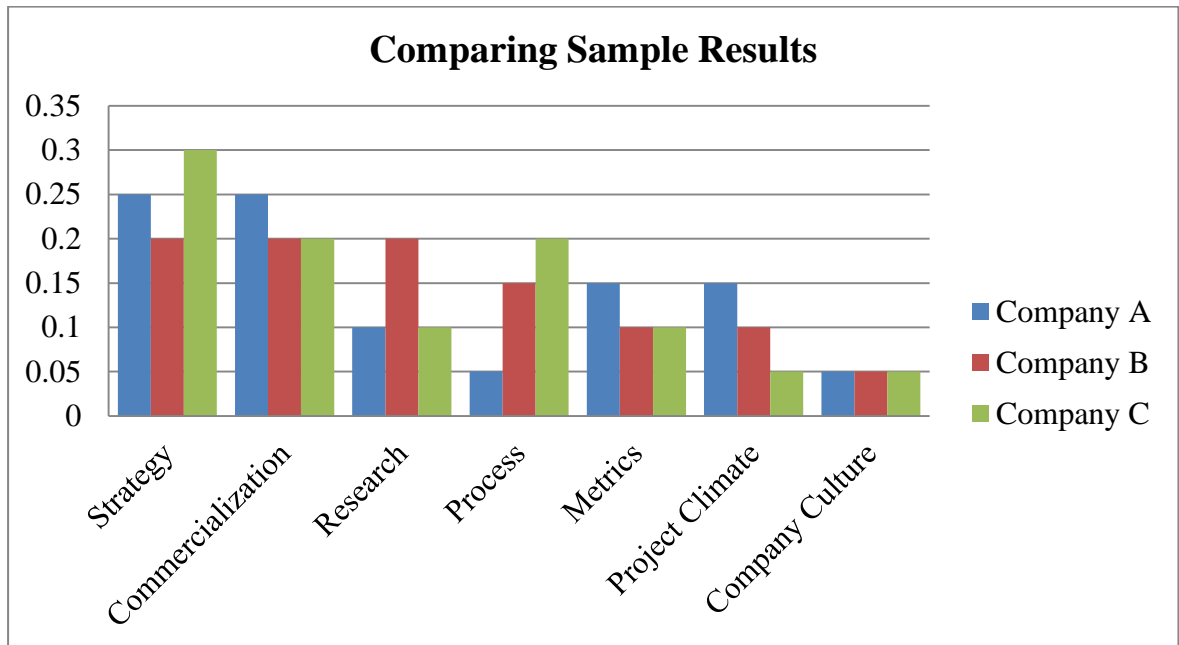


Overall, strategy received higher points and was recorded as the most important dimension for new product development success out of the seven dimensions in the survey. Commercialisation was recorded the second most important dimension. Research and process ranked third since they all had equal points. The SMEs recorded them as being of equivalent significance. Metrics & Performance Measurement was next in line and it was followed by Project climate. The company culture was recorded as the least important out of the seven dimensions in the survey.

Further breakdown was done to obtain comparative results from each of the three samples. The figure below presents a further breakdown of the results. It represents the weight of how each dimension translates to the importance for NPD success in their company.

Figure 2: Relative importance of NPD Dimensions from Company A, B and C samples

Source: Processed of primary data



The samples did not weighted the dimensions in the same order of importance. Some dimensions were weight similar and others different. It shows that the importance of the NPD dimensions differs among companies. Generally, the strategy and commercialisation show high ranking in all samples while company culture is ranked as the least important for NPD success in all samples.

4.5 The characteristics of the two most important dimensions

Another aim of the report was studying the characteristics of two most important dimensions observed by SMEs in Tanzania. Main characteristics were selected in each dimension for the study. The selected characteristics where considered as better to understand, aimed to facilitate swift discovery of the respondent’s company actual practices.

The scores of the characteristics stretch a picture of how reality of the two most important dimensions by the SMEs in relation to how things ought to be. Also, by studying these characteristics, we can be able to measure how these characteristics reflect the actual practices in their companies in relations to the optimal level practices. The score for each selected characteristic was obtained and the overall score for each dimension in each company. The results suggest that SMEs in Tanzania have not yet attained the optimal level of these dimensions. However, the results could not indicate the level of maturity the companies attained.

4.5.1 Strategy

It was ranked the most important by the 3 SMEs. On average the characteristics on strategy had low score when examine them one by one in all companies. However, the total score of all the characteristics in each company is above average. Company A score 60%, Company B scored 55% while Company C scored the highest 70%. In their response, many agreed that to be having such characteristics in their SMEs while some were neutral and even disagreed. In order to attain the optimal level in strategy, the companies need to enhance their practices in this dimension. The above have been displayed in the table below.

Table 4: The responses determine the actual characteristics of strategy in SMEs.

Source: Processed from primary data

Strategy		Response			Percentage		
	Description	Company A	Company B	Company C	Company A	Company B	Company C
1	Clearly defined and organization awareness of NPD strategy.	Neutral	Agree	Neutral	10%	15%	10%
2	Organisation views NPD as a long-term strategy.	Agree	Disagree	Agree	15%	5%	15%
3	NPD goals are clearly aligned with organization mission and strategic plan.	Disagree	Neutral	Agree	5%	10%	15%
4	Opportunity identification is on-going and can redirect the strategic plan real-time in order to respond to market forces and new technologies.	Strongly Agree	Agree	Agree	20%	15%	15%
5	All projects must be aligned with the organization's mission and strategic plan.	Neutral	Neutral	Agree	10%	10%	15%
Overall consideration of Strategy in %					60%	55%	70%

4.5.2 Commercialization

It was ranked by the overall sample the second most important dimension out of the seven dimensions in the survey. On average the characteristics on commercialization also had low score when examine them one by one in all companies. However, the total score of all

the characteristics in each company is higher than strategy. Company A score 70%, Company B scored 70% while Company C scored the highest 75%. A big portion of respondents agreed that they were practicing these characteristics and some were neutral and none strong agreed. Similar to strategy, the companies need to enhance their practices in this dimension in order to attain the optimal level. The above have been displayed in the table below.

Table 5: The responses determine the actual characteristics of commercialization in SMEs.

Source: Processed from primary data

Commercialization		Response			Percentage		
	Description	Company A	Company B	Company C	Company A	Company B	Company C
1	The launch team is cross-functional in nature	Neutral	Agree	Agree	10%	15%	15%
2	Cross-functional teams make decisions concerning manufacturing, logistics, marketing, and sales	Disagree	Neutral	Neutral	5%	10%	10%
3	Logistics and marketing work closely together on new product launch	Agree	Neutral	Agree	15%	10%	15%
4	Customer/user is an integral part of the NPD process	Agree	Neutral	Neutral	15%	10%	10%
5	Everyone on the launch team is aware of the new product's promotional campaign	Agree	Agree	Neutral	15%	15%	10%
6	A launch team is established and responsible for launch planning activities	Neutral	Agree	Agree	10%	15%	15%
Overall consideration of Commercialization in %					70%	75%	75%

CHAPTER 5: ANALYSES

5.1 Analyses

The results provide the answer to research question one. With benchmarking efforts of NPD practices such as the Barczak and Kahn NPD framework (2012), it is evident that SMEs in Tanzania uses such practices in developing and launching successful new products and services. They must have discovered the benefits of having a set of methods that are able to more effectively and efficiently deliver a new product. However, companies vary in perception of the importance of the methods and its application. The 3 SMEs revealed the seven dimensions of NPD practice as of having different importance. This observation could be influenced by practitioner preference or nature of product or company.

The increasing competitive business environment, it becomes difficult to bring new products to the market and sustain growth. That makes benchmarking and application of NPD practices a distinguishing factor of product and company success.

Moreover, the results provide the answer to research question two. The 3 SMEs revealed the two most important dimension and their actual characteristics. However, the result is different from Kleinschmidt and Cooper (1995). The author proposed process as the most important dimension of NPD success followed by strategy and commercialisation. The importance of strategy and commercialisation can be linked to the increase in competition hence companies relay on them for competitive advantage.

One can conclude that the companies have not yet attained the optimal level of these dimensions. The measurement of actual characteristics of the two important dimensions observed by SMEs had low scores. In other words, they recognise the importance of a strategy and commercialization in NPD success but in practice, the 3 SMEs have not fully embraced them by their actions. This means that the food processing SMEs in Tanzania still have a long way to improve these dimensions in order to be more effective and efficient in the these dimensions. It should be marked as urgent considering the increasing competition in the free market economy.

Strategy ranked as the most important dimension. It is evident that strategy gets high priority out of the seven dimensions in the study. For these companies, strategy can be seen as the main contributor of their success in food processing products in Tanzania. Its existence is a prerequisite for their NPD projects. This means, SMEs value the need of having defined and planned vision to guide the NPD projects. A good strategy stands as a blueprint to facilitate the activities, the people and resources involved in the NPD projects hence

smoothen and speeds the projects. Therefore, their NPD teams are capable to develop and launch products faster and effectively than their competitors. It is linked to positive performance and competitive advantage against competition (Cooper, 2002).

The key characteristics of strategy in these SMEs includes having clearly defined strategy with long term view of NPD, strategic arenas for new opportunities have been defined, awareness of the NPD strategy within the organisational, continually review and update NPD strategy to reflect changes to the market place.

Commercialization ranked the second most important dimension in NPD succes. This means the 3 SMEs apply this dimension effectively to diffuse their products to the marketplace. Success in product development not only insists in developing a superior product but also show the importance of convincing the market about the benefits ascertained from using the product. Effective commercialisation can be a determine factor for success in the marketplace (Cooper, 2005). The market is becoming more competitive and rapid change of consumers need subjective by technological change, it reduced shelf- life of products. Therefore commercialization is important to increasing the return on investment. This suggests that understanding of customers, creating and launching effective product are vital for a new product success in the marketplace.

On average, the characteristic of commercialization in these SMEs includes having across functional team responsible for commercialization activities since the initiation of NPD projects and customer involvement during the NPD project. This call for broad collaboration and cooperation between cross functional team including the product engineers, sales, and marketers as well as customers.

The increasing competitive world mentioned above, pressure companies to do all means necessary to thrive. NPD best practices offer a chance to exceed your competition through NPD success. Implementing effective and systematic methods for NPD project helps to be ahead. Optimal application of the seven dimensions and their characteristics can have tremendous competitive advantage. Apart from determination to use the methods, it requires investing time and resources. Their willingness to pay the price will determine their success.

CHAPTER 6: LIMITATIONS, CONCLUSION AND RECOMMENDATIONS

6.1 Limitations

The study was able to obtain results on the importance of the seven dimensions. To some extent, they were consistent with previous studies and yet some seen as inconsistent with previous studies. There are several limitations to this study. It is limited to assume that all food processing products are equal and therefore these dimensions apply to all. However, in NPD project, product can be very different such as radical and incremental products. It is therefore likely to differ in the relative importance of the seven dimensions of NPD best practices and their characteristics.

It may be considered that the sample size is too small to reflect all the big portion of SMEs in Tanzania. The use of purposive sampling arises possibility of biased. It should be reminded that this survey was designed to include those SMEs who are actively working in the development field and have significant experience.

6.2 Conclusion

This study used the seven dimensions as NPD best practices adapted from Barczak and Kahn NPD best practice framework (2012) to explore the NPD activities from the 3 food processing SMEs in Tanzania. Specifically, it measured relative importance of each NPD best practice dimension and study the characteristics of top two most important dimensions as perceived by the SMEs. The strategy was identified as the most important dimension for new product development success out of the seven dimensions in the survey. Commercialisation was recorded the second most important dimension and followed by research and process ranked third. All had equal points hence we assume as being of equivalent significance. Metrics & Performance Measurement was next in line and it was followed by Project climate. The company culture was recorded as the least important out of the seven dimensions in the survey.

The 3 SMEs thrive to apply NPD best practices to increase their product success because they believe it will lead to the success of the product and company that can be gauged by reaching high customer use, stipulated market share, sales growth, and profit (Krishnan, 2001). Thus NPD best practices represent practices that seem to have greater success in NPD (Kahn, 2009). Hence the explanation that in order to succeed, application of NPD best practices is essential.

However, respondents have a long way towards reaching optimal characteristics of the seven dimensions as revealed in the study the characteristics of top two most important dimensions perceived by the SMEs. This suggested that despite general awareness about these dimensions, SMEs in Tanzania need to apply them effectively while adapting to the environment and capabilities.

In general the study was positively perceived by the respondents and to some extent has succeeded to provide a better understanding of SMEs and NPD practices in Tanzania. It has demonstrated the actual NPD practices translated from the contemporary NPD best practice and also provide a chance for stakeholders to instigate superior ways that will result in NPD success and economic growth. However, some parts in the survey were viewed as complex and less suited for SMEs.

6.3 Recommendations

The study showed the presence of general understanding or awareness of NPD best practice by SMEs practitioners in Tanzania. Some dimensions perceived more important than others for NPD success. Further research would be necessary to get deeper understanding in which the dimensions are being applied by SMEs in Tanzania. This could call for more studies in one or more SMEs.

SMEs involved in the study seemed to give more attention to strategy and commercialisation. Research, process, metrics, and performance measurement, project climate and culture are also important dimensions for improving on shortcomings and support product development success. However, SMEs have a long way towards reaching optimal characteristics of the seven dimensions suggested by Barczak and Kahn (2012). This suggested that despite general awareness about these dimensions, SMEs in Tanzania need to apply them effectively while adapting to the environment and capabilities.

To do this successfully, SMEs might prioritise them. First, consider focusing on few most important dimensions and proceed improving them. This should not be misunderstood, the total application of these best practices is not discourage but the optimization of each dimension has a price, which include massive efforts and resources while for SMEs most things are limited. Therefore, focus and systematic execution of these practices is very important for sustainable results. Moreover, as they work on improving these dimensions, SMEs should also consider formalizing these practices while reflecting their environment and their capabilities.

REFERENCES

- Adams – Bigelow, M. E. (2004). *First Results from the 2003 Comparative Performance Assessment Study (CPAS) in the PDMA Handbook of New Product Development (2nd Edition)*. New Jersey: John Wiley and Sons, Inc.
- ADB. (2012). *African Development Bank Group Report*. Tunis, Tunisia: ADBG.
- Barczak , G., & Kahn, K. (2007). Verification and validation of an NPD best practice framework. *14th International Product Development Management Conference*. Porto.
- Barczak. (2012). Identifying new product development practices. *Business Horizons*, Vol 47, No 1, 293 - 305.
- Bryman, A. &. (2007). The nature of quantitative research. In: Business Research Methods. In A. &. Bryman, *Business Research Methods* (pp. 154-177). New York. : Oxford University Press.
- Camp, R. (1989). *Benchmarking: The Search for Industry Best Practices that lead to Superior Performance*. Milwaukee, WI.: ASQ Quality Press.
- CIA. (2012, September 27). *World Factbook*. Retrieved September 27, 2016, from World Factbook: <https://www.cia.gov/library/publications/rss-updates>
- Cooper. (1995). Benchmarking the Firm's Critical Success Factors in New Product Development. *Journal of Product Innovation Management*, 12 (5), 374-391.
- Cooper. (2002). *Improving New Product Development Performance and Practices, Benchmarking*. USA: American Productivity & Quality Center.
- Cooper. (2005). *Lean, Rapid, and Profitable New Product Development*. Ancaster: Product Development Institute.
- Cooper. (2006). *Product Development Institute Inc*. USA: PDI.
- Cooper. (2009). *Successful Product Innovation: A Collection of Our Best*. USA: Product Development Institute Inc.
- dictionaries.com, o. (2017). *Oxford University Press*. Retrieved May 30, 2017, from Oxford University Press: <https://en.oxforddictionaries.com/definition/mature>
- Dietz, M. H. (2000). *Assessment of the small-scale food processing subsector in Tanzania and Uganda: study report*. CTA.
- Dooley, K. S. (2002). Adoption rates and patterns of best practices in new product development. *International Journal of Innovation Management*, Vol. 6 No. 1, 85-103.
- EUFIC, E. F. (2017). *eufic.org*. Retrieved May 30, 2017, from eufic.org: <http://www.eufic.org/en/food-production/category/food-processing>
- Galavan, R. M. (2008). *Strategy, Innovation, and Change: Challenges for Management*. New York: Oxford University Press.

- Godener, A. a. (2004). Use and impact of performance measurement results in R&D and NPD an exploratory study. *R&D Management* 34(2), 191-219.
- Gomez, J. O. (2007). Achieving competitive advantage in the Mexican footwear industry. Benchmarking. *International Journal*, 289-305.
- Griffin, A. (1997). PDMA research on new product development practices: updating trends and benchmarking best practices. *Journal of Product Innovation Management*, Vol. 14, 429-58.
- Jean, E. A. (2005). *Innovation in Tanzania: Insights, Issues and Policies*. Washington, DC: World Bank Institute.
- Jean-Robert, L. (2009). *IFC Financial Products and Investment Services in Latin America and the Caribbean*. Retrieved from International Finance Corporation World Bank Group : <http://www.ifc.org/>
- Jensen, M. J., Lorenz, E., & Lundvall, B. A. (2007). Forms of knowledge and modes of innovation. *Research Policy*, 36, 680-693.
- Jonsson, N. &. (2009). Branding Strategy Among The Swedish. *Halmstad University*, 1-93.
- Kahn. (2006). Establishing A NPD Best Practises Framework. *Journal of Product Innovation Management* 23, 106-116.
- Kahn. (2009). "Trends and drivers of success in NPD practices: results of the 2003 PDMA best practice study. *Journal of Product Innovation Management*, No. 1, Vol. 26, 3-23.
- Khurana, A. a. (1998). Towards Holistic "Front Ends" in New Product Development. *Journal of Product Innovation Management* 15(1), 57-74.
- Kimambo, C. Z. (2005). Stimulating small and medium enterprises development for poverty eduction through business and technology incubation. *Proceeding of the Discourse on Engineering Contribution in Poverty Reduction* . Tanzania.
- Kleinschmidt, J. E. (2006). Rejoinders to "Establishing an NPD Best Practices Framework. *Journal of Product Innovation Management* 23 (2) , 117–127.
- Koen, P. G. (2001). *New Concept Development Model: Providing Clarity and a Common Language to the "Fuzzy Front End" of Innovation*. Research Technology Management.
- Krishnan, V. a. (2001). Product Development Decisions:A Review of the Literature,. Vol 47, No 1.
- Ledwith, A. (2000). Management of new product development in small electronic firms. *Journal of European Industrial Training*, Vol. 24 Nos 2/3/4,, 137-48.
- Loch, C. (2000). Tailoring product development to strategy: case of a European technology manufacturer. *European Management Journal*, Vol. 18 No. 3, 246-58.
- Luoma, T. P. (2008). Managing Commercialisation Risks in Innovation Development: Linking Front End and Commercialisation. *The XIX ISPIIM Conference*. In Proc.

- Martensen, A. a. (2000). Towards Innovative Excellence: A Danish Pilot Study on modelling and measuring innovation performance.
- Metikurke, S. (2011). An empirical study of important dimensions of new product development practices in small and medium enterprises in New Zealand. *Doctoral dissertation*, Massey University, Auckland, New Zealand.
- Mori, N. (2012). Information Barriers: Implications for Exporting SMEs of the East African Community. *Journal of Entrepreneurship, Management and Innovation*, (2), 60-77.
- Mosey, S. (2005). Understanding New-to-Market Product Development in SMEs. *International Journal of Operations & Production Management* 25(2), 114–30.
- Nicholas J., a. L. (2006). *Development of a best practices framework for new product development in small to medium enterprises*. Retrieved May 30, 2017, from Development of a best practices framework for new product development in small to medium enterprises: http://proceedings-test.utsp.utwente.nl/139/1/Nicholas,J._c.s._paper.pdf
- Nicholas, J. (2011). New product development best practice in SME and large organisations: theory and practice. *European Journal of Innovation Management* Vol 4 No. 2, 227-251.
- Nyaundi, B. (2011, February 18). *MSRA-Conference*. Retrieved May 30, 2017, from MSRA-Conference: <http://msra.or.ke/documents/conferences/2011/MSRA-Conference-2011-Successful-factors-for-innovation-new-product-development-in-Africa-Barry-Nyaundi.pdf>
- Parry, M. E.-N. (2009). The Impact of NPD Strategy, Product Strategy, and NPD Processes on Perceived Cycle Time. *The Journal of Product Innovation Management*, 26(6), 627-639.
- Parry, M. E.-N. (2009). The Impact of NPD Strategy, Product Strategy, and NPD Processes on Perceived Cycle Time. *The Journal of Product Innovation Management*, 26(6), 627-639.
- Paulk, M. C. (1993). *Capability maturity model for software version 1.1 Technical Report No. CMU/SEI-93-TR-24*. Pittsburgh, PA: Software Engineering Institute, Carnegie Mellon University.
- PDI. (2010). *A Study of Best Practices in New Product Development (NPD)*. USA: Product Development Institution.
- PDMA. (2003-04). *Report on Best Practices among US companies* . USA: Product Development Management Association.
- Pharel, K. (2013, Avril 3). Investir. *Le Point*. (R. Caraibe, Interviewer) Group Croissance.
- Rock, A. (2013). *How Strengthening SMEs and Entrepreneurship Can Create Value in Haiti*. Retrieved from CEDEL HAITI: <http://www.cedelhaiti.org/>
- Ruteri, J. M. (2009). Supply Chain Management and Challenges Facing the Food Industry Sector in Tanzania. *International Journal of Business and Management*, 4(12), 70–80.

- Stage-gate.com. (2000). *Stage-Gate International*. Retrieved May 30, 2017, from Stage-Gate International: http://www.stage-gate.com/resources_stage-gate_full.php
- Ulrich. (2012). *Product Design and Development*. New York: McGraw Hill Education.
- Ulrich, K. a. (2004). *Product Design and Development*. New York: McGraw Hill.
- URT. (2002). *Small and Medium Enterprise (SMEs) Development Policy*. Tanzania: Ministry of Trade, Industry and Marketing.
- URT. (2003). *Small and Medium Enterprise Development Policy*. Dar es Salamm: Ministry of Industry and Trade.
- URT. (2012). *Micro Small and Medium Enterprises in Tanzania: National Baseline Survey Report*. Tanzania: United Republic of Tanzania.
- URT. (2012). *Micro Small and Medium Enterprises in Tanzania: National Baseline Survey Report* . Tanzania: United Republic of Tanzania.
- Young, E. &. (2009). *Study on the promotion of micro, small and medium enterprises in the East African region*. The East African Community.