

FACTORS AFFECTING VALUE ADDITION IN THE LEATHER INDUSTRY IN KENYA

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ABSTRACT: *The leather industry holds a significant position in the agricultural sub-sector in Kenya. The industry has a high potential to make high quality products that can address socio-economic problems, and create employment and wealth. The success of the industry depends on value addition, which unfortunately has been so minimal that most of Kenya's exports have been in the form of unprocessed raw hides and skins. The industry is yet to realize its full potential. The objective of this study was to investigate factors affecting value addition in the leather industry in Kenya. Adopting a case study design, the study focused on the influence of capacity building, technology, finance and quality control on value addition. The study population consisted of both incubatees and graduate incubatees of Leather Development Centre at the Kenya Industrial Research and Development Institute. The findings show that the industry is characterised by low capacity building, and unskilled employees take long to upgrade their skills on the job. The industry uses old technology, does not practice expeditious machine upgrade; and repairs and maintenance are quite slow. Further, the industry is inadequately financed, and quality is compromised because of unavailability of affordable inputs. The study recommends that in order to increase value addition, manufacturers need to invest resources in upgrading their human capital and technology. The different players in the industry should also analyse weaknesses in the present national policy framework, and address the loopholes that exist.*

KEYWORDS: Value Addition, Capacity Building, Technology, Finance, Quality Control

INTRODUCTION

Kenya's ability to run a successful leather industry is enormous as it produces huge amounts of hides and skins. The industry is one of the key agricultural sub-sectors in the country, and has a high potential for commodity development to address pertinent issues of socio economic importance, which impact on rural development, employment and wealth creation (Mwinyihija, 2010). In the recent past, Kenya has produced an average of 2.4 million hides, 6 million skins and 20,000 camel hides (Mbogo, 2010). The industry depends largely on the large livestock resource base from ASALs (Arid and Semi Arid Lands) areas which contributes most of the slaughter stock, whose hides and skins are by-products. The industry contributes an estimated

4% to agricultural GDP, and the earnings of local market dealers are estimated to be Kshs 1.8 billion annually. The country also earns approximately Kshs 4 billion from exports of semi-processed and unprocessed leather.

However, the optimal growth of the industry is dependent on value addition. The increase of tanneries from nine to eleven, with two more being rehabilitated, is a sign that the industry is poised for growth, demonstrated in the economic survey of 2008 that established a 10.3% growth (Mbogo, 2010).

The full realization of the industry's potential in any country is dictated by value addition, which is also predicated upon skilled capacity, technology, financing and quality control. Lack of rigorous attention to these input parameters results in low quality leather and leather products, leading to low demand in both the domestic and export market. Value addition in the livestock sector has been minimal, and most of Kenya's exports have been in the form of unprocessed raw hides and skins. But Kenya can produce much more footwear for its domestic population and reduce reliance on cheap imports Curtis (2010).

Over 90% of hides and skins produced in Kenya are exported to external markets in both raw and semi processed form, and 80% of the exports are currently in wetblue state (Mwinyihija, 2010). Kenya manufactures an estimated 4 million units of leather products, which is a meagre amount compared to the deficit of about 28 million, considering Kenya's population alone (Mhono, 2012).

Different scholars have expressed concern about leather manufacturers failing to reap maximum benefit that the industry provides due to half-hearted uptake of value addition (Mwinyihija & Onyango, 2012; Kagunyu *et al*, 2013). Previous studies on leather have focused on other characteristics and only one or two aspects of value addition. There have been calls to fill gaps in the leather industry value chain through research to make the Kenyan leather and leather products competitive in the international market (Kiuluku, 2008). Yet Kenya is still challenged by minimal value addition and more knowledge is needed to improve the leather industry (Mwinyihija and Onyango, 2012).

It was in response to such challenges that this study set out to provide more knowledge on the factors affecting value addition in the leather industry in Kenya. This study was guided by technology, finance, capacity building and quality control as independent variables. It investigated and made recommendations relating to factors affecting value addition in the leather industry in Kenya.

Based on the reviewed literature, a conceptual framework was developed comprising four independent variables believed to influence value addition most during processing and production of leather and leather products, captured by Fig. 1.

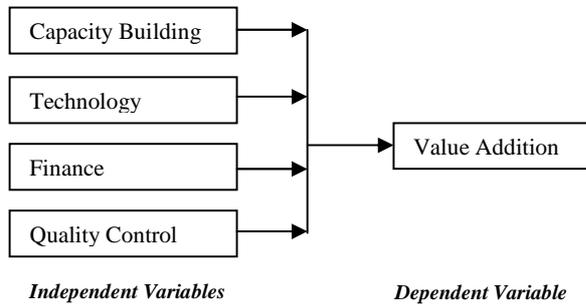


Fig. 1 Conceptual Framework

LITERATURE REVIEW

In most developing countries, tanning operations is a family business, carried out in small to medium scale semi-mechanized units, very frequently grouped tightly in clusters which used to be outside residential areas (Gupta & Tamra, 2007). Tanners in such units do not have formal education or any significant understanding of the complexities of leather processing, or the need for environmental protection. Proper waste technologies, for instance, require better skilled personnel and closer technical control than conventional processing. Thus, lack of properly trained staff at different levels remains one of the crucial constraints.

The leather industry can be improved through skills development and capacity building, availability of credit finance, formulation of legal and regulatory framework, and a national policy which supports the growth of the industry and addresses the requirements of the Micro and Small and Medium Enterprises (Muthee, 2008). For capacity building to be effective, support structures are needed to provide specialised networking linkages with local and international organisations, to ensure adequate marketing channels.

Africa is an industrial reality with low technological levels, where innovation goes very slowly, and new productive units are installed with old plant and machinery that are difficult to use for innovative production (Ciprian, 2002). Technologies can transfer the present conditions of traditional leather industry, which will also ensure the realization of sustainable development of the leather industry (Jian-zhong, Zhi-jie, Yun, 2004). As it were, information technology (IT) and other related technologies hardly find a place in the current leather industry (Dasanayaka and Sardana, 2009).

Financial services that adequately meet the needs of the business is an important precondition for establishing and managing a successful hides and skins enterprise (Leach & Wilson, 2009). Yet Small and Medium Enterprises lack finances as the many micro-finance institutions and SACCOs have not been lending to SMEs (Muthee, 2008). Availability of investment finance is critical for growth in the leather sector.

Quality is the most critical element for market success (UNIDO, 2004). The prevalence of defects in hides and skins imports from Africa, coupled with lack of compliance with delivery dates, are

key issues for present and potential importers. Quality and standards control is a direct function of the pervasive manufacturing process (Bekele and Ayele, 2008). It involves organisational structures, company management and how activities are carried out both at the departments and individual level (Ciprian, 2002).

METHODOLOGY

An exploratory approach was used and case study design was adopted to identify, analyse and describe the variables that influence value addition in leather and leather products in Kenya. This was supported by Blanche *et al*, (2006) who state that the exploratory approach employs an open, flexible and inductive approach to research as it attempts to look for new insights into phenomena.

The study population was comprised of current and former incubatees of the Leather Development Centre at the Kenya Industrial Research and Development Institute (KIRDI), in Nairobi. Some of them had already established SMEs in the leather processing and leather product manufacturing.

A total of 35 incubatees (15 current and 15 former) were found and sampled. A census technique was adopted to collect primary data through semi-structured questionnaires. Thirty of the 35 questionnaires that were distributed were filled and returned, constituting an 85.71% response rate.

The statistical tool for Social Sciences (SPSS) was used for data analysis, and qualitative data was analyzed using descriptive statistics. These are known to provide the foundation upon which correlation and experimental studies emerge, and clues regarding issues that should be focused on, leading to further studies (Mugenda & Mugenda, 2003). Correlation was used to show how the four variables are inter-related, while multiple regression method was used to show the strength of the association between the independent variables and the dependent variable.

RESULTS AND DISCUSSIONS

The first finding indicated 36.6% of leather manufacturers acquire their leather processing skills through on-job training, while 30% trained at the Leather Development Centre. These findings concur with Ohge (2004) who found that most tannery workers start as labourers and learn their skills on the job. The findings imply that for the growth of the leather industry, the key actors should put emphasis on human capital development strategy needs to cover off-site training facilities as well as on-site training.

Further, 76.6% of the respondents indicated that proper management structures are required to govern growth in the leather industry. This concurs with Jabbar *et al*, (2002) who concluded that the success of the leather industry depended on capacity building for the whole industry, to include training of staff and management, and investment in research and development.

A majority of the respondents (60%) indicated that skills development enabled them to work better and faster, in line with findings by Muthee (2008) who established that improved leather industry can be enhanced by skills development and capacity building. These findings show that for the leather industry to be successful, it has to empower both the management and the employees and upgrade their skills.

On modern methods, 66.6% of the respondents agreed that they should incorporate modern leather processing methods for the success of the industry. These findings contradict those by Bowonder, Sadulla, Jain (2009), who suggested that the leather industry should capture the traditional knowledge and integrate it with new knowledge. They argued that shifting from traditional knowledge to new knowledge base cannot occur spontaneously, it has to be through 'learning-by-doing', which requires a considerable amount of time.

On start-up finances, 44% of the SME leather manufacturers indicated that they started their enterprises with family money and personal savings. This is in line with findings by Bowen (2009) who established that most SMEs rely mainly on own savings and reinvested profits. SMEs should therefore develop relationships with formal financial institutions so as to learn about and also benefit from their financial packages.

On loans to finance their enterprises, 83.3% of the respondents stated that they did not apply for any loans from financial institutions. Among the reasons given was that the institutions required collateral and rigid repayment schedules, which attracted punitive penalties in cases of default. This finding concurs with Mandeep, Suresh, Kumar and Thiruvengdam (2008) who also found that a majority of loans made by financial institutions to SME are secured for various reasons, including higher risk perceptions and legal barriers with respect to loan recovery. The findings show that SMEs do not perceive financial institutions as a viable option for their financial needs. To encourage lending among the SME sector from financial institutions, financial providers should interact more with the SMEs sector to learn about their business models. This will enable financial institutions to tailor their services to suit these business models.

Concerning quality control, 43.3% of the respondents were in agreement that more emphasis should be put on building employees' capacity in order to improve product quality. The findings concur with Muthee (2008) who emphasized that to improve the quality of leather, weight should be put on capacity building in the pervasive production process; investment; and favourable policy. From these findings, it is evident that SME leather manufacturers should strive to make quality of products which can compete in the international market.

Still on quality, 50% of the respondents stated that conducting final inspection of the finished product adds value to leather and leather goods. This is a good practice which companies should entrench into their systems in order to improve quality. This finding is in agreement with Black (2010), who established that after-process quality control enables manufactures to inspect the attributes of the finished products to determine whether they are acceptable; rework on mistakes; and reject as scrap those which do not meet the acceptable standards.

On value addition, 57% of the respondents indicated that they engaged in value addition to a great extent, in their production of leather products. Muthee (2008) found that in Kenya, value addition in the leather sub-sector is well recognized in the national policies; however putting this into practice was still a challenge. These findings are therefore encouraging, and those in charge of running the leather sector should carry out awareness campaigns to enlighten the leather manufactures about the international market demands so that they can produce products which are internationally acceptable.

To establish the relationship between the independent variables (capacity building, technology, finance, and quality control) and the depended variable (value addition), Karl Pearson's coefficient of correlation (r) was employed and a positive correlation between value addition and capacity building ($r=0.534$) was established. There was also a positive correlation between value addition and technology ($r=0.521$). The correlation between value addition and finance was also positive at ($r=0.509$), while value addition and quality control also correlated positively ($r=0.511$).

Coefficient of determination was obtained to determine the percentage of variation in the dependent variable (value addition) that is explained by all the four independent variables (capacity building, technology, finance and quality control) (Panneerselvam, 2004). The four independent variables that were studied explain only 51.8% (R^2) of value addition. This therefore means that other factors not studied in this research contribute 48.2% of value addition of the leather products. Therefore, further research should be conducted to investigate these other factors that influence value addition in leather products.

IMPLICATIONS OF RESEARCH AND PRACTICE

Given the scarcity of information on value addition in the leather industry in Kenya, most of the findings of this study add new knowledge to the little existing information on this phenomenon specifically in Kenya. However the same information can be used comparatively to benefit any other similar situation in the developing world.

First, the findings now add knowledge on the need for emphasis on capacity building through on-the-job method, given its prevalence in the leather tannery sector. This is contrary to modern day expectation where a formal training would be given more consideration, regardless of its practical effectiveness.

Secondly, the findings bring out the limited awareness of the full potential of the Kenyan leather industry, and emphasise the need for the leather sector to increase awareness and enlighten actors on institutions which provide training in leather works for both leather workers and managers of leather production processes.

Further, these findings provide new information or knowledge that policy makers can use to improve value addition in the leather industry and in the process address the needs of all stakeholders. The study advocates that, the leather sector should establish a body which

coordinates the expectations of the international market and those of the manufacturers to facilitate market demands and market access.

The study also brings in new information on the need for leather SMEs in Kenya to work in strong clusters in order to influence the market, something they have not been doing yet since they operate in a scattered manner and largely independent of each other.

The study exposes the plight of SME operators in the leather industry in Kenya with regard to access to institutionalised financial facilities, and advocates for their acquaintance with the different financial packages offered by financial institutions and make use of those which are favourable to them. In the same vein, it brings out new information on the need for financial institutions to come up with tailor-made financial packages to address the challenges and operations of leather SMEs.

CONCLUSION

The leather industry is likely to succeed if it can embrace all forms of capacity building across the sector, without leaving out on-job training and other traditional approaches, to strike a balance in the skills demanded by the leather industry. However a sustained long term growth in the leather sector will require training of skilled staff in cattle breeding, management, and a greater understanding of the influence that these activities have on the quality of hides and skins, as well as training in the other stages of the supply chain (Khan, 2010).

The role of technology in the outcome of the final leather and leather products need not be emphasised further, and it is one of the pillars of the success of the leather industry in Kenya. Information technology, for example, will enable innovative fashionable designs; and acquire modern machines which have higher production, low production time and low expenses. In the absence of this, the industry should expedite the availability of spare parts for repair and maintenance. The industry should embrace dissemination of information to facilitate engagement of local producers with international markets.

Finance remains critical in value addition, and its shortage at any point in the production chain is likely to compromise the quality of the final product. Mechanisms to facilitate availability of affordable credit must be devised to enable growth in the leather industry. In the opinion of FAO (2006), governments can help in facilitating increased investment in the leather industry by putting in place policies that are conducive to investment.

Finally, quality control greatly influences value addition at all points of production hence must be instilled, starting from the farm level to the final product.

FURTHER RESEARCH

Even though it was outside the scope of this study, the role of management in value addition was mildly brought out by this study. This needs to be investigated deeply to compliment findings of

this research, alongside the role of access to quality raw materials, and the need for leather manufacturers working in clusters and how this can be adopted successfully by the Kenya leather industry.

Table 4.1 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.718	0.518	0.070	0.1178

Table 4.2 Relationship between Independents Variables and Dependent Variable

		Value addition	Capacity building	Technology	Finance	Quality Control
Value Addition	Pearson Correlation Sig. (2-tailed)	1				
Capacity building	Pearson Correlation Sig. (2-tailed)	0.534 0.010	1			
Technology	Pearson Correlation Sig. (2-tailed)	0.521 0.038	0.2107 0.2011	1		
Finance	Pearson Correlation Sig. (2-tailed)	0.509 0.042	0.0913 0.0321	0.2107 0.2002	1	
Quality Control	Pearson Correlation Sig. (2-tailed)	0.501 0.046	0.2368 0.1609	0.0591 0.5790	0.0117 0.0208	1

REFERENCES

- Bekele, M. and Ayele, G. (2008). *Research Report Xi the Leather Sector: Growth Strategies Through Integrated*. Retrieved March 1st, 2012, from: <http://www.edri.org.et>
- Blanche, M. T., Durrheim, K. and Painter, D. (2006). *Housing and Urban Development in Post Society City*: Moonstats CD: User Guide Publishers.
- Black, J. T. And Kohser, R. A. (2010). *De Garmo's Materials and Processing in Manufacturing*. Kendallville: John and Wiley Sons Publishers
- Bowen, M. (2009). Management Of Business Challenges Among Small And Micro Enterprises In Nairobi-Kenya: *KCA Journal of Business Management*: Vol. 2, Issue 1, Pg 58-83
- Bowonder, B., Sathull, S. and Jan, A. (2009). Evolving an ICT Platform for a Traditional Industry: Transforming Artisans into Entrepreneurs. *International Journal of Services Technology and Management*, 2005 Vol.6, No.3/4/5, pp.379 – 401
- Career.woodlandschools.org (2004). Leather Tanning and Finishing Works. Brief 297Chronicle Guidance Publications, Inc., Moravia, NY 13118. Retrieved from: <http://career.woodlandschools.org/cgp/Briefs/Brief297.PDF>

- Cipriani, D. (2002). *Study of The Quality Control And Management On The African Leather Sector*: Retrieved August 8th, 2012, from: <http://www.unido.org>
- Curtis, M. (2010) *Developing the Leather Sector in Kenya through Export Taxes: The Benefits of Defying*: Retrieved March 8th, 2012, from: <http://www2.weedonline.org>
- Dasanayaka, W. S. B. and Sardana, G. D. (2009). *Technology Issues in Pakistan's Leather Tanning SMEs*. Retrieved May 12th, 2012 from: <http://www.pafkiet.edu.pk>
- FAO, (2006). *Hides and Hides and Leather – Strategies for Development. Intergovernmental Group on Meat and Dairy Product. Tanzania 9th Session. Dairy Products*. Retrieved May, 12th, 2012 from: <http://www.fao.org/docrep/meeting/010/j6530e.htm>
- Gupta, S., Gupta, R. and Tamra, R. (2007). *Challenges Faced by Leather Industry in Kanpur Indian Institute of Technology Kanpur*. Kanpur, INDIA. Retrieved on the February, 12th 2013: http://home.iitk.ac.in/~sgupta/tannery_report.pdf
- Islam, M. R. (2003). Transactional Corporation-Bangladesh Relations: A Resource Dependence Perspective. *International Journal of Organisation Theory and Behaviour*, 6 (3), pp.354-373.
- Jabbar, M. A., Kiruthu, S., Gebremedhin, B., and Ehui, S (2002) *Essential Actions To Meet Quality Requirements of Hides, Skins and Semi- Processed Leather From Africa. A Report Prepared for the Common Fund for Commodities Amsterdam*. Retrieved from: http://www.unido.org/fileadmin/import/10197_Jabbar.2.pdf
- Jain-Shong, Zhi-jie, Yun, (2004). *Preview of Advanced Technologies in the Future Leather-Making Industry*. Shanghai, Shaanxi University Of Science & Technology.
- Kagunyua, A., E. Ngari and M. Lengarite (2013). *Factors Affecting Marketing of Hides and Skins of Pastoral Communities of Northern Kenya*. Kenya Agricultural Research. Retrieved November 1st, 2012, from: <http://www.kari.org/biennialconference/conference12/doc/factors%20AFFECTING%20MARKETING%20OF%20HIDESANDSKINSOFPASTORALCOMMUNITIESOFNORTHERNKENYA>
- Khan F. (2010). *A Blueprint for the African Leather Industry: A Development, Investment and Trade Guide for the Leather Industry in Africa*. Retrieved: March 11th, 2012, from: <http://www.scribd.com/doc>
- Kiuluku, P. (2008). *The Hides and Skin Leather Sector Global Value Chain*: Retrieved February 28th 2012, from: <http://www.roundtableafrica.net>
- Leach, L. and Wilson, R. T. (2009). *Higher Value Addition through Hides and Skins: Rural Infrastructure Agro Industrial Division Food and Agriculture Organization of the United Nations*. Retrieved March 7th, 2012, from: <ftp://ftp.fao.org/docrep/fao/011/i0523e/i0523e.pdf>
- Mandeep, S., Goyal, S. Kumar, J., Thiruvengdam, S. (2008) *International Exposure Programme in Thailand & Vietnam on Financing To SMES Project Reports*: College of Agricultural Banking Reserve Bank of India Pune
- Mbogo, J. (2010). *"To Be a Lead Agency in Steering the Hides, Skins and Leather Sector in Attaining Set Goals in Vision 2030."* Government of Kenya: Retrieved March 7th, 2012, from: <Http://Www.Scribd.Com/Doc/67343653/Definition-Of-Hides-Skins>
- Mhono, J. (2012). *Comesa Pact II Boost Kenya, Leather Sector*: Kenya Leather Development Council 2nd ed. *The Leather News*
- Mugenda, O. M., & Mugenda, A.G. (2003). *Research Methods Quantitative and Qualitative Approaches*. Nairobi: Applied Research and Training Services Press.

- Muthee, A. M. (2008). *MSME Competitiveness Project Ministry of Trade and Industry: Integrated Value Chain Analysis of Leather Sector in Kenya*. Retrieved March 4th, 2012, from:
<http://industrialobservatory.gov.rw/IMG/pdf/LeatherVChainanalysis.pdf>
- Miranda-da-Cruz, S. (2011) *Global Leather Summit Present & Future International Trade –New Challenges, World Leather Congress (WLC)*, Rio de Janeiro Brazil, www.unido.com
- Mwinyihija, M. and Onyango, G. J. (2012). *Comesa pact II Kenya Leather Sector: Kenya leather Development Council, Leather. MonthlyNews*
- Mwinyihija, M. (2010). *Hides, skins and leather value addition initiatives: the Kenyan Scenario*. Leather and Leather Products Development Division, Ministry of Livestock Development, *Mawingu Conference 23-25*.
- National Manufacturing Competitive Council (2010). *India Leather over View: Skills Development*. Retrieved August 11th, 2012, from http://nmcc.nic.in/pdf/Leather_03July2010.pdf
- Ohge, L. (2004). *Leather Tanning and Finishing and Workers: Chronicle Guidance Publication. Brief 297: Moravia, New York*. Retrieved April 4th, from <http://career.woodlandschools.org/cgp/Briefs/Brief297.PDF>
- Olawa, F. and Garwe, D. (2010). *A Principal components analysis Approach. African Journal of Business Management: University of Ford Hare South Africa*
- Panneerselvan, R. (2004). *Research Methodology*. New Delhi: Pack Publishers
- Pathania-Jain, G. (2001). *Global parents, local partners: A Value-Chain Analysis of Collaborative Strategies of Media Firms in India, Journal of Media Economics, Vol. 14, No. 3, p. 169-187*.
- Porter, M. E. (1985). *Competitive Advantage: Creating and Sustaining Superior Performance*, New York: Free Press.
- Rizin, D. (2010). *The Importance of Research and Development for Companies and Entrepreneurs in Gaining Competitive Advantage*. University of Belgrade, Retrieved August 3rd, 2012, from:
<http://fbm.uni-ruse.bg/jei/Issue-2010/10-2010-JEI-Dejan-Riznic-Edited-Final-M.pdf>
- UNIDO. (2004). *Product quality: A guide for small and medium-sized enterprises*. Retrieved March 20th, 2012 from:
http://www.unido.org/fileadmin/media/documents/pdf/tcb_product_quality.pdf

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