

Value Chain Analysis of Slipper Industry in the Footwear Capital of the North

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Abstract—This research, anchored on the Value Chain Analysis (VCA) framework, delved at describing the slipper industry in the so-called footwear capital of the North in Nueva Ecija, Philippines, the “Gapan City”. It utilized a descriptive research design and involved 46 slipper manufacturers as respondents. The researchers particularly focused on the industry's business operation in terms of inputs provision, production, marketing, cost and return analysis, prospects, problems and constraints of the slipper industry. The study revealed that raw materials were mostly from China. The worker turnover rate was high since they were underpaid. Pricing methods employed were cost-based, penetration and customer-based pricing. The prime geographical markets of the manufactured slippers were in the City of Gapan and other nearby regions. Many of the slipper manufacturers relied on credit extended by suppliers and other financing and financial institutions, hence causing shrinkage in income. Although this business is profitable, imported slippers from other countries still haunt local slipper manufacturers which were directly competing with their products. With the identification of problems and uncertainties of the slipper industry as concealed in this study, the researchers crafted management strategies to enhance and sustain the competitiveness of the industry which will be of great help for utilization or reference not only of Filipino businessmen but for every slipper entrepreneur in the world. Likewise, the findings of this paper have beneficial repercussions for policy implementation and VCA application in the slipper industry.

Keywords—Customer-based pricing, financial institution, manufacturers, slipper industry, value chain analysis

1. Introduction

In this day and age, there is a need for every industry to have a process where each company classifies its initial and upkeep activities that add value to its merchandise and then analyze these activities to maximize income and minimize expenses [1]. This process is known as value chain analysis (VCA) [2] as cited by [3].

One business enterprise that requires the use of VCA is the footwear industry, particularly the slipper industry of Gapan City in the Philippines. Gapan, endearingly called “The Footwear Capital of the North” is one of the five component cities in the province of Nueva Ecija, whose main industry is slipper making [4]. This industry generates an annual gross of about P 500 million a year in which 15,000 people depend on it as their source of livelihood [5]. According to [6], the slipper making industry started in the city in the early 1930s. Now, a great number of slipper makers are found in the barangays of Pambuan, Mangino and San Lorenzo, and some of their products have already reached as far as Visayas and Mindanao [4].

The slipper industry has been blossoming in Gapan for a long period of time. However, in 2009, when low-cost footwear from other countries such as China came, it affected the local slipper industry in the Philippines, since most of the traders from local department stores and boutiques procure cheaper foreign products [5]. Gapan, whose native source of livelihood is slipper making, was also affected by the decline in the demand for footwear in the local industry. With the immediate threat to their source of living, some residents shifted their attention to another more profitable source of income such as farming, livestock and other small and medium enterprises (SMEs).

Recognizing the problem of slipper industry in City, the Department of Trade and Industry (DTI) whose mandate is industry development, took the initiative to encourage slipper makers in the city to enrich their business by promoting trade fairs and providing them a multi-purpose cooperative that could help them in their needs and widen their benefits. The initiative of the DTI made the slipper industry in Gapan a trademark for high-quality slippers [5].

Still, as the industry continued to grow, some problems took place specifically with the decline of the supply for raw materials for making slippers due to House Bill 4831 in 2011 which forbids the killing of

farm animals particularly carabaos. Because of these government restrictions, the slipper makers of Gapan were forced to create their products using synthetic leather and rubber [4].

Although the slipper industry in the City made a mark in the history of the country, it is a known fact that slipper makers have experienced issues, problems and concerns that made their business difficult to thrive and survive. These issues and problems pertaining to the industry were directly affecting the source of livelihood for thousands of people and the slipper industry in Gapan. These are the reasons that kept the researchers interested in conducting this study. Hence, this research described the current state of the slipper industry through the value chain analysis framework of [2] anchored on inputs provision, production, marketing, and cost and return analysis. "The value chain analysis describes the activities that the organization performs and links them to the organization's competitive position. It encompasses the activities within and around an organization and relates them to an analysis of the competitive strength of the organization" [7].

Through the value chain analysis, this study unleashed the current situation of the slipper industry in Gapan that aided the researchers in proposing a management strategic action plan which would help empower the slipper makers to attain a sustainable status and hence, uplift the trade's competitiveness.

In this study, the aspects of the slipper industry that add value to slipper production were described. In the input provision; materials, costs, designs, equipment and machines used, the manpower resources and the sources of capital were reported. Production process covered the source of product design, production processes, production schedule, production site or place of production, and security and safety measures including waste management practices of the slipper manufacturers. As to marketing, it described the distribution strategy of the business, places of distribution, level of distribution channel, mode of transportation; delivery terms and pricing of the slippers were described.

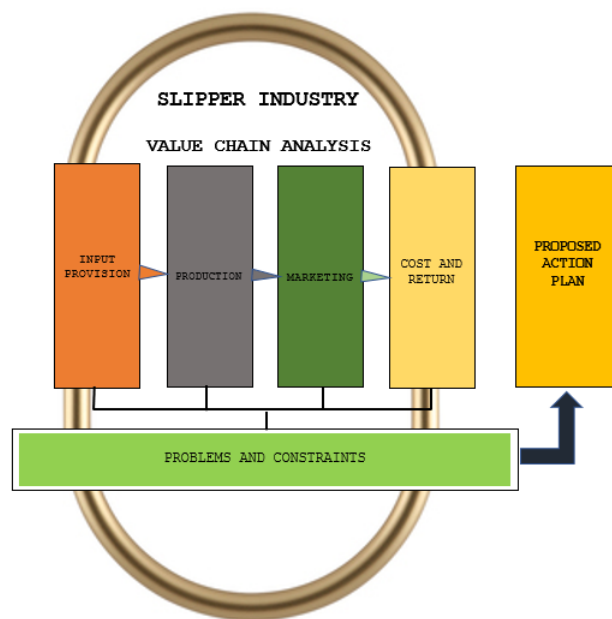


Fig.1. Research Paradigm

The cost and return analysis were included to determine the profitability of slipper making in Gapan. Lastly, the researchers identified the problems and constraints of the slipper industry which served as a basis for their proposed management strategic action plan (as shown in the research paradigm of the study, Fig. 1).

2. Literature Review

The value chain analysis popularized by [7] served as the framework of this study. The ideas from other kinds of literature, books and articles such as those written and conducted by [8], [9], [10] and [11] application of VCA learned and read by the researchers were instrumental in the completion of this paper.

Moreover, studies with implementations of value chain analysis (VCA) served as a starting point of the researchers which were very helpful in conducting this study. The authors of several types of research have successfully presented the significance and relevance of introducing VCA to different industries that encounter difficulties such as aquaculture feed [12], organic food [13], fisheries [14], plastic products [15], mango [16], sawn rubberwood timber [17] and healthcare retail business [18].

In addition, different studies reviewed contribute much particularly the importance of financial intermediation and other supporting activities to the footwear value chain such as those dispersed by [19], [20], [21], [22], [23], [24], [25] and [26]. The components of these studies were deliberately simplified and understood by the researchers to maintain focus on the key activities in studying the slippers industry which was the main focus of this research.

3. Methodology

This research paper investigated the situation [27] of the slipper industry in Gapan City, Nueva Ecija, which is named the Footwear Capital of the North in the Philippines. The study employed descriptive quantitative research. According to [28] as cited in [29], “descriptive survey can systematically describe a situation, problem, phenomenon, service or programs, or provide information or describe the attitude towards an issue”. Descriptive research was used in this study to describe the slipper industry through value chain analysis on input provision, production, marketing and cost and return analysis. Problems and constraints of the slipper manufacturers were also included that serve as basis in proposing the strategic action plan. A researchers-made questionnaire with open-ended questions was utilized to gather data from the respondents.

The respondents of the study were all the 46 slipper manufacturers in Gapan who came from Barangay Pambuan, Mangino and San Lorenzo.

4. Results and Discussions

1. Aspects of the slipper industry in terms of:

1.1. Input provision;

The materials used in manufacturing slipper depend on the types of slipper and designs made. Flats such as ekis, strap, ipit, rags, sabutan, abaca, alboloryo, banhay and tribu are the different types and designs of slippers commonly manufactured in Gapan City. Rubber, swelas, Gordon, rugbies and intrada are needed to create ekis, strap and ipit.

The equipment and types of machinery utilized by the manufactures in making slippers are swing beam arm press and cutting die/knives for insoles (Bagsakan), stitching machine (Pananahi or Letehan) and Sander (Molihon).

The manpower resources of the slipper manufacturers were sourced out from referrals, acquaintances, and relatives. All workers are from the municipality of Gapan. The estimated monthly salary received by workers is P6,000.00 for intradista during peak season and P5,500.00 during offseason. Additionally, manggagawa (laborers) were given P8,000.00 monthly salary for peak season while in the offseason they were provided with an estimated monthly salary of P7,500.00.

The slipper manufacturers sourced out the capital in financing their business from their own savings and from financial institutions like banks, lending companies, and their distributors.

As to the production of slippers, the initial stage differs in the two types of manufacturing businesses. The cooperative-analyzed trend and demand in the market, while other manufacturers depend on the orders placed by slipper distributors and traders.

Budget estimation and purchase of raw materials were known from the slipper manufacturers as the next stage of production. The source and quantity of the materials and supplies needed in the production are identified and the cost of labor is estimated.

All manufacturers utilized partial automation in the production of the slipper parts. The finished slippers are sorted according to sizes and design, bundled by dozen and wrapped in plastic and tied by a straw rope to be ready for distribution.

The majority of the slipper manufacturers had to work six days a week in order to meet their average quota of 5 transactions per month. Sunday was reserved for delivery and also the rest day of workers.

The manufacturers have small capitalization so their production sites are on the extensions or side of their houses. Their manufacturing sites are usually open to avoid suffocation of the laborers from rugby and other materials hazardous to health.

They observe production safety measures and apply different practices in disposing of their wastes.

1.2. Marketing

The pricing methods used by the slipper manufacturers are classified as cost-based (cost-plus mark-up, CPM), penetration pricing (low-start-up price, PP) and customer-based pricing (CBM).

The geographical market of the manufactured slippers reaches Region III, Metro Manila, and some provinces in Regions I and II.

The promotional strategies adopted by the slipper manufacturers are: giving free samples, extending credit payments, giving discount prices for the big volume of the products purchased, and serving as sponsors in trade fairs and festivals.

1.3. Cost and return analysis

There is a stable and positive inflow of cash in the slipper industry of Gapan despite its being a household enterprise. The approximate net income of 31.68% is good enough to provide the manufacturers and their families the basic essentials of life e.g. food, clothing and shelter. Others were able to raise capital to divert into other businesses.

2. Prospects, problems and constraints of the slipper industry

The problems identified under inputs provision were mostly the rising cost of materials. Some manufacturers revealed that lack of capital is another problem they are confronted with, and lastly, another problem identified was the shortage and availability of raw materials and the perennial problem of huge labor turnover.

As to the aspect of production, a major problem encountered was the attitude of the workers. The next problem was the lack of support from the Local Government Unit (LGU). Electricity brownout was also identified as one of the problems in production by the manufacturers as it affected their production.

The biggest problem met by slipper manufacturers was the pricing of their products. Another issue in marketing in which the manufacturers want to address is the lack of promotional activities and promotional plans. Moreover, the burden on the part of the manufacturers was the absence of delivery vehicles, needed facilities, machines and equipment. These findings clearly show that market risks and operational risks were present in the slipper industry which has an impact in its specific economic sector and sometimes occurs in their operations [17].

3. Proposed Management Strategic Action Plan for the Slipper Industry

Plan–Do–Check–Action, the fundamental and iterative four-step management method and the core of the Total Quality Management theorized in [30] is the groundwork of this strategic plan. “The Deming Cycle, or PDCA Cycle, is a continuous quality improvement model consisting out of a logical sequence of four repetitive steps for continuous improvement and learning: Plan, Do, Check (Study) and Act [30]”. The objective of this strategic plan intends to address essential points in marketing, management, the technical and financial aspect of the business and the industry as a whole.

With the advent of problems and uncertainties identified by different stakeholders of the industry, the proponents of the study propose interference of management strategies to sustain the competitiveness of the slipper industry in Gapan, Nueva Ecija.

These alternative courses of action also include the stakeholders and agencies responsible for the implementation of possible solutions to identified problems in the industry.

Table 1. Proposed Strategic Action Plan

Constraints/ Problems	Intervening Strategy	Responsible Group/Unit
Lack of upgraded equipment and machines	Government to subsidize equipment and machines	LGU, DTI
Lack of technical know-how on proper organization and management of business	Seek support from private and government-owned universities through their extension services	LGU, SUCs, Private Universities, Slipper Manufacturers and Trade Associations

Small production area	Layout improvement of a production site or utilization of LGU facilities such as Gym and the likes for small market players	LGU, DTI, SUCs and Slipper Manufacturers
High cost of production	Outsource knowledgeable speakers from DTI to determine the primary cause of the high cost of production and define potential by-products to add other silos of income	DTI, SUCs, Slipper Manufacturers
Power interruption	Train workers to manufacture slippers manually as an alternative course of action if there is no electricity or to purchase generator set through financing	DTI, Concerned Cooperative Groups, Financial institutions, Slipper Manufacturers
Lack of Workers, High rate of defective or spoiled output,	Mechanization of some steps of production	LGU, DTI, DOST
Attitude of workers	Provide rewards for good performance of workers	Owners of Slipper Manufacturing Businesses
Lack of timely designs	Skill and design–innovation training for slipper manufacturers and workers	LGU, DTI, SUCs
Inadequate delivery facilities	Granting of delivery trucks to cooperative/s	LGU
Absence of promotional activities	Participation of slipper manufacturers to bazaar and exhibits	LGU, DTI
Price manipulation by distributors	Create a group that will monitor prices of inputs needed by the slipper manufacturers	LGU, DTI
Lack of technical know-how in a proper recording of accounts	Seminar–workshop in bookkeeping and recording	LGU, DTI, SUCs
Low–priced competitors	Focus on quality–based output	LGU, DTI, SUCs
Buying behavior of distributors, retailers, and traders	Provide the best Integrated Brand Promotion to sustain the current market and to gain more distributors through promotional strategies like sales discounts, sales promotions and the likes	Owners of Slipper Manufacturing Businesses

5. Conclusions and Recommendations

Slipper businesses are already established and are earning well in the market. The materials used by manufacturers in manufacturing slippers depend on the types of slippers and designs made. They have pieces of equipment and types of machinery utilized in making slippers. As to the manpower resources, workers are earning below the minimum wage. Likewise, most of the capital used by the business owners were borrowed and loaned from banks and traders. The manufacturing sites are the extensions or side of their houses. Lastly, the manufacturers practice social responsibility since they observe production safety measures and are disposing of their wastes properly. The production aspect of slipper manufacturing includes several stages; from production to work schedule, safety measures, packaging to waste management. The slipper manufacturers of Gapan produce different types of slippers. Their pricing methods vary but depended much on the needs of the industry. The prime geographical markets of the manufactured slippers are in Gapan and other regions. Their promotional strategies are mixed. Net income is good enough to provide manufacturers and their families with the basic essentials in life. They were also able to invest in other businesses. Issues, problems and constraints regarding the different aspects of the slipper manufacturing business and the industry as well abound. One big issue is the entry of similar products coming from China which is directly competing with the local slipper manufacturers.

Based on the findings and conclusions of this study, the following suggestions are offered: The local government of the city and Department of Trade and Industry (DTI) should encourage and help the unregistered slipper manufactures to apply for legalization of their businesses through extending their assistance by means of Business Name Registration Caravan; The City's Footwear Multi-Purpose Cooperative should encourage slipper manufacturers to become its member and further explain to them the benefits they can get from this; The slipper manufacturers may consider increasing the rate of salary of their workers and provide them additional benefits/incentives; The local government and the slipper manufacturers must work closely to address the needs of the later especially in the form subsidy and loans; There should be workshop-trainings regarding VCA where the principles and application of the activities are applied in relation [31] to slipper industry's operation. The management strategic action plan created by the researchers of this study should be disseminated to address the concerns

of the slipper manufacturers and enhance the competitiveness of the industry. This plan can be utilized not only by Filipino businessmen but of every slipper entrepreneur in the world.

References

- [1] O.Jurevicius, "Value chain analysis", <https://strategicmanagementinsight.com/tools/value-chain-analysis.html>, 2013.
- [2] M. Porter, "Competitive advantage: Creating and sustaining superior performance", New York, Simon and Schuster, 1985
- [3] M.Oyson, "Internationalisation of value chain activities of small firms: The dynamic value chain approach", Conference paper: 8th Australian Graduate School of Entrepreneurship International Entrepreneurship Research Exchange At: Swinburne University of Technology, Melbourne, Victoria, Australia, 2011.
- [4] Pinoysilog, "The tsinelas industry of Gapan City", pinoysilog.blogspot.com, 2009.
- [5] A.Galang, "Giving Gapan's tsinelas industry a shot in the strap", 2010.
- [6] City Planning and Development Office of the Local Government Unit (LGU) of Gapan, "History and profile of tsinelas festival", Gapan City Hall, 2009.
- [7] Michael Porter's value chain: Unlock your company's competitive advantage (management and marketing book12) kindle edition, 50minutes.com, 2015.
- [8] G. Gereffi, K. Fernandez-Stark, "Global value chain analysis: A primer", Center on Globalization, Governance & Competitiveness (CGGC), 1–39, 2011.
- [9] P. Ahi, C. Searcy, "A comparative literature analysis of definitions for green and sustainable supply chain management", Journal of Cleaner Production, 52, 329–341, 2013.
- [10] B. Pathik and Md. M. Habib, "Book review: multi-tier supply chain visibility in the automotive industry" International Journal of Supply Chain Management, Vol. 2, No.4, pp.89-91, 2013.
- [11] O.Peterson, "What is value chain analysis? how to deliver value & gain a competitive advantage", <https://www.business2community.com/strategy/what-is-value-chain-analysis-how-to-deliver-value-gain-a-competitive-advantage-02271832>, 2019.
- [12] A.F. M. El-Sayed, M. W. Dickson, G. O. El-Naggar, "Value chain analysis of the aquaculture feed sector in Egypt", Aquaculture, 437, 92–101, 2015.
- [13] L. M. Vieira, M. D. de Barcellos, A. Hoppe, S. B. da Silva, "An analysis of value in an organic food supply chain", British Food Journal, 115, 1454–1472, 2013.
- [14] R. M. Rosales et al., "Value chain analysis and small-scale fisheries management", Marine Policy, 83, 11–21, 2017.

- [15] L. Milios et al., "Plastic recycling in the Nordics: A value chain market analysis", *Waste Management*, 76, 180–189 (2018).
- [16] M.M. Alam, "Mango Supply Chain and Value Chain Analysis from Farm to Market", *International Journal of Supply Chain Management*, Vol. 7, No.4, pp.7-12, 2018.
- [17] S.Nimsai and P. Ho, "Risk factor analysis of the value chain for sawn rubberwood timber exports to China", *International Journal of Supply Chain Management*, Vol. 8, No.6, pp.14-22, 2019.
- [18] B.Foster and M.Johansyah, "Image processing as value chain to enhance competitiveness in healthcare retail business", *International Journal of Supply Chain Management*, Vol. 8, No.6, pp.87-91, 2019.
- [19] G. S. Keenan, J. R. Franz, J. Dicharry, U. D. Croce, D. C. Kerrigan, "Lower limb joint kinetics in walking: The role of industry recommended footwear", *Gait and Posture*, 33, 350–355, 2011.
- [20] J. Pearce, and R. Robinson, "Strategic management: formulation, implementation and control", McGraw Hill, 2011.
- [21] A. J. Verdu, J. M. Gómez-Gras, J. Martínez-Mateo, "Value creation through production offshore-inshore strategies in a footwear industry cluster: A coevolutionary perspective", *International Business Review*, 21, 342–356, 2012.
- [22] A. Jimeno-Morenilla, J. L. Sánchez-Romero, F. Salas-Pérez, "Augmented and virtual reality techniques for footwear", *Computers in Industry*, 64, 1371–1382, 2013.
- [23] C. Martínez-Mora, F. Merino, "Offshoring in the Spanish footwear industry: A return journey?", *Journal of Purchasing and Supply Management*, 20, 225–237, 2014.
- [24] M. A. Sellitto, G. M. Pereira, M. Borchardt, R. I. Da Silva, C. V. Viegas, "A SCOR-based model for supply chain performance measurement: Application in the footwear industry", *International Journal of Production Research*, 53, 4917–4926, 2015.
- [25] A.D. Ardhala, E. B. Santoso, H. Sulistyarso, "Influence factors on the development of creative industry as tourism destination (Case study: Footwear village in Mojokerto City)", *Procedia - Social and Behavioral Sciences*, 227, 671–679, 2016.
- [26] R. M. Paiva, E. A. Marques, L. F. da Silva, C. A. António, F. Arán-Ais, "Adhesives in the footwear industry. Proceedings of the Institution of Mechanical Engineers", Part L: *Journal of Materials: Design and Applications*, 230, 357–374, 2016.
- [27] G. Subia, "Comprehensible technique in solving consecutive number problems in Algebra", *Journal of Applied Mathematics and Physics*, 6, 447-457, 2018.
- [28] R. Kumar, "Research methodology: A step-by step guide for beginners (4th ed.)", SAGE, CA, Thousand Oaks, 2014.
- [29] B. Zabala, M. Guterrez, and G.Subia, "Needs assessment of Barangay Tanawan, Dingalan, Aurora towards a proposed oplan development program", *International Journal of Environment, Agriculture and Biotechnology (IJEAB)*, Volume 3, Issue 6, 2018.
- [30] ISIXSIGMA.(n.d.).DemingCycle,PDCA.<https://www.isixsigma.com/dictionary/deming-cycle-pdca/>
- [31] G. Subia, Fortuitous: "A proposed activity-based book in mathematics of chance", *International Journal of Scientific & Technology Research*, Vol 9, Issue 3, 2020.