

Comparative Analysis of Ethiopian Footwear Competitiveness: The Quality Dimensions of Manufacturing

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Abstract— In the transformation of the Ethiopian economy from agriculture to industrial led, the manufacturing sector has been making up a large and important segment of the industrial sector. Among others, the Leather and leather products including the footwear manufacturing industries are continue to be one of the leading industries in this transformation period with new lines of production establishments to foster foreign earning and import substitution. However, the quality of the inland leather footwear is a chronic problem that demands contentious concern. The sole objective of this paper is to investigate the quality determinants of those leather shoe products in terms of quality performance and to study the requirements that the footwear should possess to be purchased by the local customers. Data have been gathered through distributing structured questionnaire to the end users and retailers in Mekelle, Ethiopia, and then interpreted with descriptive analysis. The research result demonstrated that local footwear products have low market position because of lack of engineering features, comforts and aesthetic values and short service life. Respondents, both end users and retailers, have determined that imported footwear products have been most consumable even though they are three times costly than local ones. The local footwear products have been experiencing low durability because of ease breakdown and wearing of their outsole and fading, breaking and wearing of the upper leather. These shoes are with upper leather that lacks breathability characteristics; a means to heat accumulation and sweating. The sole component is so stiff and inflexible that merely harms the foot of the user. It is recommended that the footwear manufacturers should exert efforts on engineering and re-engineering of the outsole and insole technology indigenization. Tannery plants have better to supply quality leather uppers that satisfy at least the minimum requirement of the standards.

Keywords— Comparative analysis, Leather upper, Local footwear, Equivalent imported products, Quality dimensions, Product performance, Purchasing requirements

1 INTRODUCTION

The manufacturing sector has been making up a large and important segment of the industrial sector in Ethiopia [1]. To persuade this momentum, the growth and transformation plan, the five year strategic plan, of the country has made an assignment that the manufacturing sector should be developed by a faster rate than the other economic sources to meet the transformation from agriculture to industry led economy [2]. This industrial expansion is being promoted based on the aim of both export orientation and import substitution through the persuasion of various encouragements for investment. The review of the GTP demonstrates that the industrial sector has shown 10.8 % and 15.0 % growth rate by the year 2009/2010 and 2010/2011, respectively, which shared 13.4 GDP in 2010/2011 [3].

To anchor this at solid foundation, the country has categorized the manufacturing sector into four groups namely leather and leather products, textile and garments, metal and engineering, and chemical and pharmaceutical manufacturing industries as driving economic corridors. The footwear manufacturing which is the largest component of Leather and leather products manufacturing industries in Ethiopia have lived with a tremen-

dous expansion since its inception with various encouragements to foster import substitution and foreign earnings. Local industries are manufacturing footwear almost all of leather uppers. However, the quality of the inland leather footwear is a chronic problem that demands contentious concern. A number of imported footwear products have substituted the market position of the inland products both in the national and international markets. Equivalent leather upper imported footwear, branded as CAT, Reebok, Nike, Timberland and others, are dominated the local market in rapid fashion.

In the contrary, various literatures have appreciated that Ethiopian hair sheep skins and goats originating from the highland are appreciated by the international leather industry because of their high strength at lower thickness and flexibility which makes them very suitable for gloving, garment leather and shoe upper [4]. These skins have fine fiber structure that lends itself to good quality suede. But 25 % of skins and hides are made usable [5] because of low quality pelts supply. It is because these reasons that, though there is great growth in footwear demand, the inland footwear manufacturing industries have acute a shortcoming to deliver quality products to both national and international markets [6]. The country leather and leather products export, in 2011/2012, has reached 206 million US Dollar [7] of which the crust and finished leather export shares 89.58 percent and shoe export shares 9.08 percent and the remaining percent is taken by the other leather products [8]. The large export at crust and finished leather is not due to surplus, but due to low consumption by the local shoe manufacturing industries. The shoe manufacturing firms are not so profitable but are sheltered for survival, though there is too much supply

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for leather uppers. Hence, this research has risen to investigate the design and performance quality of the inland footwear products through comparative analysis with equivalent i.e. leather upper imported footwear products of known brands.

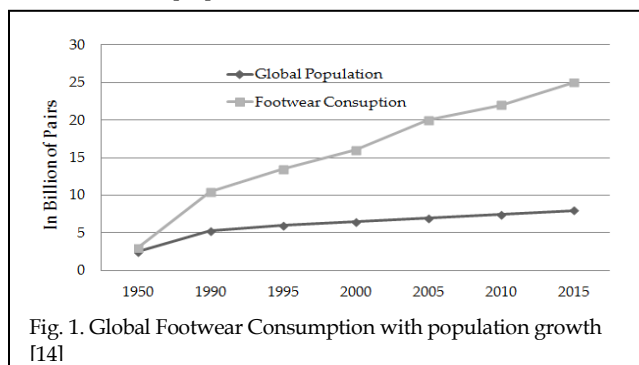
2 THE GLOBAL LEATHER AND LEATHER PRODUCTS MARKET

The leather industry is one of the oldest and largest industries that occupy a place of prominence in the global economy in view of its massive potential for employment, growth and exports. The world demand for the leather and leather products was USD 24.3 billion in the 2001 [9] and it stood at USD 68.57 billion in 2003 [10] which then has skyrocketed to USD 347.50 billion in 2010 [11]. The main reason to this sloppy increment of demand is that leather and leather products continue to be consumed in large volumes in developed countries like the USA, Europe, Australia and Japan [10].

China is the largest producer, consumer and exporter of leather and leather products in the World in that the annual production of leather is around 7.7 billion square feet accounting for over 20% of total global output [11]. Europe also represents 25% of the world production of leather and it is also the largest and most dynamic consumer of leather goods [12].

The leather and leather products include finished leather, leather uppers and footwear, leather goods and garments, and saddler. Leather upper footwear is the largest component of leather products in the global market, accounting for more than 70 percent of the global leather consumption [11] and 58.5 percent of the global footwear types [13]. Various censuses revealed that the distribution of the footwear manufacturing companies has been radically skewed to the North Asia and then slightly to India and central Asia, and south East Asia [13]. For instance, the annual leather footwear output in China is about 14 billion pairs accounting for over 70% of global output [11].

Worldwide footwear consumption has doubled every 20 years, from 2.5 billion pairs in 1950 to more than 20 billion pairs of shoes in 2005 as illustrated in fig. 1 [14]. The worldwide per capita consumption of footwear has considerably increased from year to year: for instance, from 1 pair of shoes per year for every person in the world in 1950 to almost 2.6 pairs of shoes in 2005. Per capita consumption is also different among the various countries: 6.9 in USA (the largest in the world), 2.2 in China, 0.5 in Vietnam [14].



The leather industry is felt to be the call of the day to Ethiopia to pursue and ensure broad based economic development. Ethiopia is possessing 90-million livestock pelt population [4] of which 48 Percent is cattle, 27 Percent are sheep and the remaining 25 percent are goat [15]. With these largest livestock resources, the country is considered as first in Africa and the 10th in the world.

However, the country's share to the global leather and leather products market has shown low contribution since its inception. Quantitatively, the share in 2001 was only 0.00023 percent [9] then has slightly increased to 0.000597 percent in 2010 [7]. The import and export of footwear in Ethiopia, referring the data from Revenue and Customs Authority, in 2011 reaches a value of over 35.63 million USD, representing a 9.82 percent annual increment since 2007. The export has a share of 14.80 percent and the import has a share of 85.20 percent with that the import shows -2.66 percent increment and the export 14.08 percent since 2007. This illustrated that the high demand of the shoe in the country is substituted by the imported shoes.

2.1 The Quality of Footwear Products

The quality of the products is defined as its degree of fitness to meet the needs and desires of the customer. The quality of products can be measured in terms of various requirements; after the product has been delivered to the customer. The most common quality definitions in manufacturing include: Conformance, Performance, Reliability, Features, Durability and Serviceability. The relative importance of these definitions is based on the preferences of each individual customer. It is easy to see how different customers can have different definitions in mind when they speak of high product quality.

In the case of leather products, the quality of the product can be measured in terms of two properties [16]. These include: aesthetic value which includes the colour evenness, grain fineness, pore appearance, absence of defects, surface feel, flexibility, stretch and in general those properties that can be perceived by senses and assessed subjectively. The other dimension is the use property. This determines the fitness of the footwear to withstand environmental conditions and physical efforts to which it will be subjected in practical use by the customer, by conducting the corresponding tests or standard analyses. The dimensional stability of the leather upper is also becoming mandatory requirement [17] that the leather upper footwear should possess.

3 METHODOLOGY

The data used in this study were collected through the administration of a questionnaire that consisted of two types: for the end users and retailers which have eleven and eight items, respectively. The questionnaire process was designed to collect the customers' voice about the local leather upper footwear and to assess the possible reasons that lower the market position of these products. The questionnaire was translated from the English language into Tigrigna by local experts, in order to elicit responses from subjects within the local area and to make the survey sensitive to cultural factors. Then the questionnaire was

pretested before it was administered to end users and retailers in the city of Mekelle. 95 questionnaires were presented to end users and 14 retailers in April, 2013. The response rate for the end users is 94 percent and for the retailers is 79 percent. Data were then processed using descriptive analysis.

4 RESULTS AND DISCUSSION

Ethiopian is a country of abundant resources in livestock for leather and leather products manufacturing. Currently there are 27 tanneries and 15 shoe manufacturing industries in Ethiopia to persuade this agro business. These tanner plants are estimated capacity of processing 27.03million of sheep skin (37 percent), 13.83 million goatskin (44 percent) and 2.34million cattle hides (7.6 percent) to the crust or/and finished leather [15]. Ethiopia, then, is producing finished leather to the global market. The country is also reaching the leather footwear abroad market though venturing leading companies' brands, such as from Germany and Italy [5].

The shoe manufacturing is becoming an increasing business since the last five years because of that the government has considered as first priority area of economic corridor. However the quality of the inland footwear is a contentious problem by the local users, though the Ethiopian finished leather attracted the world because of the fibre structure. To mere this speculated quality problem, a comparison analysis has been carried out between the Ethiopian leather footwear products and with the equivalent imported products of known brands.

4.1 Comparison Analysis of Ethiopian Footwear Products

In comparison analysis, retailers and end users have good knowledge to determine the market competitiveness and reputation of the specific product [18]. Hence, this research has been developed by approaching both the retailers and the end users through structured questionnaire. For the development of this discussion, the research has inferred the products of Sheba leather industry, the Anbesa shoe factory, TiKur-Abay Shoe Factory and the Peacock shoe factory as representatives to the inland products due to their business age, size, product variability and reputation.

This comparison analysis is issued to critically investigate the competitiveness of inland shoe products with the equivalent imported ones on the perspective of the end users. To develop this comparison analysis, samples have been taken randomly from both shoe retailers and end users.

4.2 Voice of the customer

In Ethiopian shoe market is composed of both locally manufactured and imported products. The observation on market segment revealed that imported shoe products are more populated than the inland manufactured shoe products. It is common and usual observation that these imported shoe products are found in almost all boutiques and shoe markets. This trend of frequent use of imported products is ever increasing due to the dynamic nature in design and aesthetic value of these products, especially for those on the young age.

Participants are approached to provide their yearly shoe consumption. The assessment, as shown in fig. 2 illustrated that most of the customers in this study buy shoe twice a year. The second distance of yearly consumption is three times per year. Significant number of respondents also buy shoe once a year.

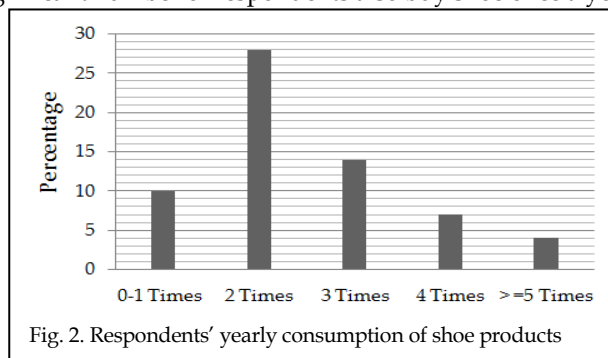


Fig. 2. Respondents' yearly consumption of shoe products

In this assessment it also discussed to assort the frequency to use the Ethiopian shoe products. As demonstrated in Fig. 3, more than 67 percent respondents give less attention to use local products, in other side, most of the time they are vulnerable to use imported shoe products.

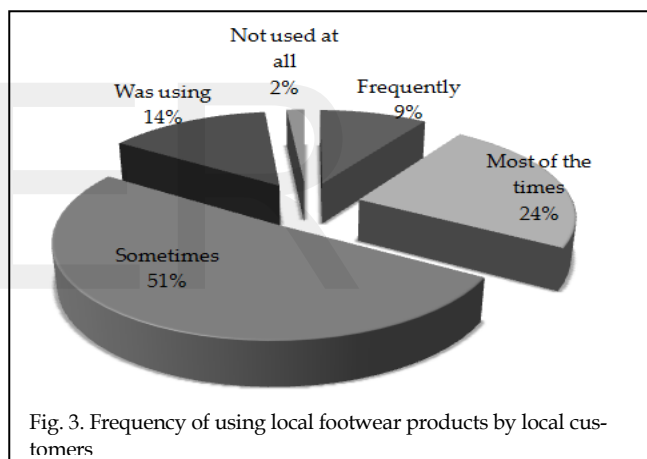


Fig. 3. Frequency of using local footwear products by local customers

The different inland shoe producers are also compared among each other to reveal their reputation and to concern on the fact that do customers rely focus on the products brand. As demonstrated in the fig. 4 the Anbesa shoe products and the Tikur Abay Shoe products are found more popular. Significant number of respondents also buys the Sheba shoe products. Moreover, 95.24 percent customers made due attention to the product brands while purchasing locally produced footwear.

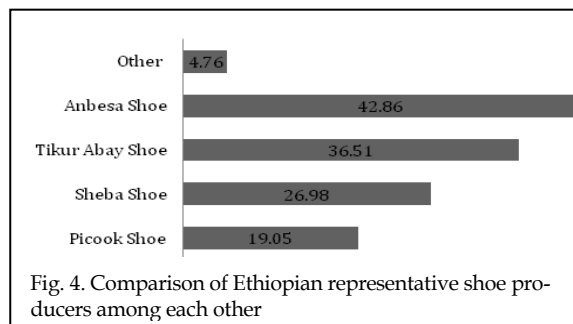


Fig. 4. Comparison of Ethiopian representative shoe producers among each other

The average price of the Ethiopian leather footwear products, inferring the price estimation of the respondents, is quoted as \$21 while average price of the equivalent imported leather shoe products is \$ 67, which exceeds three times the price of the inland shoe products.

In the other hand, the assessment result demonstrated that customers buy Ethiopian products mostly because of their low purchasing price. Some also voiced that they buy such products to encourage and appreciate local shoe manufacturers. In other side, customers buy imported equivalent shoe products due to their engineering features such as their essence of comfort, their architecture view i.e. the aesthetic value and long service life. Fig. 5 shows the customer perception to buy inland shoe products and imported ones.

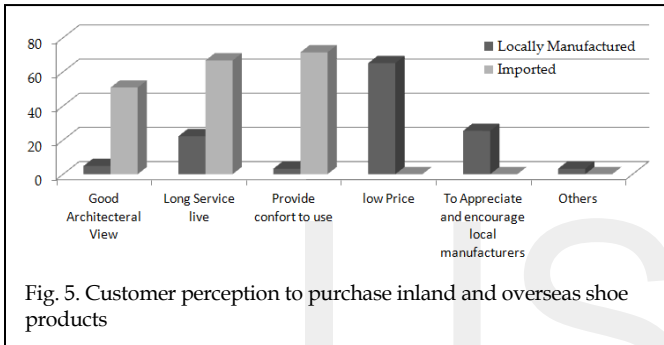


Fig. 5. Customer perception to purchase inland and overseas shoe products

From this assortment and investigation, we can deduce that the local manufactured shoe products lack engineering features such as ensuring comfort, aesthetic value and short service life. Most of the respondents have demonstrated that the Ethiopian manufactured shoe products have service life of 6 months to one year, while the average life of the equivalent imported shoe products is two to three years as illustrated in fig. 6.

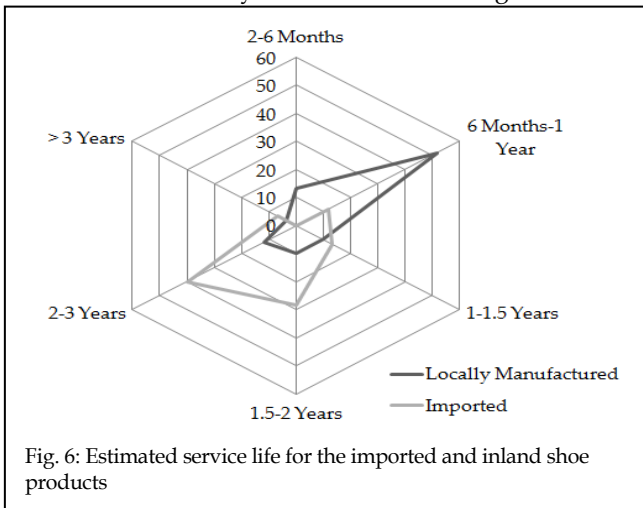


Fig. 6: Estimated service life for the imported and inland shoe products

Customers are asked to provide their voice on the reason that why Ethiopian shoe products experience short service life: to define causes of failure. As demonstrated in fig. 7, the outsole failure is the main reason that significantly determines the repu-

tability of the local shoe products in terms of service time. The outsole is being easily and suddenly breakdowns which determines the lack of flexibility of the footwear outsole. Ease of wearing of the outsole is also mentioned as a chronic problem that shortened the service life of local footwear. This ascertains that the outsole lacks to withstand resistance to abrasion. Wearing, fading and breakdown of the upper leather also substantially determines the service life. These problems mostly appear due to low water resistance and colour fastness nature of the upper leather.

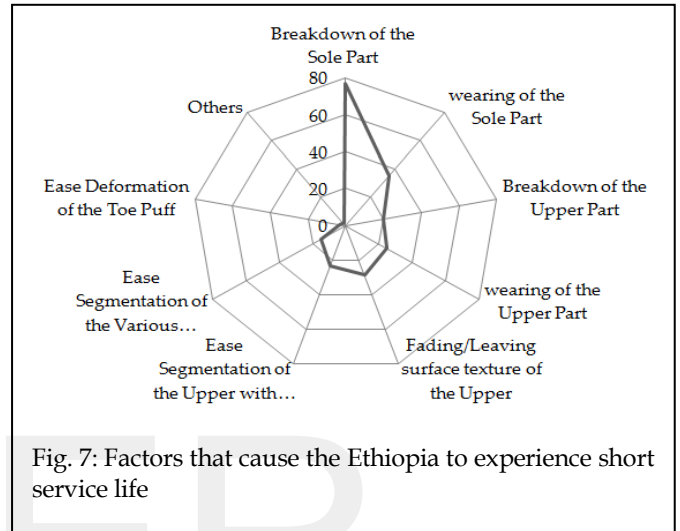


Fig. 7: Factors that cause the Ethiopia to experience short service life

In the same manner, the assessment has discussed on the factors that describe for the inland products to be deficient in their suitability to use. As illustrated in fig. 8, most of the respondents determined that the sole part of the shoe is so stiff and inflexible with rough nature. This recalls to the shortage in quality of whole sole and whole shoe flexing of the footwear. This situation harms the foot of the user. Significant number of respondents also demonstrated that local footwear accumulate heat, dehydrate the foot and then create bad smell inside the shoe. This recalls to the lack of breathability i.e. water vapour permeability of the upper leather.

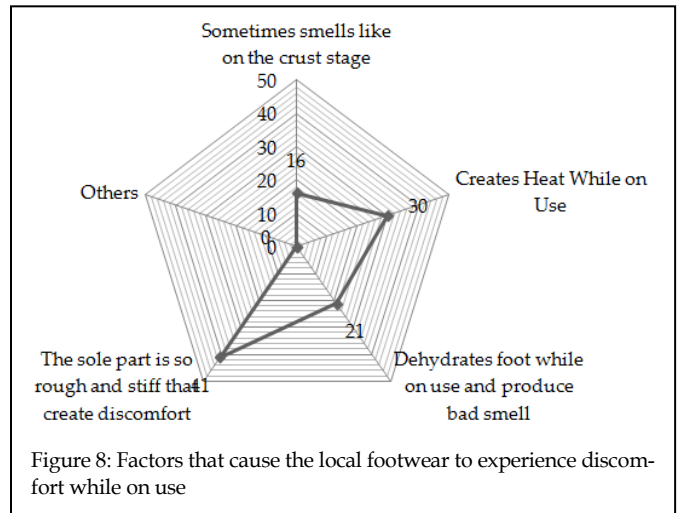


Figure 8: Factors that cause the local footwear to experience discomfort while on use

4.3 Validating Through Voice of the Retailers

Few of retailers have been approached to provide their deliverables to validate the end users voice. It is a rule of thumb that retailers are more power full for such ideas due to their direct contact to the end users and their closeness to forecast for the market trend from the past experience.

In this assessment, thirteen retailers of which four local shoe, six imported shoe and three mixed products market shops have been addressed randomly. The local marketers have shoe products from Picook, Tikur Abay, Sheba, Ambesa and other local shoe manufacturing company. Marketers of the imported equivalent footwear have products branded as CAT, Nike, Reebok, Timberland and other known brands. Through this assessment, it has been observed that, most of the local product marketers are dedicated for single product brand, i.e. for single company as big retailers, sometimes the factory itself. But the imported footwear marketers most importantly populate their shops with various product brands. The exported products also found in almost every boutique, sometimes with the local products as well.

Retailers have indentified that the average price of the Ethiopian made leather shoe products with an average of \$28 whereas the average value of the imported shoe products, taking the value of known branded products such as Nike, Reebok, Timberland and CAT, as \$83. This is three times the price of the Ethiopian leather shoe products, which is equivalent to the end users response. But retailers have responded that most customers are more prone to the imported shoe products when both products have been brought together. Retailers, those having both locally manufactured and imported shoe products, have pronouncedly proven this fact. Males at their young age are more exposed to this situation.

The retailers also orderly set customers' vulnerability towards different criteria. They rated the footwear comfort as the prior requirement followed by the aesthetic value and service life. Purchasing price is found at a third distance. Retailer hence reason out that customers are vulnerable to imported products because of their comfort to use, architectural view and long service life through maintaining its views for long. Some retailers have mentioned additional shortcomings of the inland manufactured shoe products that wind buyers towards the imported products. They noted that there is no innovation in design of outsole and the shoe as whole and hence local products possess of the same design at all times. They also marked that these local products lack view especially on the finishing activities, such as the stitching of the upper parts, attaching of the upper with the sole, thread colour selection, etc.

5 CONCLUSION AND RECOMMENDATION

This research has risen to investigate the competitiveness of inland footwear products when compared with equivalent imported products through descriptive analysis. From this comparison analysis, inland shoe products are experiencing different short comings. Customers are buying these products due their low price. Even with this low price, the inferred customers are not purchasing these products in frequent manner but so

rare. These participative customers have identified the possible shortcomings of the inland shoe products. The products are exhibiting short service life, mostly determined as 6 months to one year. This is due the fact that the sole part of this product is easily wearable and suddenly breaks down while on use. The upper part of the leather footwear is also remarkably known for ease of fading, breaking and wearing. This fact pointed out that the leather upper is experiencing ease of fastening to rubbing and low water resistance, which is the unwanted character of uppers. Moreover, the leather upper possesses limitations on the flexing and abrasion resistance, which determined the life-long suitability of the leather and even shorten the service life at large.

The breathability nature of the footwear upper is not up to the job. This enforces the local footwear to produce high heat accumulation at short usage period and to dehydrate the foot. The sole component of the footwear is so stiff and inflexible that limits the suitability to use. This ascertained that the local footwear has acute shortages on possessing the whole sole and whole shoe flexing requirements.

These reasons recall to the design and performance failures of the local footwear. Both the upper leather and the sole components are experiencing various pitfalls to possess the aesthetic values and use properties, hence, it is wise to recommend that local tannery plants and sole manufacturer should look into their supplied products to determine the quality requirements and the gaps. Tannery plant that produce finished leather for footwear upper consumption should regularly measure and determine the physical and mechanical properties of the uppers. The sole component manufacturers had better to investigate the outsole design and the performance measures through the art technology.

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