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Evaluation of Competitiveness Responses From the Leather Value Chain Strata in Kenya

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Abstract

Leather sector competitiveness encompasses fundamental aspects that provide the thrust to the sector. The prerequisites that are required include entrepreneurial-ship, harnessing of technology acquisition and transfer, research and development, appropriate policies and investment. In addition, these aspects through appropriate opportunity management and value creation initiative creates ambience in becoming competitive. The study also found out that productivity driven on efficient and effective resource management strategies are key for enterprises to be competitive in Africa. It is with this background that the study analyzed the responses from the leather strata in Kenya and related this to competitiveness. Moreover, the research evaluated the significance of the interrelationship between various stratums that interphase in the value creation process of the leather sector and also determined the impact of activities identified towards competitiveness. The study used a quantitative approach (n=244), descriptive analysis including an aggregate score to ascertain the top activities impacting on competitiveness in Kenya. The results indicated that producers and butchers were impacted with enterprise competitiveness and as a preference that followed, required the government to encourage investment. Traders were mostly concerned with price competitiveness and this was closely, associated with stiff competition in sourcing for raw materials in the country. However, tanners, leather goods and footwear required investments to improve on the leather and leather products with a concern raised for the flooding of leather products. This was deemed to stifle leather goods and footwear stratums' competitiveness. In general, responses of the study were significant with the study depicting that with appropriate value-addition initiatives it is feasible to transform the leather strata to become competitive. Thusly, the overall results indicated that activities were significant ($p<0.05$) to the value chain stratum towards competitiveness. Therefore, this observation strengthened the aspect of considering competitiveness as key to spur tangible results in the development and growth of the leather sector in Kenya.

Keywords: leather sector; economic indicators; competitiveness; agro-based commodity prices; resource management & value addition

1. Introduction

Africa is characterized by inadequate technological capability to support in particular its agro-based processing firms for the supply of quality value added products. It is observed that a transition from resource and low technology-based manufacturing to medium and high technology manufacturing stage is fundamental to competitiveness, especially in market entry for exports (Amanor-Boadu, 2003). Competitiveness refers to the capability and performance of the enterprise to supply or sell goods and services in an identified market in competition with other enterprises (Armitage, 1999) and in the process integrate social, economic, and environmental dimensions (Jiang & Shen, 2013).

Therefore, transformational stance by African enterprises from resource dependent stage of processing agro-based commodities to a higher degree of processing is the panacea to enhance competitiveness and provide stimulus towards industrialization in the region (Mwinyihija, 2014a). However, critical domains that have been associated with such transformation include; technological development aspects, human resource development, infrastructure, quality standards and testing, research and development, and support services to improve productivity (Fiore et al., 2007).

This approach will result to improved technological prowess and productivity (whose main ingredient encompasses competitiveness) of the target enterprises in the national and regional enterprises. Indeed, it is envisaged that strengthening of competitiveness would generate heightened efficiency and allocation of resources to enhance final products and co-products development, especially in the leather sector. Although, it is conspicuous that prices of raw material could also impact on the final products availed from the enterprises (Mwinyihija, 2014b). For instance, in the recent past in India the effect of highly priced raw materials on tanneries equally affected the other leather chain levels, particularly the competitiveness of the leather-goods and footwear subsectors (National Productivity Center [NPC], 2010).

It is with such background that a sustained leather sector through improved productivity and efficiency becomes prospective to optimized competitiveness. Thus, for an all-inclusive study relating to leather sector competitiveness there are prerequisites that need to be considered in consolidating critical aspects such as entrepreneurial-ship, harnessing of technology acquisition and transfer, research and development, appropriate policies and investment (Riahi, Rahbargazi, Mahmoodoghli, & Abbaszadeh, 2012; Terziovski, 2010). Therefore, when considering the SME's (small to medium enterprises) in Africa dealing with leather and leather products enhancing their comparative advantage are necessary and clustering becomes integral to the development of the leather sector in Africa.

According to Karantininis, Sauer, and Furtan (2008), the advantage of pursuing these prerequisites towards stimulating industrialization and competitiveness eventually targets tangible achievement of sustained macroeconomic stability, accountability and transparency in trade regimes and attraction of capital flows. Moreover, the leather sector strata will be necessitated to approach value addition by integrating knowledge, processes, and technology to enhance competitiveness and clientele satisfaction (Lin & Chunying, 2010; McEachern & Schroeder, 2004). Thusly, this study epitomizes evaluation of competitiveness of the leather sector and its underlying potential to improve current national performance in the leather value chain (Delgado & Ketels, 2011; Delgado, Ketels, Porter, & Stern, 2012). This therefore creates the scope towards the study in exploring competitiveness as a fundamental factor towards value addition of the leather strata in Kenya.

As such, the research aim will entail identifying and examining the responses from the leather strata in Kenya related to competitiveness. Moreover, evaluate the significance the

interrelationship between various stratums that interphase in the value creation process of the leather sector influence activities related to competitiveness. Finally, identify through an aggregate score which among the activities, the respondents deemed crucial towards competitiveness of their respective stratums.

The outcome of the study is envisaged to encompass a deeper comprehension of competitiveness to ascertain the performance of the leather sector in Kenya. The proposed study has both a theoretical and practical inclination as it expands on the knowledge base related to the interphase of competitiveness and its direct focus towards value creation.

1.1 Research Question and Hypothesis

R1a: Is there a statistically significant difference between value chains and competitiveness as measured in the leather sector strata in Kenya?

H1a (o): There is not a statistically significant difference between value chains and competitiveness as measured in the leather sector strata in Kenya.

H1a (a): There is a statistically significant difference between value chains and competitiveness as measured in the leather sector strata in Kenya.

2. Methodology

2.1 Sample Size

The sample size was based on an estimated population of 1,031 registered leather value chain players drawn from the Kenya leather sector. The sample size composition ensured incorporation of randomly selected players from each of the phases or stratum of the value chain. The sample size was determined through Sigma XL Version 6.2 (2013), which provided a target of 281 respondents. The statistical power analysis using this sample size indicated a value of $\alpha = 0.05$ (where H_O; $P_O = 0.5$ and $Ha \neq 0.5$), Power (1-Beta) = 0.922. This was corroborated with an online a-priori sample calculator, an analytical tool by Soper (2013). Triola (2009) earlier indicated that in a quantitative study, a minimum of 30 could provide a normal distribution for a parametric analysis**.**

2.2 Sampling Procedures

The study adopted a random sampling strategy for all respondents but ensured that all the strata in the value chain were incorporated. The minimum number of respondents from each stratum was targeted. Due to the complexity of the leather value chain (Viju, 2008), such as the distances involved and remoteness of the localities in the study, internet-based survey was viewed most suitable but unfeasible due to the poor infrastructural support for internet usage as a tool. Thusly, irrespective of the convenience of electronic surveys, face to face survey was preferred to conduct the research.

2.3 Data Collection Methodology

The survey was conducted using structured questionnaires. Invitations to participate in the survey were notified through emails, telephone calls, and surface mails depending on the communication method with the greatest ease of accessibility and also the researcher's established relationships with the participant. Therefore, the study will use survey instruments validated from previous research related to the leather sector (e.g. survey instruments of the

Indian leather sector performance by National Productivity Centre (NPC) with solid psychometric properties to sample the participants (NPC, 2010). Moreover, by adopting such an approach, validity and reliability are optimized. Validity is indicative of how appropriately a survey measure is conducted. Measuring the content validity in this study will be used as suggested by Litwin (1995) and Prawitz, Garman, Sorhaindo, O'Neill, Kim & Drentea, (2006). Reliability of the survey instrument determined the level of random error in the survey instrument (Radhakrishna, 2007). The consistency, complementarity, and correlation coefficient were measured using Cronbach's coefficient alpha.

2.3.1 Statistical Techniques.

The data analysis included descriptive statistics, calculated to describe the sample. Due to the large sample size ANOVA and pairwise set of means rather than *t*-test was performed on the mean responses of the respondents to determine if there were differences between the groups within the various levels (pre-, peri- and post-slaughter) and value chain stages (producers, butchers, hides and skins traders, tanners, footwear and leather-goods manufactures).

The statistical technique adopted a stratified random sampling approach to adequately analyze the distinct groupings in the leather value chain and their inter-relationship. The rationale for this choice was based on the different strata of the leather chain (e.g. producers, traders, tanners, and manufacturers of leather-goods), wherein the individual role and relationship with each other was evaluated.

Keller and Warrack (1999) indicated that the identified difference would be attributed to the divergence among the groups which is also applicable to the leather value chain. Furthermore, a correlation coefficient was used to determine if correlations exist between value addition opportunities and the identified outcome (trade). By using ANOVA and the means matrix to carryout multiple comparisons to test H_O=μ1=μ2=μ3……K; H_a: at least one pairwise set of means are not equal at $p<0.05$. Pursuance of data analysis due to the assumption of equal variance when using ANOVA included test of medians (Kuskal-Wallis test) and normality (Levene's test which is robust on multiple group comparison to ascertain normality). In case of unequal variances in the response data Welch's ANOVA was used. The basis overall was to determine if there were differences between the stratum within the various levels (pre-, peri- and post slaughter) and value chain stages (producers, butchers, hides and skins traders, tanners, footwear and leather-goods manufactures) by derived confidence limits and *p*-value for null hypothesis H_O: $p = po$. In this study, using ANOVA and obtaining the coefficient of determination and pairwise probabilities allowed for quantification of data and to appropriately generalize the results obtained from the population (Loslever, Cauffriez, Caouder, Turgis, & Copin, 2012).

In addition, aggregated score on weighted total frequency score for each thematic activity in each stratum was analyzed. The purpose of using this technique was to weigh the frequency according to the participant's responses in each of the activity in a stratum (e.g. Producer, Butcher etc.) leading to the mentioned themes (i.e. productivity). The rationale was that the participant's response on an activity in a thematic area over another determined the relationship between value addition opportunities as measured in the leather strata in relation to the value chain. An aggregated score and a mean for each activity per stratum were computed to facilitate their ranking. The aggregated score for each parameter or activity was calculated by multiplying the total number of frequencies of each option by its respective value assigned in the various scale of the survey question.

2.3.2.1 Descriptive Statistics.

The study used descriptive statistics to summarize the sample's measures of central

tendencies (i.e. means, etc.) and variability (i.e. standard deviations) to determine whether the data sets would exhibit deviations (positive or negative).

2.3.2.1 Correlational Analysis and Statistical Package.

This study used correlation studies (coefficient of determination (R^2) to deduce or explain on strata's variation in relation to the identified independent variable. However, while correlation analysis demonstrated the strength of the relationship between the variables, it is important to characterize the nature of the relationship (Nikolić et al., 2012). Therefore, during the study, coefficient of determination (R^2) provided a measure of strength of the relationship between independent and dependent variables and *p*-value for null hypothesis H_O: $p = po$. To evaluate the coefficient of determination analytical tools from Sigma XL (version 6.2; 2013) was used. The advantage of this tool was its ability to identify the sub-issues (related to the research objectives stated earlier) of the study that significantly affected value addition and Trade in the leather sector.

3. Analysis and Presentation of Results

The pilot study had 11 sections with a total of 111 assessed items within the instrument and attained a Cronbach alpha of 0.869. The survey instruments had a mixture of dichotomous and multi-point scales as such there was relatively heterogeneous variances in which case the use of standardized variables was appropriate (Santos, 1999; Falk & Savalei, 2011).The attained value of 0.869 in this study was ideal value (where Cronbach alpha values between 0.7 – 0.95 were considered acceptable with values above 0.80 mostly preferred) limits for ascertaining internal consistency and homogeneity (Dunn, Baguley, & Brunsden, 2013; Tavakol & Reg, 2011).

Out of the targeted 281 respondents to be interviewed, the study yielded 244 valid responses providing a response rate of 87%. The demographics of the sample included number of respondents in the identified strata in the value chain map along with gender involvement and comparisons. Age, position level, type of organization, education level and type of specialization depicted the diversity and characterization of the core value players of the leather value chain. Moreover, experience provided an insight to the conformity of the experimental prerequisite (of respondents having equal or more than 5 years exposure to the leather sector) and ultimately ascertain the reliability of responses emanating from the value chain players. Thus, as an attempt to articulate the productivity aspects of this study, the leather chain strata (i.e. Producers, Butchers, Traders, Tanners, Leathergoods and Footwear) responses were analyzed to comprehend the sectors performance in Kenya.

3.1 Competitiveness

The research aim was concerned with competitiveness as measured in the leather strata in Kenya. As such, the study analyzed competitiveness response data from the survey in the leather strata, covering aspects such as competitiveness on cost, price, enterprise and Government interface with business (Table 1).

3.1.1 Cost of Competitiveness

In Table 1, general perspective of the strata response's indicated that 72.35% overall indicated an increase of between 11-25% towards the cost of competitiveness. The highest stratum response was from Footwear (83.33%) closely followed by Leathergoods (82.35%). In contrast, Tanners (42.86%) exhibited lowest response to the increase of cost of competitiveness in the leather strata. This observation strengthens the trends earlier shown under productivity and trade. The few numbers of Tanneries in the Country and within the East Africa region render their cost of competition lower than Footwear and Leathergoods

who are predisposed to low quality imports.

3.1.2 Price Competitiveness

Overall response (85.77%) of price competitiveness in the leather strata showed that on average along the value chain the increase was between 1-10% (see Table 25). Price competitiveness in specific stratum responses illustrated that Producers (95.6%) registered an increase range of between 1-10%. This could be associated with the rigors of auction markets style used in livestock trade in the country. As observed earlier under cost of competitiveness and productivity, the stratum with the lowest price competitiveness was leather goods (62.5%) followed closely by the Foot wear participants (66.67%).

In relation to responses (Table 1) towards product price competitiveness, Footwear (70%) and Leather goods (64.71%) illustrated the highest increase in the strata. Footwear stratum alone depicted increases in the ranges of 6-10%. In comparison, Leather goods participants indicated product price increases ranging from 11 – 25%. This observation provided the basis of the unfair competitiveness of their products impacted by similarly imported leather goods and footwear (low quality and second hand) sold at lower prices. However, Traders illustrated in their responses (95.24%) that there were no changes in product prices based on competitiveness.

This observation (Table 1) elucidated instances where traders predetermined the purchase prices of the product (hides and skins) based by providing ‘soft loans’ to Butchers and Producers to purchase livestock. As such this type of livestock financing provides leverage (for low priced products), domineering and guarantee of hides and skins delivery to Traders irrespective of market demand and supply dynamics. Some Tanners are also known to extend financial support to traders for bulk purchase of hides and skins to ensure continued supply of the raw material to their manufacturing units. Thus, both downwards and upwards traders are at most cushioned on price competitiveness as depicted by data in Table 1.

In Table 1 responses (53.52%) from the leather strata showed that the increase on product price was influenced by increased exports. In concurrence to this aspect, the highest responding stratum was with Footwear respondents (85.71%) but registered a meagre price increase of between 1-5%. Moreover, the Tanners (71.43%) whose production is solely focused on exports indicated an increase of product price in the range of 6-10% based on increased exports. This observation supported the inclination of tanner’s semi-processed leather more towards export rather than local markets. The local market requires more of finished leather for the development of leather goods (belts, bags, wallet etc.) and footwear manufacture.

The study further implored whether a decrease of product price was due to increase in imports. An overview of the leather strata (56.8%) tend to disagree that a decrease of product price was influenced by imports (see Table 1). The Tanners (85.71%) concurred to this observation. However, the Footwear (80%) and Leather goods (72.73%) affirmed that they experienced a decrease of product price due to increased imports by a range of 11-25% and equal to 26% and above respectively. This observation enhances the impact caused to the two stratums by the increased imports of second hand and poor quality leather goods and footwear.

The data analysis in Table 1 attempted to ascertain if the decrease of product price was due to decrease in exports of finished leather products. The response from the strata (71.09%) in general negated this assertion. The highest stratum response in support of this negation was the Tanner (100%). Whilst other stratums also negated, in retrospect they were observed to be at lower levels in comparison to tanners. This negation is attributed to the negligible

production of finished leather in the Country which poses no impact to the leather product price due to decrease of its imports. As for leather goods and footwear strata, product price equally do not decrease (but has the potential to increase because of magnified demand) due to unavailability of finished leather to facilitate production of finished products.

3.1.3 Enterprise Competition

Table 1 illustrates the general strata's response (80.1%) on enterprise competition to have increased. In tandem, the highest stratum in support was Butchers (91.89%) and closely followed with Traders (89.55%). This observation depicting the two stratums is associated with intense intra-competition experienced by both the Butchers and Traders. The intense competition amongst Butchers as an enterprise is involved with seeking continuous supply from meagre sources of livestock to satisfy the local demand of meat consumption. The same applies for Traders who also out-price themselves in securing hides and skins to meet the tanners and export demand.

3.1.4 Infrastructure

The study evaluated (see Table 1) the respondent's satisfaction towards the quality of infrastructure as integral prerequisite to competitiveness. The overall strata's response (71.62%) indicated dissatisfaction with the infrastructure quality. In concurrence, the highest stratum amongst the strata in support was the Producers (88.89%). In retrospect, a few selected aspects of infrastructure were pursued to provide the impact of infrastructure (e.g. road, rail, airport, harbor, ICT, warehouses etc.) towards competitiveness.

In Table 1, the data analysis related to the leather strata illustrated dissatisfaction to the quality of roads (53.28%), rail (70.2%), airport (98.36%), harbor or port (98.77%), ICT (70.49%) and warehousing (92.21%). The importance of such observation on infrastructure was due to overly incurred costs in relation to conveyance of inputs and processed goods to and from sources to terminal markets respectively. This was a manifestation of the infrastructural deficiencies impacting on competitiveness of the leather value strata including the individual stratum in the country.

In support of this study, responses of satisfaction towards social infrastructure were evaluated along the leather strata. The overview of the strata indicated dissatisfaction (69.8%) towards the quality of social infrastructure. Moreover, the need to have interventions in order to improve the social infrastructure depicted various response levels. As such schools (5.08%), higher education (8.47%), technical institutions (47.46%), general hospital (23.16%) and special medical center (15.82%) were identified. Thusly, the strata's preference on social infrastructure was in favour of establishing technical institutions to build capacity and facilitate in the technology transfer.

3.1.5 Government Interface with Business

Table 1 indicates through the responses (55.04%) that the government's interface with business was not in place. However, an exception was registered at the Tanners' stratum level (85.71%) with an affirmative response to the effect that there is government interface. This was in recognition by the Tanners to the Government fiscal policy in Kenya that provides exemption to machinery and equipment imported for the purpose of enhancing processing of leather.

The study delved further to evaluate the government's stance in encouraging investments to the leather sector. The response data analyzed from the leather strata (83.97%) indicated the government's encouragement towards investment to the sector (see Table 1). The highest strata in affirming the government's support was the Tanners (100%). This observation in

addition to the fiscal policy mentioned earlier is related to the government's initiative to provide special funds in stimulating rural based tanneries and policies that encouraged both local and foreign investments.

The government's interface with the businesses in the leather strata indicated a slow adoption to e-commerce with overall response (52.09%). However, an exception with the Tanners' response (71.43%) was observed illustrating strong interface with government on e-commerce. This observation is related to the tanners (who are actively engaged with exports) having in place during the last few years online clearances of their export documentation by the Kenya Revenue Authority. The impact is positive with rapid clearances of exports and reduction on bureaucratic processes to the Tanners.

Table 1 elucidates on data related to corruption to ascertain if adaption of non-bureaucratic processes reduced the vice. On further analysis the leather strata response (65.66%) generally showed an increase on levels of corruption. The highest stratum response to increased corruption levels was the Producers (74.65%) followed closely by Tanners (71.43%) irrespective of their engagement with government's e-commerce related to regulatory framework on online export documentation. This observation on Producers is related to the multi-level taxation discussed earlier concerning transportation of livestock through several jurisdictive territories en-route. Thus, the exercise is prone to corruptive exposures affecting also the Tanners while transporting their export consignments by road to respective ports of exits.

To clarify whether it was lack of transparency that magnified the corruptive practices and impacted to the overall competitiveness in the leather strata responses were evaluated. In general the strata response (63.91%) illustrated there was lack of transparency in certain vital areas of governance for the leather sector. The highest stratum in concurrence were the Tanners (85.71%) indicating that when sourcing for inputs for processing and delivery of finalized materials exports many aspects are not transparently handled to their satisfaction. This observation has adverse impact to the competitiveness of the leather sector in Kenya due to inherent costs incurred and delay in acquiring inputs and clearance of exports.

Table 1. *Number and percentage of response related to value chain strata on identified activities towards competitiveness (All respondents)*

Activities		Value Chain Strata						
		Producer	Butcher/ Slaughter -house owner	Trader	Tanner	Leather Goods	Footwear	Total
Cost of competitiveness	Increase	58 (62.37%)	31 (75.61%)	57 (80.28%)	3 (42.86%)	14 (77.78%)	10 (71.43%)	174 (71.02%)
	Decrease	28 (30.11%)	2 (4.88%)	2 (2.82%)	2 (28.57%)	1 (5.56%)	2 (14.29%)	37 (15.1%)
	No change	7 (7.53%)	7 (17.07%)	11 (15.49%)	2 (28.57%)	2 (11.11%)	0 (0%)	29 (11.84%)
range of increase	1-10%	16 (25.4%)	17 (62.96%)	9 (15.79%)	2 (66.67%)	5 (33.33%)	2 (16.67%)	52 (29.21%)
	11-25%	23 (36.51%)	4 (14.81%)	29 (50.88%)	1 (33.33%)	4 (26.67%)	5 (41.67%)	66 (37.08%)
	26-50%	23 (36.51%)	5 (18.52%)	19 (33.33%)	0 (0%)	5 (33.33%)	5 (41.67%)	57 (32.02%)
	51% and above	1 (1.59%)	1 (3.7%)	0 (0%)	0 (0%)	1 (6.67%)	0 (0%)	3 (1.69%)
specify range of decrease	1-10%	1 (3.57%)	1 (50%)	2 (100%)	2 (100%)	0 (0%)	0 (0%)	6 (16.22%)
	11-25%	17 (60.71%)	1 (50%)	0 (0%)	0 (0%)	0 (0%)	2 (100%)	20 (54.05%)
	26-50%	10 (35.71%)	0 (0%)	0 (0%)	0 (0%	1 (100%)	0 (0%)	11 (29.73%)
Price competitiveness	Increase	87 (95.6%)	32 (91.43%)	57 (80.28%)	5 (71.43%)	10 (62.5%)	8 (66.67%)	199 (85.41%)
	Decrease	4 (4.4%)	2 (5.71%)	2 (2.82%)	2 (28.57%)	3 (18.75%)	3 (25%)	16 (6.87%)
	No change	0 (0%)	1 (2.86%)	12 (16.9%)	0 (0%)	3 (18.75%)	1 (8.33%)	18 (7.73%)
increased specify the range	1-10%	59 (66.29%)	18 (51.43%)	15 (27.78%)	4 (80%)	2 (18.18%)	3 (37.5%)	101 (50%)
	11-25%	19 (21.35%)	11 (31.43%)	15 (27.78%)	1 (20%)	5 (45.45%)	3 (37.5%)	54 (26.73%)
	26-50%	11 (12.36%)	5 (14.29%)	24 (44.44%)	0 (0%)	4 (36.36%)	2 (25%)	46 (22.77%)
	51% and above	0 (0%)	1 (2.86%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	1 (0.5%)
decreased specify the range	1-10%	1 (50%)	2 (66.67%)	1 (50%)	1 (50%)	2 (66.67%)	2 (66.67%)	9 (60%)
	11-25%	1 (50%)	1 (33.33%)	1 (50%)	1 (50%)	0 (0%)	1 (33.33%)	5 (33.33%)
	51% and above	0 (0%)	0 (0%)	0 (0%)	0 (0%)	1 (33.33%)	0 (0%)	1 (6.67%)
Increase in prod price	Yes	44 (48.89%)	19 (61.29%)	3 (4.76%)	4 (57.14%)	11 (64.71%)	7 (70%)	89 (40.64%)

	No	46 (51.11%)	12 (38.71%)	60 (95.24%)	3 (42.86%)	6 (35.29%)	3 (30%)	130 (59.36%)
specify the range	1-5%	13 (29.55%)	5 (26.32%)	1 (20%)	2 (50%)	2 (18.18%)	2 (25%)	25 (27.17%)
	6-10%	15 (34.09%)	2 (10.53%)	2 (40%)	1 (25%)	3 (27.27%)	3 (37.5%)	27 (29.35%)
	11-25%	16 (36.36%)	11 (57.89%)	0 (0%)	1 (25%)	5 (45.45%)	2 (25%)	35 (38.04%)
	26% and above	0 (0%)	1 (5.26%)	2 (40%)	0(0%)	1 (9.09%)	1 (12.5%)	5 (5.43%)
prod price increase due to export increase	Yes	61 (69.32%)	20 (71.43%)	16 (23.88%)	5 (71.43%)	6 (40%)	6 (85.71%)	114 (53.52%)
	No	27 (30.68%)	8 (28.57%)	51 (76.12%)	2 (28.57%)	9 (60%)	1 (14.29%)	99 (46.48%)
If yes specify the range	1-5%	12 (20%)	9 (42.86%)	7 (41.18%)	0 (0%)	1 (11.11%)	3 (50%)	32 (26.89%)
	6-10%	16 (26.67%)	9 (42.86%)	8 (47.06%)	6 (100%)	2 (22.22%)	1 (16.67%)	42 (35.29%)
	11-25%	32 (53.33%)	2 (9.52%)	2 (11.76%)	0 (0%)	6 (66.67%)	2 (33.33%)	44 (36.97%)
	26% and above	0 (0%)	1 (4.76%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	1 (0.84%)
decrease prod price due to increase import	Yes	41 (46.07%)	16 (57.14%)	15 (25%)	1 (14.29%)	8 (72.73%)	8 (80%)	89 (43.2%)
	No	48 (53.93%)	12 (42.86%)	45 (75%)	6 (85.71%)	3 (27.27%)	2 (20%)	117 (56.8%)
If yes specify the range	1-5%	25 (51.02%)	12 (57.14%)	0 (0%)	0 (0%)	0 (0%)	1 (12.5%)	38 (37.25%)
	6-10%	23 (46.94%)	7 (33.33%)	4 (28.57%)	1 (100%)	3 (33.33%)	1 (12.5%)	39 (38.24%)
	11-25%	1 (2.04%)	1 (4.76%)	8 (57.14%)	0 (0%)	1 (11.11%)	4 (50%)	15 (14.71%)
	26% and above	0 (0%)	1 (4.76%)	2 (14.29%)	0 (0%)	5 (55.56%)	2 (25%)	10 (9.8%)
decrease price prod due decrease in export of finish goods	Yes	28 (31.46%)	5 (17.86%)	15 (24.19%)	0 (0%)	6 (50%)	1 (14.29%)	55 (26.7%)
	No	61 (68.54%)	23 (82.14%)	47 (75.81%)	7 (100%)	6 (50%)	6 (85.71%)	151 (73.3%)
If yes, specify range	1-5%	13 (33.33%)	2 (28.57%)	1 (16.67%)	0 (0%)	3 (50%)	0 (0%)	19 (31.15%)
	6-10%	16 (41.03%)	2 (28.57%)	2 (33.33%)	0 (0%)	0 (0%)	0 (0%)	20 (32.79%)
	11-25%	10 (25.64%)	3 (42.86%)	1 (16.67%)	1 (100%)	1 (16.67%)	2 (100%)	18 (29.51%)
	26% and above	0 (0%)	0 (0%)	2 (33.33%)	0 (0%)	2 (33.33%)	0 (0%)	4 (6.56%)

enterprise competition	Increased	66 (72.53%)	34 (91.89%)	60 (89.55%)	5 (83.33%	9 (52.94%)	11 (84.62%)	185 (79.74%)
	Decreased	22 (24.18%)	1 (2.7%)	4 (5.97%)	0 (0%)	3 (17.65%)	1 (7.69%)	31 (13.36%)
	No change	3 (3.3%)	2 (5.41%)	3 (4.48%)	1 (16.67%)	5 (29.41%)	1 (7.69%)	16 (6.9%)
Satisfaction with quality of infrastructure	Yes	10 (11.11%)	10 (28.57%)	35 (51.47%)	3 (42.86%	4 (25%)	3 (23.08%)	66 (28.7%)
	No	80 (88.89%)	25 (71.43%)	33 (48.53%)	4 (57.14%)	12 (75%)	10 (76.92%)	164 (71.3%)
Road	Yes	46 (49.46%)	22 (53.66%)	30 (42.25%)	4 (57.14%)	6 (33.33%)	6 (42.86%)	114 (46.53%)
	No	47 (50.54%)	19 (46.34%)	41 (57.75%)	3 (42.86%)	12 (66.67%)	8 (57.14%)	131 (53.47%)
Rail	Yes	52 (55.91%)	15 (36.59%)	4 (5.63%)	0 (0%)	0 (0%)	2 (14.29%)	73 (29.8%)
	No	41 (44.09%)	26 (63.41%)	67 (94.37%)	7 (100%)	18 (100%)	12 (85.71%)	172 (70.2%)
Airport	Yes	1 (1.08%)	1 (2.44%)	2 (2.82%)	0 (0%)	0 (0%)	0 (0%)	4 (1.63%)
	No	92 (98.92%)	40 (97.56%)	69 (97.18%)	7 (100%)	18 (100%)	14 (100%)	241 (98.37%)
Port	Yes	0 (0%)	1 (2.44%)	1 (1.41%)	0 (0%)	0 (0%)	1 (7.14%)	3 (1.22%)
	No	93 (100%)	40 (97.56%)	70 (98.59%)	7 (100%)	18 (100%)	13 (92.86%)	242 (98.78%)
ICT	Yes	44 (47.31%)	3 (7.32%)	12 (16.9%)	0 (0%)	8 (44.44%)	5 (35.71%)	72 (29.39%)
	No	49 (52.69%)	38 (92.68%)	59 (83.1%)	7 (100%)	10 (55.56%)	9 (64.29%)	173 (70.61%)
Warehouse	Yes	3 (3.23%)	4 (9.76%)	3 (4.23%)	1 (14.29%)	5 (27.78%)	3 (21.43%)	19 (7.76%)
	No	90 (96.77%)	37 (90.24%)	68 (95.77%)	6 (85.71%)	13 (72.22%)	11 (78.57%)	226 (92.24%)
social infrastructure satisfaction	Yes	13 (13.98%)	18 (43.9%)	29 (40.85%)	2 (28.57%)	8 (44.44%)	3 (21.43%)	74 (30.2%)
	No	80 (86.02%)	23 (56.1%)	42 (59.15%)	5 (71.43%)	10 (55.56%)	11 (78.57%)	171 (69.8%)
social infrastructure requires attention	School	1 (1.19%)	3 (13.64%)	1 (2.33%)	0 (0%)	1 (9.09%)	3 (27.27%)	9 (5.08%)
	Higher Education	3 (3.57%)	1 (4.55%)	8 (18.6%)	1 (16.67%)	1 (9.09%)	1 (9.09%)	15 (8.47%)
	Technical Institution	35 (41.67%)	11 (50%)	21 (48.84%)	2 (33.33%)	8 (72.73%)	7 (63.64%)	84 (47.46%)
	General Hospital	27 (32.14%)	5 (22.73%)	7 (16.28%)	1 (16.67%)	1 (9.09%)	0 (0%)	41 (23.16%)
	Special medical	18 (21.43%)	2 (9.09%)	6 (13.95%)	2 (33.33%)	0 (0%)	0 (0%)	28 (15.82%)

	Center							
government interface with business	Yes	47 (51.09%)	27 (69.23%)	14 (20.29%)	6 (85.71%)	9 (50%)	4 (30.77%)	107 (44.77%)
	No	45 (48.91%)	12 (30.77%)	55 (79.71%)	1 (14.29%)	9 (50%)	9 (69.23%)	132 (55.23%)
Govt encouraging investment	Yes	88 (95.65%)	32 (84.21%)	52 (76.47%)	7 (100%)	12 (66.67%)	8 (57.14%)	200 (84.03%)
	No	4 (4.35%)	6 (15.79%)	16 (23.53%)	0 (0%)	6 (33.33%)	6 (42.86%)	38 (15.97%)
Govt encouraging investment	Yes	88 (95.65%)	32 (84.21%)	52 (76.47%)	7 (100%)	12 (66.67%)	8 (57.14%)	200 (84.03%)
	No	4 (4.35%)	6 (15.79%)	16 (23.53%)	0 (0%)	6 (33.33%)	6 (42.86%)	38 (15.97%)
Govt adopting ecommerce	Yes	49 (52.69%)	24 (58.54%)	10 (14.08%)	5 (71.43%)	10 (55.56%)	3 (21.43%)	102 (41.63%)
	No	43 (46.24%)	14 (34.15%)	57 (80.28%)	2 (28.57%)	5 (27.78)	8 (57.14%)	129 (52.65%)
Corruption level	Increased	63 (67.74%)	16 (39.02%)	53 (74.65%)	5 (71.43%)	9 (50%)	7 (50%)	153 (62.45%)
	Decreased	14 (15.05%)	8 (19.51%)	7 (9.86%)	0 (0%)	2 (11.11%)	3 (21.43%)	34 (13.88%)
	No Change	13 (13.98%)	11 (26.83%)	10 (14.08%)	2 (28.57%)	7 (38.89%)	3 (21.43%)	47 (19.18%)
Govt Transparency	Yes	21 (22.58%)	18 (43.9%)	34 (47.89%)	1 (14.29%)	7 (38.89%)	2 (14.29%)	84 (34.29%)
	No	67 (72.04%)	18 (43.9%)	34 (47.89%)	6 (85.71%)	11 (61.11%)	11 (78.57%)	147 (60%)

Table 2 depicts the aggregated score, mean, standard deviation and rank order in relation to identified activities towards competitiveness of Producers. In this stratum, the top aggregate score of 92.81 (with a mean of 1.01) had responses that illustrated intense competition amongst enterprises impacting on competitiveness. The intra competition amongst the Producers is closely related to the scarcity of livestock in the country creating a 'scramble' on the few animals for slaughter that are available. As such the second ranked activity with a score of 90 (with a mean of 0.98) on investment by the government becomes critical. The area the Producers want the government to invest is on breeding and improvement of the livestock herd health programmes in the country. The negative effect of inbreeding is loss of productivity of the herd and resultant smaller hides and skins produced.

Table 2. Aggregated Score, Mean, Standard Deviation and Ranking n Identified Activities to Competitiveness with Producers 2008-2013

	Producers value chain stratum				
Activities	Number	Aggregate score	Mean	SD	Rank
i. COST RELATED					
Cost competitiveness	93	52.01	0.56	0.38	12
Increase in cost	63	45.01	0.714	0.49	15
Decrease in cost	28	21.67	0.77	0.64	17
ii. PRICE RELATED					
Price competitiveness	91	56.71	0.623	0.22	10
Increased price competiveness	89	32.5	0.37	0.22	16
Decreased price competitiveness	2	1.67	0.83	0.76	18
Increase in Product price	90	67	0.75	0.33	7
Product Price increase due to - increased exports	88	74.5	0.45	0.76	4
Product Price decrease due to Increased imports of inputs	89	65	0.73	0.27	8
Product price decrease due to - decreased exports of finished products	89	75	0.84	0.75	3
iii. FACTORS FOR COMPETITIVENESS					
Enterprise Competitiveness	92	92.81	1.01	1.03	1
Quality of Physical infrastructure-Satisfactory	90	50	0.56	0.47	12
Quality of social infrastructure - Satisfactory	93	53	0.57	0.41	11
Government interphase with private Sector	92	69.5	0.76	0.38	6
Government encouraging investments	92	90	0.98	1.32	2
Government adopting e-commerce	92	71	0.77	0.42	5
Corruption levels	90	45.12	0.49	0.21	14
Government transparency.	88	57.6	0.62	0.20	9

Table 3 shows the aggregated score, mean, standard deviation and rank order in relation to identified activities towards competitiveness of Butchers. In this stratum, the top aggregate score of 37.30 (with a mean of 1.04) had responses that depicted intense competitiveness amongst enterprises. As such with an ever increasing demand in consumption of meat

through a rapid rise in the population, cultural dietary inclination and improved affluence has transformed Butchery enterprises to be actively engaged. However, with the scarcity of livestock to fulfill on the rising demand has subjected the enterprises to become highly competitive. Moreover, the second ranked activity with a score of 35 (with a mean of 0.92) on investment by the government in supporting herd health and livestock breeding as discussed under the Producers stratum equally suffices for Butchers. The other aspect relating to this stratum is the need for support in micro financing through government programmes to emancipate the Butchers from 'soft' loans conditionality provided by Traders and Tanners to secure the hides and skins supply from them on easy terms. The effect is that they are constricted on their profit margins as they have to supply at a price predetermined (i.e. turns to monopolistic trading regime) and not on the principles of supply and demand.

Table 3. Aggregated Score, Mean, Standard Deviation and Ranking o Identified Activities to Competitiveness with Butchers 2008-2013

	Butchers value chain stratum				
Activities	Number	Aggregate score	Mean	SD	Rank
i. COST RELATED					
Cost competitiveness	40	16.59	0.42	0.31	15
Increase in cost	27	22.75	0.84	1.13	12
Decrease in cost	2	1	0.50	0.5	18
ii. PRICE RELATED					
Price competitiveness	35	33.3	0.95	1.55	4
Increased price competiveness	35	14.75	0.42	0.22	16
Decreased price competitiveness	3	2.27	0.76	1.09	17
Increase in Product price	31	25	0.81	0.6	9
Product Price increase due to increased exports	28	24	0.86	0.81	11
Product Price decrease due to Increased imports of inputs	28	21.99	0.79	0.51	14
Product price decrease due to decreased exports of finished products	28	25.50	0.91	1.04	8
iii. FACTORS FOR COMPETITIVENESS					
Enterprise Competitiveness	36	37.30	1.04	1.49	1
Quality of Physical infrastructure Satisfactory	35	22.5	0.64	0.1	13
Quality of social infrastructure Satisfactory	41	29.5	0.72	0.22	7
Government interphase with private Sector	39	33	0.85	0.76	5
Government encouraging investments	38	35	0.92	1.08	2
Government adopting e-commerce	38	33.5	0.82	0.63	3
Corruption levels	35	24.2	0.60	0.12	10
Government transparency	36	30.8	0.75	0.35	6

Table 4 shows the aggregated score, mean, standard deviation and rank order in relation to identified activities towards competitiveness of Traders. In this stratum, the top aggregate score of 65.67 (with a mean of 1.04) had responses that demonstrated price competitiveness as critical to Traders in their operating environment. This is illustrated with the effort of Traders to predetermine the prices for the Butchers and providing 'soft' loans to the Producers to secure the supply of hides and skins. As such, out of these arrangements the Traders at most out-price themselves with setting up of remote buying posts to be competitive on prices of hides and skins. The result of price competitiveness is closely associated with enterprise competitiveness with a score of 63.3 (mean of 0.95) in this stratum which was ranked second.

Table 4. Aggregated Score, Mean, Standard Deviation and Ranking on Identified Activities to Competitiveness with Traders 2008-2013

	Traders value chain stratum				
Activities	Number	Aggregate score	Mean	SD	Rank
i. COST RELATED					
Cost competitiveness	70	28.33	0.41	0.37	16
Increase in cost	57	40.3	0.71	0.63	10
Decrease in cost	2	0.133	0.007	0.012	18
ii. PRICE RELATED					
Price competitiveness	71	65.67	0.93	1.30	1
Increased price competiveness	54	29.23	0.54	0.57	15
Decreased price competitiveness	2	1.67	0.83	0.76	17
Increase in Product price	63	33	0.52	0.61	13
Product Price increase due to increased exports	67	41.5	0.62	0.20	8
Product Price decrease due to Increased imports of inputs	60	37.5	0.63	0.18	11
Product price decrease due to decreased exports of finished products	62	54.5	0.88	0.90	4
iii. FACTORS FOR COMPETITIVENESS					
Enterprise Competitiveness	67	63.3	0.95	1.51	2
Quality of Physical infrastructure-Satisfactory	68	51.5	0.76	0.39	5
Quality of social infrastructure - Satisfactory	71	50	0.70	0.16	7
Government interphase with private -Sector	69	41.5	0.60	0.28	9
Government encouraging investments	68	60	0.88	0.91	3
Government adopting e-commerce	71	34.5	0.54	0.37	12
Corruption levels	70	30.9	0.44	0.26	14
Government transparency	68	51	0.75	0.35	6

Table 5 shows the aggregated score, mean, standard deviation and rank order in relation to identified activities towards competitiveness of Tanners. In this stratum, the top aggregate

score of 7 (with a mean of 1) had responses shared equally between Government encouraging investments and product price decrease due to decreased exports of leather by the Tanners. This observation elucidated the issue of investing in the stratums initiative in capacity building and technology transfer to meet the global expectation in quality and green production. Moreover, the stratum equally took cognizance of the fact they can only hold on to the product price as long as the exports of what they produce is sustained but does not decrease. This stratum as was explained earlier under productivity is purely export oriented. The results further illustrate the importance the stratum apportions to the Government Interphase with them. With aggregate score of 6.50 (mean of 0.86), the tanners envision that with appropriate policies that enhance value addition and facilitate market entry at regional (e.g. COMESA free trade agreements) or global (through bilateral agreements) their quest for value addition could further be achieved.

Table 5. Aggregated Score, Mean, Standard Deviation and Ranking on Identified Activities to Competitiveness with Tanners 2008-2013

	Tanners value chain stratum				
Activities	Number	Aggregate score	Mean	SD	Rank
i. COST RELATED					
Cost competitiveness	7	4.33	0.62	0.22	10
Increase in cost	3	2.75	0.92	1.3	14
Decrease in cost	2	0.67	0.33	0.58	17
ii. PRICE RELATED					
Price competitiveness	7	5.67	0.81	1.16	6
Increased price competiveness	5	1.5	0.3	0.38	16
Decreased price competitiveness	2	1.67	0.83	0.76	115
Increase in Product price	7	5.5	0.79	0.51	7
Product Price increase due to increased exports	7	6.0	0.86	0.81	4
Product Price decrease due to Increased imports of inputs	7	4.0	0.57	0.40	11
Product price decrease due to decreased exports of finished products	7	7	1	1.4	1
iii. FACTORS FOR COMPETITIVENESS					
Enterprise Competitiveness	6	5.67	0.94	1.4	5
Quality of Physical infrastructure Satisfactory	7	5.0	0.8	0.51	8
Quality of social infrastructure Satisfactory	7	4.50	0.64	0.1	9
Government interphase with private Sector	7	6.50	0.93	1.1	3
Government encouraging investments	7	7	1	1.4	1
Government adopting e-commerce	7	6.0	0.86	0.81	4
Corruption levels	7	3.0	0.43	0.38	13
Government transparency	7	4.0	0.57	0.4	11

Table 6 shows the aggregated score, mean, standard deviation and rank order in relation to identified activities towards competitiveness of Leathergoods. In this stratum, the top aggregate score of 15 (with a mean of 0.83) had responses that illustrated Governments role in encouraging investments towards the development of the SME's in this stratum. Thusly, revitalization of this stratum to be competitive requires investments to address aspects such as access to modern tools and equipment at center's that could incubate their businesses. This will allow the stratum to produce better quality leather products efficiently and become competitive. As a follow-up in the ranking of scores of14 with (a mean of 0.82) the Product price is identified as critical in the stratums revenue base as any increase would translate to out competing themselves with the massive imports (which are cheap and of lower quality) entering the market.

Table 6. Aggregated Score, Mean, Standard Deviation and Ranking on Identified Activities to Competitiveness with Leather-Goods 2008-2013

	Leathergoods value chain stratum				
Activities	Number	Aggregate score	Mean	SD	Rank
i. COST RELATED					
Cost competitiveness	17	7	0.41	0.36	15
Increase in cost	15	10.8	0.72	0.52	9
Decrease in cost	1	1	1	1.73	18
ii. PRICE RELATED					
Price competitiveness	16	13	0.81	0.93	5
Increased price competiveness	11	6.0	0.6	0.5	16
Decreased price competitiveness	3	2.3	0.8	0.7	17
Increase in Product price	17	14	0.82	0.7	2
Product Price increase due to - increased exports	15	10.5	0.7	0.14	10
Product Price decrease due to Increased imports of inputs	11	9.5	0.86	0.8	13
Product price decrease due to decreased exports of finished products	12	9.0	0.75	0.35	14
iii. FACTORS FOR COMPETITIVENESS					
Enterprise Competitiveness	17	13.3	0.8	0.73	4
Quality of Physical infrastructure Satisfactory	16	10	0.63	0.18	10
Quality of social infrastructure Satisfactory	18	13	0.72	0.24	6
Government interphase with private Sector	18	13.5	0.75	0.35	3
Government encouraging investments	18	15	0.83	0.71	1
Government adopting e-commerce	18	12.5	0.7	0.59	7
Corruption levels	18	9.7	0.54	0.23	12
Government transparency	18	12.5	0.70	0.12	8

Table 7 shows the aggregated score, mean, standard deviation and rank order in relation to identified activities towards competitiveness of Footwear. In this stratum, the top aggregate score of 12 (with a mean of 0.9) had responses that showed enterprise competitiveness as pivotal. This observation is fundamental because of the intense intra competition of the footwear manufactures. This being a cottage based industry and also comprising the cobblers have to contain with abject working environment compromising on their quality. Therefore, they look upon the Government facilitated investment as a second score of 11 (with a mean of 0.79) activity demonstrates the need to modernize and re-equip the stratum to enhance their competitiveness. Price competitiveness closely ranked third reaffirming the concerns raised under leather-goods related imports of second and low quality footwear.

Table 7. Aggregated Score, Mean, Standard Deviation and Ranking on Identified Activities to Competitiveness with Footwear 2008-2013

	Footwear value chain stratum				
Activities	Number	Aggregate score	Mean	SD	Rank
i. COST RELATED					
Cost competitiveness	12	5.33	0.45	0.42	15
Increase in cost	12	8.25	0.69	0.52	8
Decrease in cost	2	1.33	0.67	1.2	18
ii. PRICE RELATED					
Price competitiveness	12	10	0.81	1.04	3
Increased price competiveness	8	3.75	0.47	0.4	16
Decreased price competitiveness	3	2.67	0.89	1.02	17
Increase in Product price	10	8.5	0.9	0.8	5
Product Price increase due to increased exports	7	6.6	0.95	1.4	13
Product Price decrease due to Increased imports of inputs	10	9.0	0.9	0.99	4
Product price decrease due to decreased exports of finished products	7	6.5	0.9	1.1	14
iii. FACTORS FOR COMPETITIVENESS					
Enterprise Competitiveness	13	12	0.9	1.4	1
Quality of Physical infrastructure Satisfactory	13	8.0	0.62	0.22	9
Quality of social infrastructure Satisfactory	14	8.5	0.61	0.25	6
Government interphase with private Sector	13	8.5	0.65	0.05	6
Government encouraging investments	14	11	0.79	0.51	2
Government adopting e-commerce	11	7.0	0.64	0.13	12
Corruption levels	13	7.34	0.57	0.12	11
Government transparency.	13	7.5	0.58	0.38	10

Table 8 details the differences in competitiveness activities in the Leather strata, summary Information, ANOVA, pairwise mean differences and related probabilities (n=108). The ANOVA and means matrix was used to make the computations required to run the analysis of variance and multiple comparison of the leather strata. As seen in this table, the ANOVA p value of 0.000 illustrated that at least one pairwise set of means are not equal. From the means matrix the inference is that all the strata in the leather value chain were significantly different except means between Tanners and Footwear (p=0.5099), Tanners and Leather goods (p=0.1873) and Footwear and Leather goods (p=0.5068). The R^2 (square) value indicated in Table 32 suggested that 70.11% of the strata's variation is explained by the identified competitiveness activities.

Table 8. Competitiveness Activities in the Leather Strata Summary Information, ANOVA, Pairwise Mean Differences and Related Probabilities (n=108)

Summary Information	Producers	Butchers	Traders	Tanners	Leather goods	Footwear
Count	18	18	18	18	18	18
Mean	56.686	24.049	39.911	4.486	10.144	7.305
Standard Deviation	22.764	10.243	18.201	1.918	3.922	2.709
UC (2-sided, 95%, pooled)	62.663	30.027	45.888	10.463	16.121	13.282
LC (2-sided, 95%, pooled)	50.708	18.072	33.934	-1.491	4.166	1.327
ANOVA Table						
Source	SS	DF	MS	F	p-value	
Between	39109	5	7821.7	47.849	0.0000	
Within	16674	102	163.47			
Total	55782	107				
Pooled Standard Deviation =	12.785		R-Sq =	70.11%		
DF =	102		R-Sq adj.=	68.64%		
Pairwise Mean Difference (row - column)	Producers	Butchers	Traders	Tanners	Leather goods	Footwear
Producers	0	32.636	16.775	52.199	46.542	49.381
Butchers		0	-15.861	19.563	13.906	16.745
Traders			0	35.425	29.767	32.606
Tanners				0	-5.658	-2.818
Leather goods					0	2.839
Footwear						0
Pairwise Probabilities	Producers	Butchers	Traders	Tanners	Leather goods	Footwear
Producers		0.0000	0.0002	0.0000	0.0000	0.0000
Butchers			0.0003	0.0000	0.0015	0.0002
Traders				0.0000	0.0000	0.0000
Tanners					0.1873	0.5099
Leather goods						0.5068
Footwear						

4. Discussion of Results

The research basis of the study was concerned with productivity as measured in the leather strata in Kenya. The third research question was concerned with competitiveness as measured in the leather strata in Kenya. The study analyzed aspects such as competitiveness on cost, price, enterprise and Government interface with business. According to Aalto-Setala, (2005) and Beck, Hubrich, and Marcellino (2011), setting the right price determines an enterprise's survivability and subsequently influences the value perception for a product or service.

Generally, the strata response's indicated that 72.35% overall indicated an increase of between 11-25% towards the cost of competitiveness. The highest stratum response was from Footwear (83.33%) closely followed by Leather-goods (82.35%). In contrast, Tanners (42.86%) exhibited lowest response to the increase of cost of competitiveness in the leather strata. This observation strengthened the trends earlier shown under productivity and trade. Thusly, Delgado and Ketels (2011) and Delgado et al. (2012) observed that enhancing competitiveness underscored the leather sector's potential to improve its current national performance in the leather value chain.

The few numbers of Tanneries in the Country and within the East Africa region renders their cost of competition lower than Footwear and Leather-goods who are predisposed to low quality and massive imports. Therefore, it wasn't surprising to identify Footwear (70%) and Leather goods (64.71%) as the highest strata in price overly competitiveness. Footwear stratum alone depicted increases in the ranges of 6-10%.

On the other hand, Leather goods participants indicated product price increases ranging from 11 – 25%. This observation provided the basis of the unfair competitiveness of their products impacted by similarly imported leather goods and footwear (low quality and second hand) which enjoyed local sales from the competitive prices they offered. Onaolapo and Oladejo, (2011) indicate that failure to address on these challenges including competitiveness results to unemployment, declined income generation and wealth creation, lower productivity, and underdeveloped small to medium size processing units.

In the leather sector in Kenya, poor price competitiveness was impacted with price distortion mechanisms. For instance, this negativity elucidated when traders predetermine the purchase prices of the raw products (hides and skins) based by providing 'soft loans' to Butchers and Producers to purchase livestock. As such this type of livestock financing provides leverage (for low priced products), domineering and guarantee of hides and skins delivery to Traders irrespective of market demand and supply dynamics.

Some Tanners are also known to extend financial support to traders for bulk purchase of hides and skins to ensure continued supply of the raw material to their manufacturing units. Thus, both downwards and upwards trading regimes by traders are at most underpriced to the detriment towards enhancement of the leather value chain.

On ascertaining infrastructure as contending factor to competitiveness in the leather strata, the results illustrated dissatisfaction to the quality of roads (53.28%), rail (70.2%), airport (98.36%), harbor or port (98.77%), ICT (70.49%) and warehousing (92.21%). The importance of this observation on infrastructure was its direct influence on incurred costs related to conveyance of inputs and processed goods from sources to terminal markets respectively. This was therefore a factor worthy of addressing if competitiveness of the leather sector was to be considered.

To comprehend further on competitiveness, the study delved further to evaluate the government's stance to encouraging investments to the leather sector. The leather strata on

overall (83.97%) indicated that the government encouraged investment towards the sector. Tanners were the highest stratum in affirming the government's support.

This wasn't surprising as this observation was related to the government's initiative to provide special funds in stimulating rural based tanneries and policies that encouraged both local and foreign investments. According to Karantininis, Sauer, and Furtan (2008); Durand (1952) and Jacobs & Shivdasani (2012) they were all in agreement that direct investments in the production chain are crucial in ensuring products that always evolve or sustain to attain market dominance.

In relation to corruptive stances as an impediment to competitiveness, the highest stratum in concurrence was the Tanners (85.71%). The tanners alluded that some levels of corruptive inclinations were experienced during delivery of inputs and products for exports where documentation and transportation are not transparently handled to their satisfaction. This observation has adverse impact to the competitiveness of the leather sector in Kenya due to inherent costs incurred and delay in acquiring inputs and clearance of exports.

Essentially, to enhance competitiveness, Jiang and Shen (2013) and Delgado et al. (2012) indicated it is crucial to regularly review processes, products/service development and upgrade of chains to meet ever-growing demand and expectations of customers. This includes considering positive trends at this level to reassure competitive edge and as a prerequisite enhance value addition to the leather strata.

The differences in competitiveness activities in the Leather strata used ANOVA and means matrix to make the computations required to run the analysis of variance and multiple comparison of the leather strata. As such, ANOVA p value of 0.000 illustrated that the strata in the leather value chain activities related to competitiveness were significantly different. The exception on the means was between Tanners and Footwear ($p=0.5099$), Tanners and Leather goods ($p=0.1873$) and Footwear and Leather goods ($p=0.5068$). This result was crucial as it illustrated that there is a statistically significant difference between value chains and competitiveness as measured in the leather sector strata in Kenya.

5. Conclusion

The study measured competitiveness responses from participants in survey in relation to the leather value chain strata in Kenya. This was in an effort to ascertain the strata's impact to value addition. An in depth analysis on issues related to costs, prices and impacting factors towards competitiveness (e.g. infrastructure, government interphase, e-commerce etc.) were pursued. The identified issues were then analyzed with the respective stratums along the value chain (e.g. producers, butchers, traders, tanners, leather-goods and footwear). The results indicated that the stratum preferential activities towards competitiveness by producers and butchers highlighted enterprises competitiveness as a major concern and pointed towards the government to intervene so as encourage investment for the purpose of revitalizing the stratums competitiveness. Comparatively, Traders specifically in their responses cited price and enterprise competitiveness as a concern. However, the top tiers of the value chain which encompasses the tanners, leather-goods and footwear exhibited different prioritized responses to competitiveness. For instance Tanners were more concerned in attracting government investments to prepare them to transform to the next level of finishing leather instead of exporting semi-processed leather whose value and profits are marginal. Whilst, leather goods and footwear stratums indicated a concern towards them being competitive, other than investment, was pricing which was adversely impacted by importation of second hand leather products. Conclusively, these concerns primarily directed the desired intervention towards the development of appropriate policy in encouraging investments into the leather sector and

instituting 'anti-damping' measures on imports. The result of such intervention is envisaged to avail much needed finished leather, increase leather products competitively and boost critical socio-economic indicators such as employment, income generation and rural development.

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References

Aalto-Setala, V. (2005). How do markets behave? The adjustment of price endings. *Journal of Product & Brand Management*, *14*(7), 455-459. http://dx.doi.org/10.1108/10610420510633404

Amanor-Boadu, V. (2003). Preparing for Agricultural Value-Adding Business Initiatives: First Things First. *AgManager*. Retrieved from www.agmanager.info

Armitage, K. P. (1999). What is competitiveness?...and who competes? *Manager: British Journal of Administrative Management*, *14*(8).

Beck, G. W., Hubrich, K., & Marcellino, M. (2011). *On the importance of sectoral and regional shocks for price-setting* (ECB Working Paper 1334). European Central Bank.

Delgado, M. (2012). *The determinants of national competitiveness* (No. w18249). *National Bureau of Economic Research*. http//dx.doi.org/10.3386/w18249

Delgado, M., & Ketels, C. (2011). Assessing country competitiveness: Case of Spain. In P. Cooke, J. L. Curbelo, & M. D. Parrilli (Eds.), *Innovation, global change and territorial resilience.* Edward Elgar, Cheltenham. http://dx.doi.org/10.4337/9780857935755.00016

Dunn, T. J., Baguley, T., & Brunsden, V. (2013). From alpha to omega: A practical solution to the pervasive problem of internal consistency estimation. *British Journal of Psychology*. http://dx.doi.org/10.1111/bjop.12046

Durand, D. (1952). Costs of debt and equity funds for business: Trends and problems of measurement. In *Conference on Research in Business Finance* (pp. 215-262). NBER.

Falk, C. F., & Savalei, V. (2011). The relationship between unstandardized and standardized alpha, true reliability, and the underlying measurement Model. *Journal of Personality Assessment*, *93*(5), 445-453. http://dx.doi.org/10.1080/00223891.2011.594129

Fiore, A. M. (2007). Experience economy strategies: Adding value to small rural businesses. *Journal of Extension*, *45*(2), 1-13.

Jacobs, M. T., & Shivdasani, A. (2012). Do You Know Your Cost Of Capital? *Harvard Business Review, 90*(7/8), 118–124.

Jiang, Y., & Shen, J. (2013). Weighting for what? A comparison of two weighting methods for measuring urban competitiveness. *Habitat International*, *38*, 167-174. http://dx.doi.org/10.1016/j.habitatint.2012.06.003.

Karantininis, K., Sauer, J., & Furtan, W. H. (2008). *Innovation, integration and product proliferation—Empirical evidence for the agri-food industry.* Selected Paper for presentation at the American Agricultural Economics Association Annual Meeting, Orlando, FL.

Keller, G., & Warrack, B. (1999). *Statistics for management and economics*. Pacific Groove, CA: Duxbury Press.

Lin, L., & Chunying, Z. (2010). The researches on knowledgeable employee's performance management based upon value added. *Advanced Management Science (ICAMS), 2010 IEEE International Conference, 3*, 283-286. http://dx.doi.org/10.1109/icams.2010.5553238

Litwin, M. S. (1995). *How to measure survey reliability and validity*. Thousand Oaks, CA: Sage. http://dx.doi.org/10.4135/9781483348957

Loslever, P. P. (2012). A scale fuzzy windowing comparison applied to multivariate descriptive analysis. *Intelligent Data Analysis, 16*(2), 279-303 http://dx.doi.org/10.3233/IDA-2012-0524

McEachern, M. G., & Schroeder M. J. A. (2004). Integrating the voice of the consumer within the value chain: a focus on value-based labeling communications in the fresh-meat sector. *Journal of Consumer Marketing, 21*(7), 497-509. http://dx.doi.org/10.1108/07363760410568716

Mwinyihija, M. (2014a). Emerging world trends and continental shifts on leather and leather goods production. *Advances in Business Management and Administration, 1*(1), 01- 013.

Mwinyihija, M. (2014b). A prognosis of the leather sector in Kenya; The upheavals and antidotes associated with value creation. *Management, 4*(1), 21-29.

National Productivity Center (NPC). (2010). *Productivity and competitiveness of Indian manufacturing sector; Leather and Leather Products, The Final Report.* Economic Services Group. New Delhi, India: Author. Retrieved from http//:www.nmcc.nic.in/pdf/leather.

Nikolić D. (2012). Scaled correlation analysis: a better way to compute a cross-correlogram. *European Journal of Neuroscience, 35*, 742-762. http://dx.doi.org/10.1111/j.1460-9568.2011.07987.

Onaolapo, A., & Oladejo, M. (2011). Effectiveness of millennium development goal programmes on entrepreneurial development: An appraisal of the Nigerian experience. *Journal of Emerging Trends in Economics & Management Sciences*, *2*(4), 310-319.

Prawitz, A. D. (2006). The in charge financial distress/financial well-being scale: Establishing validity and reliability. *Proceedings of the 2006 Association for Financial Counseling and Planning Education* (pp. 77-89). San Antonio, TX.

Radhakrishna, R. B. (2007). Tips for developing and testing questionnaires/instruments. *Journal of Extension, 45*(1), 1-4.

Riahi, A. T. (2012). The role of ICT in performance of small and medium enterprises. *Interdisciplinary Journal of Contemporary Research in Business, 3*(9), 833-839.

Santos, J. R. A. (1999). Cronbach's alpha: A tool for assessing the reliability of scales. *Journal of extension, 37*(2), 1-5.

Soper, D. S. (2013). A-priori sample size calculator for student T-tests [Computer software]. Retrieved from http://www.danielsoper.com/statcalc

Tavakol, M, & Reg, D. (2011). Making sense of Cronbach's alpha. *International Journal of Medical Education, 2*, 53-55.

Terziovski, M. (2010). Innovation practice and its performance implications in small and medium enterprises (SMEs) in the manufacturing sector: A resource-based view. *Strategic Management Journal*, *31*(8), 892-902. http://dx.doi.org/10.1002/smj.841

Triola, M. F. (2009). *Elementary statistics* (11th ed.). New York, NY: Addison Wesley.

Viju. M. (2008). African leather supply chain: An analysis. *ICFAI Journal of Supply Chain Management, 5*(3), 43-58.