

# EXTENDING MANAGEMENT ACCOUNTING TECHNIQUES AND MARKETING STRATEGIES: STANDARDIZATION OF NIGERIAN INDIGENOUS PRODUCTION FOR EXPORT

Omorogbe, Comfort E.

Department of Accounting and Finance, Crawford University, Igbesa, Ogun State, Nigeria.

*e-mail: omorogbece@yahoo.com*

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**Abstract:** Nigerian reserves have depleted terribly that the economy is at its brink. Import dependence has being found to account for this quagmire. For sustainable growth and development, Nigeria needs to turn the wheel of the clock. This paper examined the state of indigenous production specifically the ‘Aba Made’ (AM) goods that are cheap to buy but viewed as inferior quality, with a view to proffering ways for improving the standard to internationally acceptable quality for export. The study suggested the application of management accounting techniques and marketing strategies (MA-MS model) in the standardization process to manage cost of transformation of AM to national and internationally competitive product. The MA-MS model shows the application of knowledge in value analysis and value engineering to product quality control and quality assurance test. The dividend of such exercise in the standardization of product and market, would produce goods at affordable prices, and with international quality achieved, they would be exported and thus earn Foreign exchange (FOREX) for Nigeria for sustainable growth and development. The model ensures that quality is not sacrificed for huge profit. The study assessed the primary data source to ascertain the citizenry outlook on ‘AM’ goods as compared to foreign fairly used goods known as ‘Tokunbo’ (Toks). The primary instrument, the questionnaire was analysed using the non-parametric statistical tool- Wilcoxon signed rank test. Results from the field work revealed that majority of the respondents are aware of ‘AM’ products but prefer to buy ‘Toks’. Several reasons were adduced for that choice ranging from durability to cuteness. The hypothesis tested revealed that there is no statistical difference in the perception of preference for Toks against AM products among consumers and traders of Tokunbo. The study recommended among others, government’s intervention in terms of policy and implementation in Research and development, collaboration partnership, create enabling environment, Tariff-free importation of machines needed by such indigenous firms; funding support; and Improve quality for durability, rebranding and packaging to world’s best benchmark.

**Keywords:** Management, Accounting, Marketing, Strategies, Product, Standardization.

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## 1. INTRODUCTION

The quality of indigenously manufactured products and poor economic condition has contributed to shift in consumption patterns of individuals as evidenced by the economic condition in Nigeria. The economic situation in Nigeria has continued to grow at a rapid 6-8% per annum (pre-rebasing), driven by growth in agriculture, telecommunications, and services. Economic diversification and strong growth have not translated into a significant decline in poverty levels.

Statistics have it that over 62% of Nigeria's over 170 million people lives in extreme poverty (Economywatch, 2016). In terms of standard of living using the dollar per day measurement approach where those living on less than US\$1 per day are in the poverty line, 51.6% of Nigerians were living below US\$1 per day in 2004 increased to 61.2% in 2010 (*see Appendix 1*) (Nigerianinsight, 2014). This state of affairs might have produced a fertile environment for indigenous companies to thrive in the production of substandard products (by relative comparison to products from developed countries), consumed by Nigerians.

This inward looking of these companies has had a multiplier effect on the economy's GDP and reserves. This downward trend has been described by Okeke, (2015: 5) as "the economy that could slip into recession in 2016 if proactive steps were not taken to revive growth in key sectors of the economy" (*See Appendix 2*).

Reviving the economy involves overhauling, restructuring, diversifying several key areas of the economy. One area of possible revamping is in the indigenous manufacturing sector. ABA-Made (AM) Products (locally produced) are popular nationwide, produced by firms in the Eastern part of Nigeria. The innovations and ingenuity in AM products are impressive. The products range from households to industrial needs. Unfortunately, these products are yet to make significant impact in the local and global market (Ojukwu, 2003).

AM products are not patronised by most Nigerians especially the affluent class. This has been adduced to lack of durability of AM products. Those who cannot buy the brand new products (often called Shabe) settle down for the fairly used products (often called Tokunbo or Toks). In the wind change mantra, the president of the Nigerian Senate Bukola Saraki said "government should use legislative actions and policy initiatives to protect the local industries as a deliberate way of riving the economy and ensure local industries are patronised by government agencies. The 8<sup>th</sup> Senate determined to amend the procurement law to ensure that government agencies patronize made in Nigeria products; and work at all laws and help to create an enabling environment for local business to thrive in Nigeria" (Todaynews.com, 2016: web-pp). The issue now is how can the status of AM products be improved upon so that it can have both local and international relevance and value?

Standardization has being recommended as the key to value addition in marketing research. Standardization is depicted as a repositioning strategy, where quality of goods and services are designed to occupy a meaningful and distinct competitive position in the target customer's mind, which would translate into great growth potentials on the economy (Oniki, 2003). Although some researchers support the fundamental precepts of build-to-order and mass customization (Anderson, 2015), others are of strong opinion that markets are becoming more similar and progressively more global and it is believed that the key for survival is companies' ability to standardize (Vrontis & Thrassou, 2007). Standardization ensures uniformity, supports positive consumer perceptions of a product as it ensures same level of quality of any specific brand anywhere around the world. A standardised product would thrive in standardised market. It is necessary to note that success of standardised products in domestic market does not automatically translate to success in the international market. It requires deliberate effort and adequate preparation at the domestic level and knowledge of the operation.

The process of alteration to standard could be tedious and financially tasking especially for firms with inferior quality. Hence, proper cost management is essential so that total standard processing cost is not passed on to the final consumers. Contemporary management accounting (MA) techniques have been identified in providing strategy for cost effectiveness (Gerdin, 2005; Adeniji, 2009). Value analysis and value engineering techniques in MA provide a platform to increase the worth of a product by reducing the cost in a conscious manner. Value analysis is performed during production stage and value engineering techniques is performed at the end of a process (Adeniji, 2009). When both techniques are combined in the standardization process of AM products, cost reduction that gives economies of scale, selling large quantities of the same, and buying components in bulk reduce the cost-per-unit. Similar analyses can also be carried out on standardization of the marketing process in consonant with marketing strategies (MS) so that advantages relating to economies of scale which includes improved research and development, reduction in marketing operational costs, and lower costs of investment can be obtained.

Standardization has being suggested to work better for companies with strong brand identity and a strong reputation (Vrontis & Thrassou, 2007), so the first stage for AM companies is to work on building a national identity and reputation. A good quality product will normally sell itself because it will advertise itself and give itself a national identity. Quality

products are relatively more expensive. Meanwhile, an average Nigerian will want to patronise products that are cheap and affordable.

Hence this paper proposes the *MA-MS model* which is the application of management accounting techniques (value analysis & value engineering techniques) and marketing strategies (Product quality control & quality assurance tests and tactical knowledge) to repositioning AM products for economic growth. This Model is based on the theory of value chain where a manufacturing company is viewed as a system, made up of subsystems each with inputs, transformation processes and outputs and adding value even thereafter, at outbound logistics level, marketing and sales level and service level as value adding will inevitably determines higher quality attracts high patronage, while managing cost and influence profit (Cambridge, 2013); and theory of reengineering that emphasised the need for alignment of mission and strategic goals in order to reduce cost and achieve quality produce and services. The model would assist in the standardization process in ensuring that AM products are domestically and internationally competitive. It is pertinent to observe that success in domestic market does not necessarily translate automatically to success in international markets, as success in international markets requires adequate preparation at the domestic level and knowledge of the operation and situation at the international market. MA-MS model would support the standardization process toward earning Foreign exchange without sacrificing quality for huge profit.

This study proposes the following:

- (i) AM's product quality could be internationally standardized with minimum cost
- (ii) MA techniques can foster cost-effectiveness in the standardization process
- (iii) MS can assist in standardizing AM product and international marketing
- (iv) When AM products are standardized export will increase
- (v) That the application of MA-MS model in product and market standardization will reduce standard cost, increase sales/revenue and increase FOREX earnings for the country.

The objectives therefore, are specifically to (i) determining citizenry response to acquiring Aba Made; (ii) ascertain taste preference between Aba Made and fairly used products (Tokunbo); (iii) ascertain whether there are response differences in the perception of preference for Toks against AM products among consumers and traders of Tokunbo; (iv) determine the process to standardization of Aba Made quality; (v) exhibit how the MA-MS model application can reduce cost associated with standardization.

One hypothesis was constructed and tested in this study:

$H_0$ : There are no differences in the perception of preference for Toks against AM products among consumers and traders of Tokunbo.

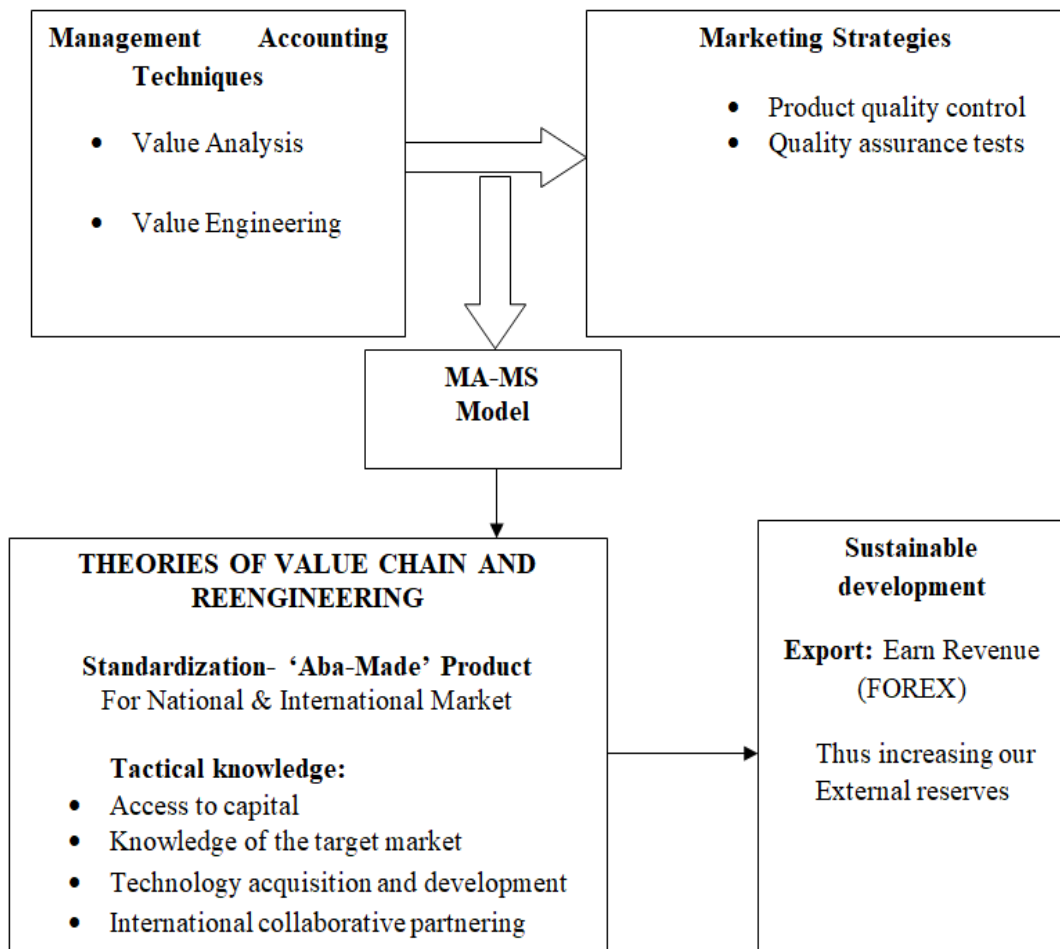
#### **MA-MS Model application to Product and Market Standardization of 'Aba-Made' for Export**

The interaction of systems and processes in the application of management accounting techniques, in this case, in terms of value analysis and value engineering techniques; and marketing strategies in terms of product quality control and quality assurance tests is described in the model. This type of interaction is common in various forms of theoretical fit that have been used in contingency-based research: selection, interaction and systems (Drazin & Van de Ven, cited in Asel, 2009).

The MA-MS model depicts the application of knowledge in value analysis and value engineering to product quality control and quality assurance test. The dividend of such exercise in the standardization of product and market, would produce goods at affordable prices, and with international quality achieved, they would be exported and thus earn Foreign exchange (FOREX) for Nigeria for sustainable growth and development. Figure 1 below shows the conceptual model with unidirectional arrows. The broad arrows depict relationship that creates the model while the narrow arrows depict impact.

**Figure 1: A Conceptual Model of MA-MS application to Product and Market Standardization of ‘Aba-Made’ for Export**

**MA-MS Model**



Source: Omorogbe & Ighodalo, 2016

## 2. BRIEF LITERATURE REVIEW

This review is based on the components of conceptual model of this study- the MA-MS model.

### MANAGEMENT ACCOUNTING TECHNIQUES

Standard Cost Reduction Techniques are in variety in Management accounting. Appropriate management of product and process cost, requires a combination of Value engineering and Value analysis techniques. These techniques would provide cost structure and restructuring at onset of production and in the course of production.

#### Value Engineering

Blocher, Chen and Lin, (1999) and Drury (2005) depicted value engineering as a systematic interdisciplinary examination of factors affecting the cost of a product or service in order to devise means of achieving the specified purpose at the required standard of quality and reliability at the target cost. This proceeds by empowering a cross-functional team to find out the most optimal process(s), materials used, tooling and capital investment requirements and to decide whether to make or outsource the product or service.

Chase, Aquilano and Jacobs, (2004), posited that value engineering’s main objective is to achieve equivalent or better performance at a lower cost while maintaining all functional requirements expected by the customers. In order to obtain the necessary information, a company has to conduct surveys and interview the customers. The cost of each function of a

product or service is compared with the benefit to the customer, and then the function would be eliminated, or modified to reduce the cost, or enhance its perceived value so that the value exceeds the cost.

### **Value Analysis**

Cooper and Slagmulder, (1998) and Adeniji (2009), described value analysis as a planned, scientific approach to cost reduction, which reveals the material composition of a product and production designs; modification and improvement can be made without reducing the value of the product to the consumers or users. Value analysis involves the examination of each part of a product, service, or system in order to reduce costs without degrading quality.

Chase, *et al.*, (2004) explained that value analysis deals with product already in production or services being rendered and is used to analyse product specifications and requirements as shown in production documents and purchase requests or specification of services to be rendered. Blocher, *et al.*, (1999) clarified that the result of value analysis may not be as great as the results of value engineering because value analysis is performed during production stage after a product is locked into a good portion of its costs or service delivery has incurred substantial costs.

## **MARKETING STRATEGIES**

### **Product Quality Control**

Competing in today's tumultuous environment has placed emphasis on quality. Quality refers to the extent to which products and services satisfy the requirements of internal and external customers (Reka, Stefan & Daniel 2008). Total quality management (TQM) is an effort in this direction; Creating competitive advantage through deliberate effort in producing products and services that are of great value to the customer. Shim & Siegel, (2009), viewed the optimal level of quality costs as the level where zero defects are produced.

Quality control is a process by which entities review the quality of all factors involved in production. Controls include product inspection of every product visually, and often using a stereomicroscope detail before the product is sold into the external market. Quality control emphasizes testing of products to uncover defects and reporting to management who make the decision to allow or deny product release. Quality Control makes sure the results of what you've done are what you expected. Control is product-related.

### **Quality Assurance Tests**

Quality assurance attempts to improve and stabilize production (and associated processes) to avoid, or at least minimize, issues which led to the defect(s) in the first place. Quality assurance (QA) is a way of preventing mistakes or defects in manufactured products and avoiding problems when delivering solutions or services to customers. This defect prevention in quality assurance differs subtly from defect detection and rejection in quality control and has been referred to as a shift left as it focuses on quality earlier in the process (Pyzdek, 2003). Quality Assurance makes sure you are doing the right things, the right way. Assurance is process-related. It advance standardized products and save companies from costs associated with poor quality; such as non-conformances and failure to meet requirements cost.

Quality assurance comprises administrative and procedural activities implemented in a quality system so that requirements and goals for a product, service or activity will be fulfilled. It is the systematic measurement, comparison with a standard, monitoring of processes and an associated feedback loop that confers error prevention. This can be contrasted with quality control which is focused on process output (Almeida, Alvaro, Meria, 2007).

Two principles included in quality assurance are: "Fit for purpose" (the product should be suitable for the intended purpose); and "right first time" (mistakes should be eliminated). Quality assurance includes management of the quality of raw materials, assemblies, products and components, services related to production, and management, production and inspection processes. Suitable quality is determined by product users, clients or customers, not by society in general. It is not related to cost, and adjectives or descriptors such as "high" and "poor" are not applicable. For example, a low priced product may be viewed as having high quality because it is disposable, whereas another may be viewed as having poor quality because it is not disposable.

## **STANDARDIZATION PROCESS**

Product standardization and market standardization are important. As companies make effort in standardizing production, they also make effort in standardising channels of distribution of such products.

### **Product standardization**

Product standardization is the homogenization of items available to consumers, by manufacturers following the technical standards and guidelines in order for such product to qualify for sale. This process is intended to help consumers make up their minds more easily and create informed decisions. Acevedo, (2015), alludes that product standardization creates general practices and standards that all similar items on the market must meet. It helps lower prices by encouraging a broad range of different resources, offering somewhat different benefits but still meet a generally accepted idea of what a specific product is meant to be. In this way, consumers are guaranteed protection from manufacturers. Product standardization ensures specific measures of cleanliness, consistency and quality with every shipment of a product, and provides a greater degree of control over testing and management of these assets.

Product standardization is an efficient method to reduce costs and increase quality. Minimizing the differences in products, results in rapid production increase, modernized distributions channels, reduction in raw material costs and strengthens product branding. The best product standardization strategy permits balance between the needs of target market and cost savings of standardization.

Acevedo, (2015), identified three areas of concern: components, packaging, and quantity. The basic components of all products should be standardized. When products are properly modified, similar components can be used across several products; Slight changes in packaging can help standardize products offered globally. Without making changes in the actual product, product packaging could be done to reflect differences in legal requirements such as warnings, language, promotions and branding. Products shipped to international destinations may also require additional protection against moisture, extreme temperatures and harsher sales conditions. Product standardization in terms of quantity would require different quantities. Large packages for warehouse stores and small packages for international markets as most international customers do not buy products in bulk due to lack of space, transportation limitations and monetary differences. A company takes advantage of product standardization savings by selling different quantities in different marketing channels. For instance, a company could sell a product in different quantities in the same store to capitalize on consumers that want a volume discount.

### **Market Standardization**

When a small company chooses to market itself internationally, it faces a unique set of challenges. While the company no doubt wants to maintain a consistent image across different markets, it must also take into account the cultural context into which its marketing material is entering. A message that works in the United States may be received very differently in, say, Sudan. Therefore, even a small company should standardize marketing internationally but also leave room for flexibility (Wolfe, 2014).

In developing a standard marketing strategy that could be applicable to all markets, a company should identify its goals. While the ultimate goal is to generate revenue, the company should ruminate on the kind of message it wishes to send to consumers across all markets about the company. Once this central message has been identified, then it can be tailored to different audiences in different countries based on their cultures.

The company should identify certain branding signifiers' colors, images, sounds, that will resonate internationally. In as much as the company is able, these branding signifiers should have global consistency, so that the company presents a coherent, standard image to everyone, no matter the language or nationality.

However, branding a product for multiple countries can be difficult, as the visual and auditory signs that are used to express brands linguistically may mean very different things in various cultures. For example, the color green in Iran has been linked with opposition to the government, while in Ireland it is a national color. Therefore, marketing should not be so standardized that it ignores these cultural contexts. An international marketing strategy should be standardized to maintain brand coherency, but also allow for a degree of tailoring, based on the input of cultural experts in various markets (Wolfe, 2014).

### **Standardization of AM Products**

Aba-Made product standardization would involve a total overhauling, from raw material need through process and mode of processing to finished products. For instance, Anderson, (2015) highlighted the part standardisation as here described.

Raw Materials Standardization: When done, the production processes would be flexible enough to make different products without setting up multiple processes; Machinery/ Tool Standardization: determines how production machine and the many different tools required for assembly, alignment, calibration, testing, repair, and servicing are brought to international standard. Company-wide machinery and tool standardization can be determined through analyzing tools used for existing products, determine modern ones existing and their efficiency rate, then decide on preferences; Process Standardization: Standardization of processes results from the concurrent engineering of products and processes to ensure that the processes are actually specified by the design team, rather than being left to chance or to be determined later. Processes must be coordinated and common enough to ensure that all parts and products in the mass customization platform are built without the setup changes that would undermine flexible manufacturing.

It is suggested that the zero based approach to standardization allows thoroughness in the procedures. Literally, it starts at zero and adds only what is needed, as opposed to reducing parts from an overwhelming list. An analogous situation would be cleaning out the most cluttered compartment and removing unwanted parts, would take much effort, and still might not be very effective; whereas zero-based approaches exclude the clutter from the beginning. The clutter is the unnecessary aspects that could be avoided if products were designed around common parts (Anderson, 2015).

### **Standardization Benefits**

Standardization brings benefits such as cost reduction in the areas of purchasing costs reduction through purchasing leverage, inventory cost reduction, floor space reduction, ordering expense avoided when common parts are simply drawn as needed from spontaneous resupply, and overhead cost reduction; Quality of product is another benefit that comes with continuous improvement. Flexibility as a benefit arises from eliminating duplicating setup, inventory reduction, simplifies supply chain management, internal material logistics, bucks truck deliveries, and flexible manufacturing. Responsiveness comes with standardization in the areas of build-to-order, parts availability, quicker deliveries from vendors (Anderson, 2015).

Feim.org. (2015) highlighted the advantages of standardization to various categories, the manufacturing companies, the consumers and then to the public. Manufacturers have the advantage to rationalize different varieties of products, decrease the volume of products in the store, manufacturing cost and also to improve the management and design of products; speed up the management of orders, facilitate the exportation and marketing of products, and simplify purchasing management.

Standardization provides the platform where consumers have the advantage of quality and safety level of service and products, information on the characteristic of the products, make comparison between the different offers easier. Lastly to Public service, they can simplify the legal passage of production, establish quality, environmental and safety policies, assist economic development and facilitate the business.

### **Tactical Knowledge**

Tactical facts are required in marketing strategies useful in the standardization process. It refers to the ingenuity of companies to utilise available information for growth and development of products and market; it is the ability that tends to invent.

Tactical knowledge as a marketing strategy in AM standardization process would encompass- (i) Access to capital: there is need for easy access to capital as standardization of AM products is an effort at repositioning indigenous companies' ingenuity. Financial institution's contribution toward this process in mobilising and delivering investment resources is indispensable. Given Nigeria's peculiar situation of access to loan or corporate funding, government would need to ameliorate the problems associated with accessing loan, procedure and interest involved for AM manufacturers; (ii) Knowledge of the target market: Identifying the product quality required by a particular target market is imperative. In order to maximize sales, companies need to understand their customer and define the target market. A Target Market is a specific group of consumers at which a company aims its products and services. A well-defined target market is the first element to a marketing strategy. This is achieved through segmentation. Two important factors to consider in selecting a target market segment are the attractiveness of the segment and fit between the segment and the firm's objectives, resources and capabilities (Netmba, 2015); (iii) Technology acquisition and development: A zero approach to standardisation is one bane of this study. It requires introduction of more sophisticated technology while discarding the current ones if any. It has been identified in literature that positioning companies for economic development would

demand modern technology for transplantation and adaptation of diverse field of production possibilities. Technology would facilitate domestication, indigenisation and diffusion internationally, leading to the country's control over supply of products and services (Ojukwu, 2006); and (iv) International collaborative partnering: For standardization of AM product to be globally relevant and competitive, international collaboration is crucial as no single economy is self-sufficient in its entirety. Foreign inputs in various forms in these AM companies would energise growth potentials. Ehinomen (2012) admitted that, repositioning small and medium enterprises in Nigeria for global competitiveness is to embark on international partnering.

## **THEORETICAL CONSIDERATION**

### **The Theory of Value Chain**

The theory of value chain empowers a company to design, produce, marketing, delivery and supporting its product. The idea of the value chain is based on the process view of companies, the idea of seeing a manufacturing (or service) company as a system, made up of subsystems each with inputs, transformation processes and outputs. The manner by which value chain activities are carried out determines cost and affects profit (Cambridge, 2013).

The value chain categorizes the generic value adding activities of an organization into the physical/traditional value chain which is a physical-world activity performed in order to enhance a product or a service; and virtual value chain which has to do with the cyber-market space. In practice, most companies since 2013, utilize a combined value chain as no progressive company can afford to remain stuck to any one of these value chains to improve the ongoing products/services or to develop some new product/service (Porter, 1985).

Porter (1985) highlights the primary and the secondary activities of value chain. The primary activities are: (i) Inbound Logistics - involve relationships with suppliers and include all the activities required to receive, store, and disseminate inputs; (ii) Operations - are all the activities required to transform inputs into outputs (products and services); (iii) Outbound Logistics - include all the activities required to collect, store, and distribute the output; (iv) Marketing and Sales - activities inform buyers about products and services, induce buyers to purchase them, and facilitate their purchase; (v) Service - includes all the activities required to keep the product or service working effectively for the buyer after it is sold and delivered.

The secondary activities are: (i) Procurement - is the acquisition of inputs, or resources, for the firm; (ii) Human Resource management - consists of all activities involved in recruiting, hiring, training, developing, compensating and (if necessary) dismissing or laying off personnel; (iii) Technological Development - pertains to the equipment, hardware, software, procedures and technical knowledge brought to bear in the firm's transformation of inputs into outputs; (iv) Infrastructure - serves the company's needs and ties its various parts together, it consists of functions or departments such as accounting, legal, finance, planning, public affairs, government relations, quality assurance and general management.

The implication of the value chain theory is that the AM companies must realize that acceptability whether nationally or internationally goes with value adding at each point. From Porters value chain viewpoint, consumers have assurances in products or services offered as value is added primarily at logistics level, operational level, outbound logistics, marketing and sales level and service level.

### **Theory of Reengineering**

Reengineering is the "fundamental rethinking and radical redesign of business processes to achieve dramatic improvements in critical, contemporary measure of performance, such as cost, quality, service and speed," according to Hammer and Champy in (White 2015, web pp). Business Process Reengineering (BPR) is the practice of rethinking and redesigning the way work is done to better support a company's mission and reduce cost.

Reengineering starts with a high-level assessment of the company's mission, strategic goals, and customer. It requires giving answers to some basic question, such as: Do we have need to redefine the company's mission? Do we have strategic goals that are properly aligned with our set mission? Have we identified our customers? Reengineering is particularly essential when a company finds out that it is operating on questionable assumptions, especially in terms of the wants and needs of customers. A company's next line of action is to rethink on what it should be doing, and how best to do it.



Within the framework of this basic assessment of mission and goals, re-engineering focuses on the company’s business processes—the steps and procedures that govern how resources are used to create products and services that meet the needs of particular customers. As a structured ordering of work steps across time and place, a business process can be decomposed into specific activities, measured, modeled, and improved. It can also be completely redesigned or eliminated altogether. Re-engineering identifies, analyzes, and re-designs a company's core business processes with the aim of achieving dramatic improvements in critical performance measures, such as cost, quality, service, and speed (United States General Accounting Office, 1997).

The corollary of reengineering theory lies in the fact that AM companies would need to be restructured, and in doing this, they must ensure that their mission and strategic goals are in perspective, with the aim of achieving impressive improvements in critical performance measures, such as cost, quality, service, and speed.

### 3. METHODOLOGY

This study adopted the descriptive method in examination of standardization of Aba-Made products to internationally acceptable standard qualified for export. A cross-sectional survey method was adopted in gathering perception data on knowledge of AM and fairly-used or Toks products; their preference, and reason(s) for choices made between AM and Toks products.

A questionnaire which was the primary data source was constructed to ascertain the citizenry outlook on AM goods and Toks products; while the secondary data source, provided information on MA-MS model application to the process of product and market standardization.

A total number of 112 copies of questionnaire was administered to consumers in the academic environment; consumers as well as traders in Toks markets. A total number of 79 valid copies were received from the field and analysed using the frequency descriptive statistical tool. The hypothesis was tested using the non-parametric tool of Wilcoxon signed rank test. This test was adopted to determine relatedness of responses.

### 4. RESULT

A seventy- one percent (71%) response rate was achieved. The data analysed revealed that respondents were about fifty-one percent (51%) male and forty-nine percent (49%) female (Table 1). This composition shows a near balanced mix of respondents which is expected to translate into almost equal contribution to the issue under examination.

About forty-six valid percent (46%) of the respondents were graduates and would be graduates from University. This was remarkable as suggestions of ways to standardization of AM products were scholarly. About 4 percent (4%) of the respondents had no schooling; about nine valid percent (9%) had primary schooling and about twenty-three valid percent (23%) had secondary education while about eighteen valid percent (18%) had college of education and polytechnic education (Table 2). A blend from this various categories in the society gave a spectrum of viewpoints which when articulated culminated in valuable suggestions towards internationalisation of AM products.

**Table 1: SEX OF RESPONDENTS**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid MALE	40	50.6	50.6	50.6
FEMALE	39	49.4	49.4	100.0
Total	79	100.0	100.0	

SOURCE: SURVEY 2016

**Table 2: HIGHEST LEVEL OF EDUCATION OF RESPONDENTS**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid				
NOSCH	3	3.8	3.9	3.9
PRIMARYSCH	7	8.9	9.1	13.0
SECSCH	18	22.8	23.4	36.4
COLLEDU	11	13.9	14.3	50.6
UNIV	35	44.3	45.5	96.1
POLY	3	3.8	3.9	100.0
Total	77	97.5	100.0	
Missing				
System	2	2.5		
Total	79	100.0		

SOURCE: SURVEY 2016

Large integers of respondents have knowledge of AM products. About ninety-six valid percentage (96%) of the respondents was familiar with both Aba-Made products and Tokunbo products. Table 5 (*Appendix 3*) revealed that about seventy-seven valid percent (77%) have preference for fairly used (Toks) goods. Reasons for preferring Toks (Table 7, *Appendix 3*) to the Nigerian Aba-Made products, ranged from last longer, strong, neater, to it being cute and a combination of all the aforementioned (Acronym- LASTRONEAT).

A closer look at the Table 7 (*Appendix 3*) reveals that about fifty-six valid percent (56%) of those with Toks preference had that choice because they claimed it last longer than the AM products. Table 6 (*Appendix 3*) showed that ten percent (10%) of those that preferred Aba-Made product (23%) said they do because it is a form of solidarity to Nigerian producers of such products while nine percent (9%) said they do because they want to encourage the indigenous production.

**Test of hypothesis**

H<sub>0</sub>: There are no differences in the perception of preference for Toks against AM products among consumers and traders of Tokunbo.

The descriptive frequency of consumers is fifty-four representing 68% while traders of Tokunbo goods are twenty-five representing 32% of the total respondents (Tables 8 & 9; *Appendix 3*)

**Hypothesis Test Summary**

	Null Hypothesis	Test	Sig.	Decision
1	The median of differences between consumers Reason Toks and trader Reason Toks equals 0.	Related-Samples Wilcoxon Signed Rank Test	.320	Retain the null hypothesis.

Asymptotic significances are displayed. The significance level is .05.

This non-parametric test shows that ( $p > .05$ ) there is no significant difference between consumers and traders of Toks on preference of Toks against AM products. The null hypothesis of no significant difference in preference is thus not rejected.

## 5. CONCLUSION AND POLICY IMPLICATION

The details from the sampled economic picture evidenced that there is greater need for diversification of the Nigerian economy. This study proposed the standardization of AM products for sustainable development of the Nigerian Economy through international marketing of standard AM products to earn foreign exchange that would improve the Nigerian foreign reserves. This would be accomplished through the application of the MA-MS model. A model that combines the use of value analysis and value engineering to monitor the cost associated with conversion from crude to stand product quality that meets international standard that are exportable; viz-a-viz product quality control and quality assurance tests, while putting to good use tactical knowledge to be able to penetrate the international market.

The response from the survey shows that most of the citizenry do not acquire Aba Made; as their taste preference is higher for fairly used products (Tokunbo). The hypothesis tested revealed that there are no significant differences in the perception of preference for Toks against AM products among consumers and traders of Tokunbo. The implication of this is that, there is need for enlightenment and education for the citizenry to patronise indigenous products. This awareness will be very necessary when the products have being standardized.

Respondents made several suggestions on how to improve AM products to internally and internationally acceptable standard. The suggestions will be useful for policy formulation and implementation:

- (i) There is need for government intervention in the following areas: Research and development, collaborative partnership, ensuring enabling environment and funding support;
- (ii) Improve quality for durability, rebranding and packaging to world's best benchmark;
- (iii) Tariff- free importation of machines needed by such indigenous firms;
- (iv) Stop importation of foreign made products and smuggling of goods that falls within this category, while creating awareness and encourage local patronage of AM products;
- (v) Create uniqueness in AM products but with international outlook;
- (vi) Quality control board should be up and doing to stop imitation production; Effective monitoring of standard by the Standards Board of Nigeria (SON); checking the right mix and material for production.
- (vii) Certification of companies complying to standards;
- (viii) Sanction companies producing sub-standard products;
- (ix) Specialised training for manufactures of such products, including training on the use of modern technology;
- (x) Labelling and branding should be Nigerian;
- (xi) Innovation and creativity should be given priority;
- (xii) Competition should be encouraged in the industry;
- (xiii) Interest rate on loan for such firms should be single digit;
- (xiv) Land Moratorium in terms of acquisition cost and occupancy fee so as to attract more companies into this production for exportation.

### **Limitation of this study**

Outside of the methodological limitation of generalisation impossibility due to the research design, the conceptual model formulated- the MA-MS model was only theoretically examined. The practicality of this model is yet to be tested. This aspect is left for subsequent study.

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**APPENDICES**

**Appendix 1: Although the world bank standard is now US\$1.25 the old reference of US\$1 was the standard used in Nigeria at the time that the survey was conduct.**

**Appendix 2: Table 1 below**

**Table 1: A Sample View of Nigeria’s Dwindling Economic Picture**

Index	Opening Figure	Ist Quarter	2 <sup>nd</sup> Quarter, 2009	2 <sup>nd</sup> Quarter, 2010	2 <sup>nd</sup> Quarter, 2014	2 <sup>nd</sup> Quarter, 2015	January 2016
External Reserves	\$53 billion	\$47 billion	\$43.20 billion	\$42.40 billion	\$37.3 billion	\$29.1 billion	34.38 billion
Crude Oil Prices	\$37 per barrel	\$60 per barrel	\$72 per barrel	\$67 per barrel	\$62 per barrel	\$43 per barrel	\$27.7 per barrel
Average Naira Exchange rate to a dollar	142.34	145.71	146.43	148.50	158.55	197.12	199.9
Capital Market Capitalisation (Naira)	5.91 trillion	5.2 trillion	4.69 trillion	8.22 trillion	10.0 trillion	9.85 trillion	9.757 trillion

Source: *Premiumtimesng.com/ Okeke, (2009) and (2015)*

**APPENDIX 3: FREQUENCY DESCRIPTIVE ANALYSIS OF RESPONSES**

**TABLE 3: KNOWLEDGE OF ABA-MADE**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid YESFAMILIARAM	75	94.9	96.2	96.2
Valid NOTFAMILIARAM	3	3.8	3.8	100.0
Total	78	98.7	100.0	
Missing System	1	1.3		
Total	79	100.0		

**SOURCE: SURVEY 2016**

**TABLE 4: KNOWLEDGE OF TOKS**

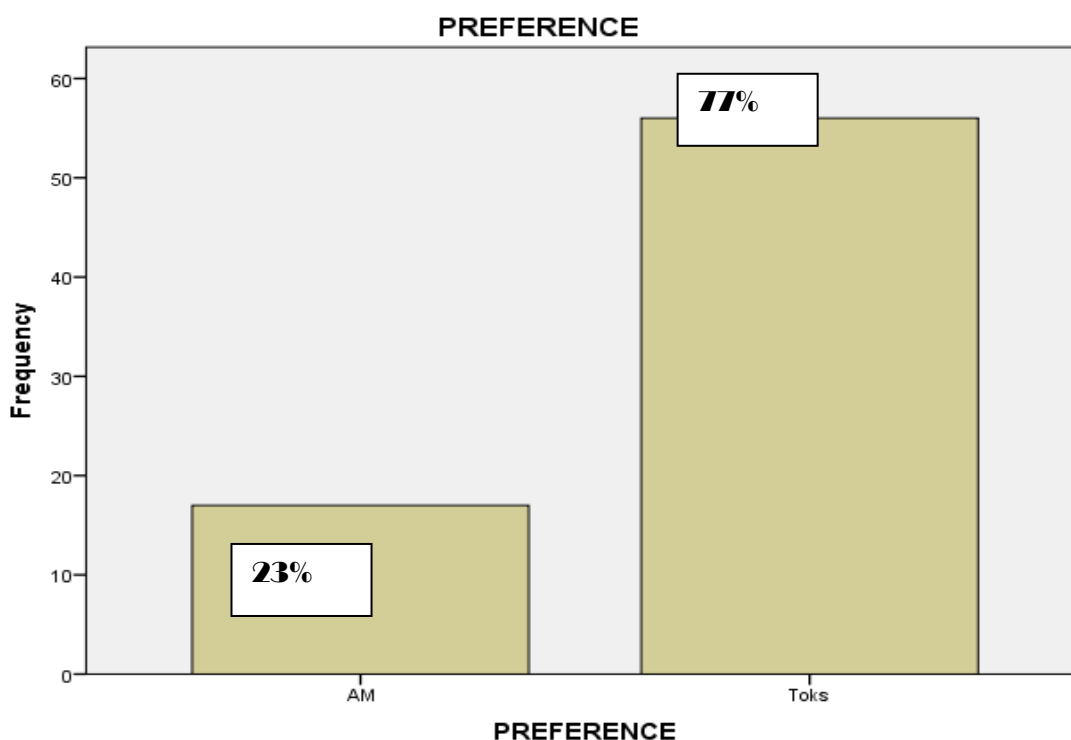
	Frequency	Percent	Valid Percent	Cumulative Percent
YESFAMILIARTOKS	76	96.2	96.2	96.2
Valid NOTFAMILIARTOKS	3	3.8	3.8	100.0
Total	79	100.0	100.0	

SOURCE: SURVEY 2016

**TABLE 5: PREFERENCE**

	Frequency	Percent	Valid Percent	Cumulative Percent
PREFERNCEAM	17	21.5	23.3	23.3
Valid PREFERENCETOKS	56	70.9	76.7	100.0
Total	73	92.4	100.0	
Missing System	6	7.6		
Total	79	100.0		

SOURCE: SURVEY 2016



**TABLE 6: REASON FOR ABA-MADE CHOICE**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid NOT CHOICE	62	78.5	78.5	78.5
SOLIDARITY	8	10.1	10.1	88.6
ENCOURAGE	7	8.9	8.9	97.5
EMPOWER	2	2.5	2.5	100.0
Total	79	100.0	100.0	

SOURCE: SURVEY 2016

**TABLE 7: REASON FOR TOKS CHOICE**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid LASTLONGER	30	38.0	55.6	55.6
STRONG	6	7.6	11.1	66.7
NEAT	1	1.3	1.9	68.5
CUTE	1	1.3	1.9	70.4
LASTSTRONEAT	9	16.7	16.7	87.0
NEUTRAL	7	8.9	13.0	100.0
Total	54	68.4	100.0	
Missing System	25	31.6		
Total	79	100.0		

SOURCE: SURVEY 2016

**TABLE 8: CONSUMERS OF TOKS**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid LASTLONGER	29	53.7	53.7	53.7
STRONG	5	9.3	9.3	63.0
NEAT	7	13.0	13.0	75.9
CUTE	1	1.9	1.9	77.8
LASTRONEAT	9	16.7	16.7	94.4
NEUTRAL	3	5.6	5.6	100.0
Total	54	100.0	100.0	

SOURCE: SURVEY 2016

**TABLE 9: TRADERS OF TOKS**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid LASTLONGER	15	27.8	60.0	60.0
STRONG	3	5.6	12.0	72.0
NEAT	1	1.9	4.0	76.0
LASTRONEAT	1	1.9	4.0	80.0
NEUTRAL	5	9.3	20.0	100.0
Total	25	46.3	100.0	
Missing System	29	53.7		
Total	54	100.0		

SOURCE: SURVEY 2016