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A Business Model of Small and Medium-Sized Enterprises: A Case Study of the Textile and Clothing Industry in Thailand*

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Abstract

The purposes of this research were: 1) to analyze the confirmatory factors with the business operational model of entrepreneurs of small and medium enterprises (SMEs) in the textile and clothing industry, and 2) to verify the congruence of the model with the operational ways of the entrepreneurs of SMEs in the textile and clothing industry. The sample consisted of 500 small and medium enterprise entrepreneurs in the textile and clothing industry. This study was quantitative research and the instrument used to collect the data was a questionnaire. The data was analyzed using 1st order and 2nd order of confirmatory analysis (CFA). The findings of this research revealed that the model of SMEs in the textile and clothing industry was overall at a high level. Four main factors were used for the model of SMEs in the textile and clothing industry by their importance in descending order as follows: marketing mix (MM), collaboration network (CN), production inventory management (PIM), and creativity (CT). The results of verification of model congruence revealed the model of SMEs in the textile and clothing industry was fit and in accordance with the empirical data.

Keywords: Marketing Mix, Collaboration Network, Production and Inventory Management, Creativity

JEL Classification Code: M10, M11, M30, M31

1. Introduction

Thailand is a newly industrialized country and Thailand has a mixed economic system. Thailand's GDP was 16.316 trillion baht (US\$505 billion) in 2018 which is the 8th largest economy in Asia as per the World Bank. As of 2018, Thailand has an average inflation rate of 1.06% and

an account surplus of 7.5% of the country's GDP. It was considered the second-largest economy in Southeast Asia after Indonesia (Khunnawatbandit, 2018). The industrial and service sectors are the main contributing sectors in the Thai gross domestic product, with the former accounting for 39.2 percent of GDP. Thailand's agricultural sector produces 8.4 percent of GDP—lower than the trade and logistics and communication sectors, which account for 13.4 percent and 9.8 percent of GDP respectively, and the textile and clothing account for 3.4 percent of GDP which was rather a small percentage. The textile and clothing industry of Thailand has been facing a lot of difficulties or obstacles: implementation of outdated manufacturing process technology, high cost of wages, and difficulties of accessing the sources of investment funds. The issues cause such a high cost of production that the entrepreneurs cannot compete and win against their foreign rivals. Therefore, the statistical data of the customs department surveyed by the Bank of Thailand during 2008–2018 revealed that the export value of the textile and clothing industry was constantly decreasing (Thai Department of Customs, 2018) as shown in Figure 1 below.

Figure 1 shows that the textile and clothing industry is one of the industries of Thailand with a yearly income of 100,000 million baht. The statistical data of the year 2008 revealed that

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the yearly income of textile and clothing products was 116,455 million baht. However, the yearly income in the year 2018 was 76,523 million baht which sharply dropped by 34.29 percent when compared with the year 2008. Therefore, the most obvious problem was that the overall export value of textile and clothing products decreased by 3.43 percent yearly. When studying in detail each industry segment - upstream industry, middle stream industry, and downstream industry- it was found

that the downstream industry faced the most serious problem because at this section the ready-made clothes or garment factories were gradually shut down. The data during January-March 2020 revealed that 14 textile and clothing factories were closed down and out of the 14, 7 were factories of ready-to-wear clothes. According to the statistical data of workers in the industry of ready-made clothes during 2009–2017, the number of workers constantly decreased as shown in Figure 2.

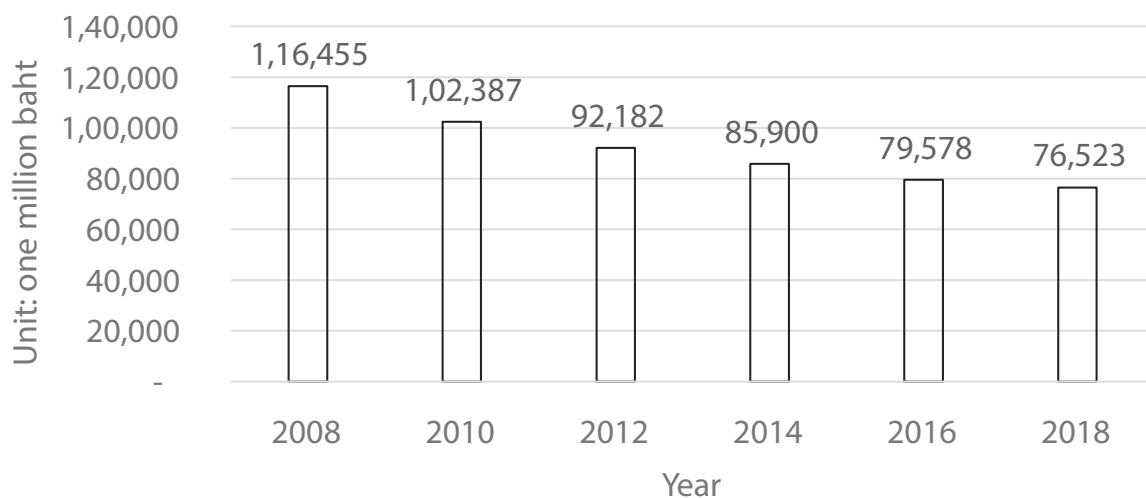


Figure 1: The Export Value of Clothing of Thailand During 2008–2018

Source: Thai Department of Customs (n.d.)

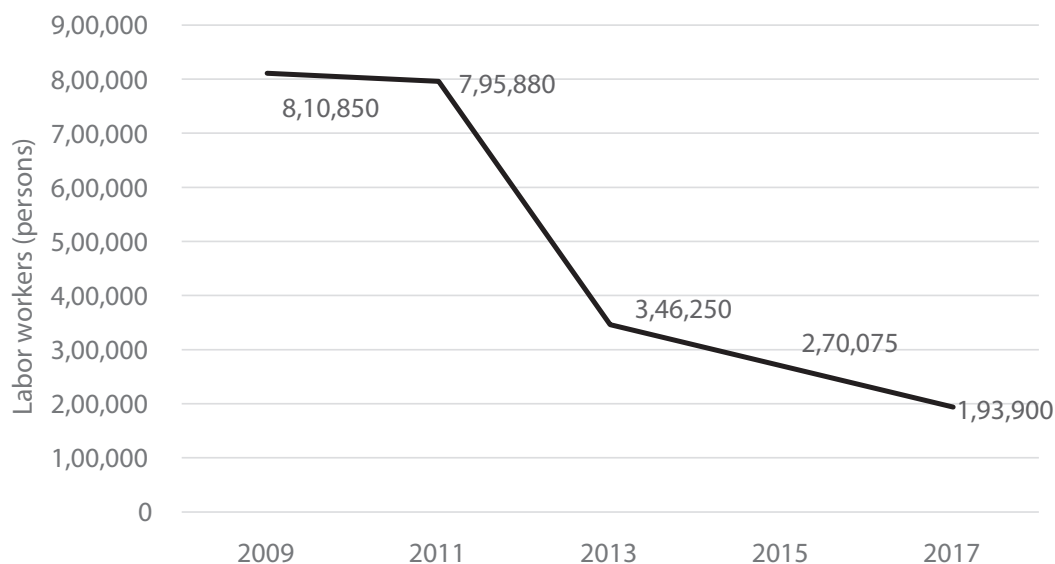


Figure 2: The Number of Workers in the Ready-Made Garment Industry During 2009–2017

Source: Thailand Textile Institute (2020)

Figure 2 shows statistical data, for instance, in 2009 there were 810,850 workers in the industry of ready-made clothes. However, in 2015 the number of workforces decreased almost three times - only 270,075 workers, and in 2017 only 193,900 workers remaining. This indicates that the ready-made garment industry has been severely affected and a number of the garment factories were gradually closed down.

In the current situation, with the overall image of the textile and the clothing industry of Thailand, it was found that the export value of textile and clothing products in March 2020 was 523.6 million US dollars which declined by 14.4 percent when compared with the same month of the previous year. Additionally, the export value of the textile group was 339.5 million US dollars which declined by 14.6 percent, and the export value of the clothing group was 184.1 million US dollars which declined by 14.0 percent. Meanwhile, the overall import value of the industry was 414.3 million US dollars which dropped by 7.2%. Additionally, the import value of the textile group was 290.4 million US dollars which declined by 7.8 percent, and the import value of the clothing group was 123.9 million US dollars which declined by 5.6 percent. Therefore, the overall trade surplus was 109.3 million US dollars (Thailand Textile Institute, 2020).

The situation indicates that the entrepreneurs of the textile and clothing industry need to adapt themselves and improve the ways of running the business to meet the present situations because it directly affects the SMEs who are not very competitive. Therefore, the business operators should adapt themselves focusing on the quality and added value of textile and clothing products for Thai and foreign customers. Moreover, the Department of International Trade Promotion and Thailand Textile Institute applies the concept of Circular Economy and lifestyle of Thai people to revive the export and distribution of textile and clothing products (Thailand Textile Institute, 2020).

The issue mentioned above motivated the researcher to study the ways how the entrepreneurs of the SMEs run their business in the textile and clothing industry focusing on the importance of marketing mix, collaboration network, production and inventory management, creativity, as well as studying the key factors affecting the success of SMEs in the textile and clothing industry and the guidelines for business operations to make the business successful. The research results could be implemented for business operations to match the strategies for the success of the textile and clothing industry of Thailand.

The objectives of this research were 1) to analyze the confirmatory factors with the model of SMEs in the textile and clothing industry, and 2) to verify the congruence of the model with the operational ways of the entrepreneurs of SMEs in the textile and the clothing industry.

2. Literature Review

2.1. Cooperation Network or Network Collaboration

The cooperation network or network collaboration can reduce the costs to efficiently achieve the operational goals (Im, 2015), and support the organizations to succeed through the superior competency of management utilizing the technical and various skills to overcome the market competition (Lo, 2012). Collaboration is a powerful business tool for companies, regardless of their size or industry. It typically refers to organizations working together to address problems and achieve goals that seem to be out of reach when working alone. By combining the effort and expertise of different organizations, all partners in the network are better able to innovate and grow and increase their competitiveness on many levels (Wutipornsoy et al., 2017). Collaboration can take many forms and you can build a network in a way that allows companies to complement each other without risking their market share or intellectual property. Business networks may provide member companies with access to resources that would otherwise be beyond the scope of a single business (Boeringer, 2015).

2.2. Marketing Mix

Today the business competition is highly increasing because of various factors involved, such as prices, quality of products and services, business rivals, time, and knowledge (Hagedoorn & Cloodt, 2013), and consequently, the organizations or businesses need to adapt themselves and enhance their competitiveness all the time. The changing customer behavior leads business people and marketers to keep trying to be customer-oriented (Firman et al., 2020). Products need to meet the needs of each customer target group, so the production shifts from mass production to custom-made. The organization can use direct marketing strategy benefits for continuously building a good relationship with customers by listening directly to comments or suggestions from customers (The Office of SMEs Promotion, 2018). The organizations with competencies to survive and succeed, in the long run, are those who have the marketing competencies (Vazquez et al., 2001). The key factor of business success is the utilization of marketing competencies to support the business operations for sustainable advantages (Durst et al., 2015).

2.3. Creativity

The concept of innovation is related to the creation and development of new things based on technology innovation (Witell et al., 2015). Innovation is crucial for small business

performance. Innovation can help small businesses grow by improving productivity and efficiency. The ability to innovate will also help small businesses to remain competitive and respond to changes (Sumiati, 2020). Wang (2014) stated that innovation based on creativity is the primary cause of business sustainability. Sulyanto and Rahab (2012) claimed that innovation is an important source of competitive advantage if it is rare, valuable, and inimitable.

2.4. Production and Inventory Management

The supply of sufficient raw materials can be the main factor to consistently manufacture products and make the customers satisfied (Boeringer, 2015). The main objective of inventory management is to maintain the required inventory to run the production and sales process smoothly. (Aqeel et al., 2011). The main objective of production management is to produce goods and services of the right quality, right quantity, at the right time, and minimum cost. It also tries to improve efficiency. An efficient organization can face competition effectively. Production management ensures full or optimum utilization of available production capacity (Radzi et al., 2017). Moreover, Lestari et al. (2020) claimed that businesses must have the appropriate technology to cut variable costs and produce products that are following customer demand.

2.5. Conceptual Framework

The conceptual framework of the study on the operational ways of the entrepreneurs in the textile and clothing industry is shown in Figure 3.

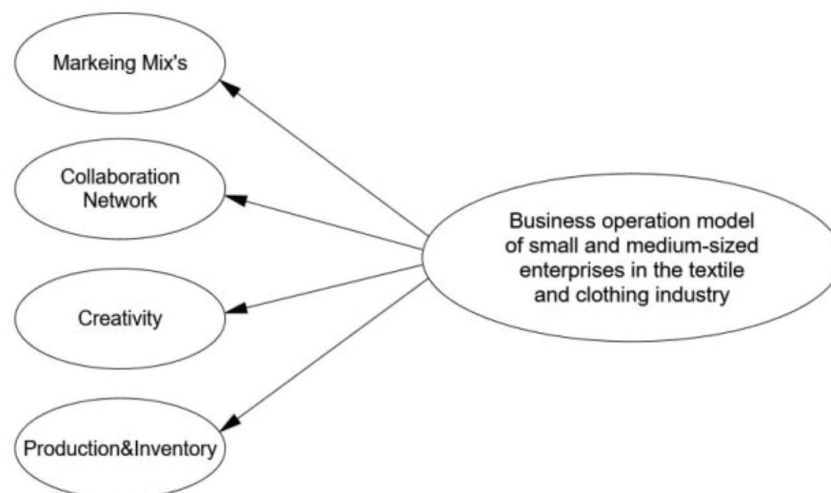


Figure 3: Conceptual Framework

3. Methodology

This research was quantitative research with the 1st order confirmatory factor analysis (CFA) and the 2nd order confirmatory factor analysis to verify the business operational model of entrepreneurs of SMEs in the textile and clothing industry to meet the empirical information. The research methodology was as follows.

3.1. Questionnaire

The instrument in this research consisted of a questionnaire used to evaluate the important factors of the business operating models of entrepreneurs of SMEs in the textile and clothing industry including 1) marketing mix, 2) collaboration network, 3) creativity, and 4) production and inventory management. The questionnaire was later distributed to five experts to evaluate and determine the quality of the questionnaire. The index of item-objective congruence developed by Rovinelli and Hambleton (1977) is a procedure used in test development for evaluating content validity at the item development stage. Using IOC, the questionnaire's validity was checked. It was found that the IOC was 0.63–0.97. After the questionnaire was corrected according to the suggestions of the experts, it was distributed to try out with the group of 30 samples related to the study's target population. The results were collected to obtain the Cronbach's alpha coefficient. The reliability of the questionnaire was 0.973 (>0.80) showing that the questionnaire was practicable to collect data of the target population.

3.2. Population and Sample

The participants of this study were 163,827 enterprises in the textile and clothing industry (The Office of SMEs Promotion, 2019). The appropriate population of 500 enterprises was determined for the analysis based on Comrey and Lee (1992). The questionnaire was distributed to the administrators or representatives who were selected as questionnaire respondents of each enterprise.

3.3. Data Analysis

The statistics used to analyze the data was percentage, mean, and standard deviation, and the confirmatory factor analysis (CFA). The goodness-of-fit models of the 1st order CFA and 2nd order CFA were performed by considering the criteria of the goodness-of-fit model with the empirical information as shown in Table 1.

4. Results

4.1. Descriptive Statistics

Most participants were the entrepreneurs of the small enterprises (51.60%), limited partnerships (35%), and businesses which were operating for over 10 years (50.40%). Most products were produced by the entrepreneurs to sell within the country and made to order (81.60%), and the products were not branded (54.80%). Financial sources used to support businesses were mostly banks and financial institutes (56%). The cost of raw materials was 33.40% and the main sources of the raw materials were derived from domestic purchase (39.80%). The collaboration of the entrepreneurs with the Department of Business Development of the government sector was 40.60%. The market problems related to dissatisfaction with the designs or products was 48.80%.

The results of analyzing the importance levels of the business model were shown in Table 2 as follows.

Table 1: Criteria of the Goodness-of-fit Model with Empirical Information (Vanichabuncha, 2014)

| Statistical Measure | Criteria |
|--|----------|
| 1) CMIN/DF (Relative Chi-square) | ≤3.00 |
| 2) GFI (Good of Fit Index) | >0.90 |
| 3) AGFI (Adjusted Goodness of Fit Index) | >0.90 |
| 4) TLI (Tucker Lewis Index) | >0.90 |
| 5) NFI (Normed Fit Index) | >0.90 |
| 6) RMSEA (Root Mean Square Error of Approximation) | ≤0.05 |

Table 2 shows that the overall importance level of the business operational model of the entrepreneurs of SMEs in the textile and clothing industry was high ($\bar{x} = 4.03$). The importance level of each variable ranging from high to low consisted of the marketing mix (MK) ($= 4.06$), followed by collaboration network (CN) ($\bar{x} = 4.02$), production and inventory management (PIM) ($\bar{x} = 3.98$), and creativity (C) ($\bar{x} = 3.97$).

4.2. The 1st Order CFA

The results of analyzing the 1st order CFA of the business operational model of the entrepreneurs of the SMEs in the textile and clothing industry.

The researcher analyzed the 1st order CFA to evaluate the goodness-of-fit model with the empirical information and observed measurable parameters in each variable as shown in Figure 4 below.

The results of analyzing the goodness-of-fit model of the 1st order CFA after the model improved in Figure 2 found that the model was fit with an IOC of CMIN/DF of 1.682, GFI of 0.989, AGFI of 0.971, CFI of 0.991, TLI of 0.982, NFI of 0.978, and RMSEA of 0.037.

4.3. The 2nd Order CFA

The results of analyzing the 2nd order CFA of the business operational model of the entrepreneurs of small and medium-sized enterprises in the textile and clothing industry are shown in Figure 5.

The researcher analyzed the 2nd order CFA to evaluate the goodness-of-fit model with the empirical information and importance levels of each component is shown in Figure 5.

The results of the analysis of the goodness-of-fit model of the 2nd order CFA after the model was improved is shown in Figure 3 and it showed that the model was fit with the empirical information with an IOC of CMIN/DF of 1.788,

Table 2: Mean of the Importance Levels of the Business Operational Model of the Entrepreneurs of Small and Medium-Sized Enterprises in the Textile and Clothing Industry

| Components | \bar{x} | S.D. | Importance Levels |
|--------------------------------------|-----------|------|-------------------|
| 1) Marketing Mix | 4.06 | 0.41 | High |
| 2) Collaboration | 4.02 | 0.40 | High |
| 3) Creativity | 3.97 | 0.49 | High |
| 4) Production & Inventory Management | 3.98 | 0.45 | High |
| Overall | 4.03 | 0.37 | High |

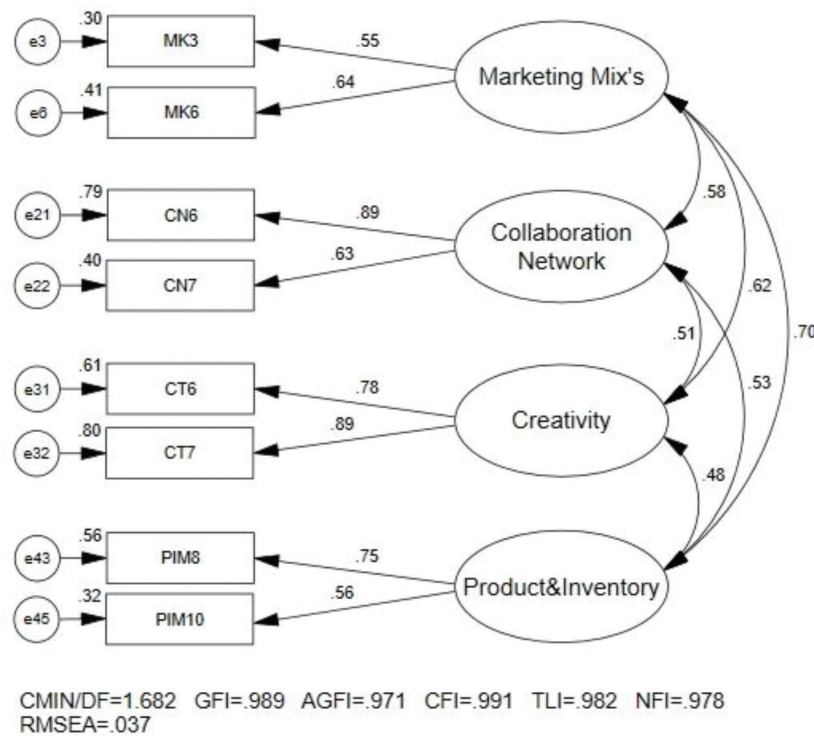


Figure 4: The 1st Order CFA of the Business Operational Model of Small and Medium-Sized Enterprises in the Textile and Clothing Industry (After The Model Improvement)

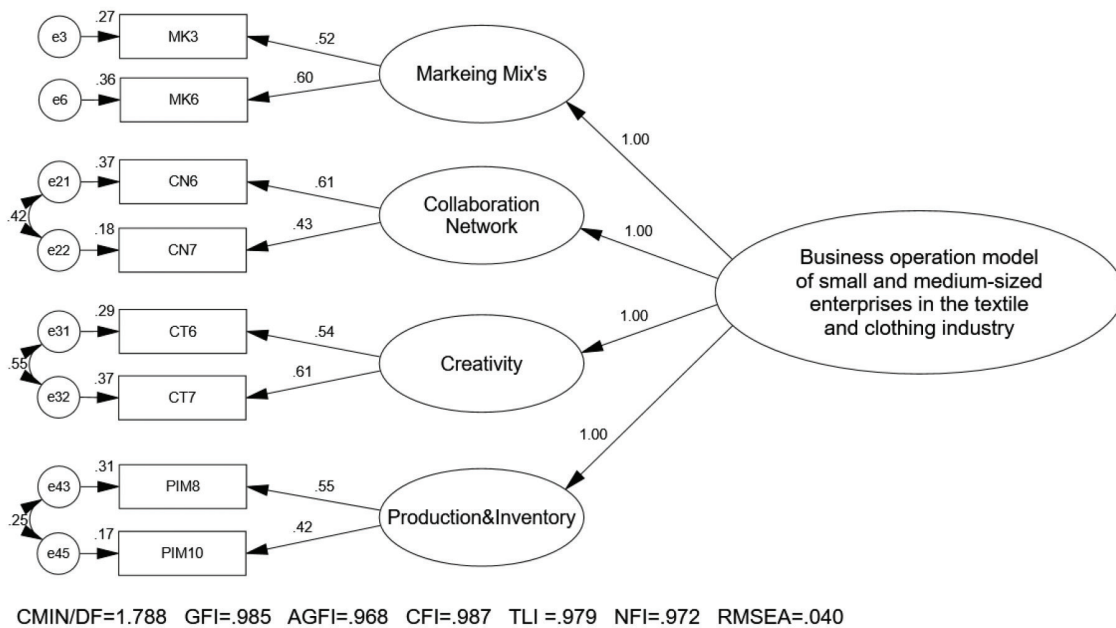


Figure 5: The Model of the 2nd Order CFA of the Business Operational Model of the Entrepreneurs of the Small and Medium-Sized Enterprises in the Textile and Clothing Industry (After the Model Improvement)

GFI of 0.985, AGFI of 0.968, CFI of 0.987, TLI of 0.979, NFI of 0.972, and RMSEA of 0.040.

The results of data analysis found that the business operational model of the entrepreneurs of the SMEs in the textile and clothing industry consisted of four variables including the marketing mix, the collaboration network, creativity, and production and inventory management. The weight of each component was equal to 1.00.

For the marketing mix variable, it was measured through two factors, (i) consumer surveys for product improvement to meet consumers' demands (MK3) with a weight of 0.52 because consumers' demands often change according to the current fashion and trends. Therefore, if the supply did not meet the demand, the products may not be sold as per the required target. (ii) Appropriate pricing of the product (MK6) with a weight of 0.60. The competition was quite high. Therefore, the price strategy was one of the factors used as a competitive strategy, and setting the right prices of products means the determination of the product value.

For the collaboration network variable, it was measured through two factors, (i) the consumption of the resource among the members for cost savings (CN6) with a weight of 0.61. A group of businesses with a collaboration network could share the resources and workforce to save the production costs (ii) the exchange of knowledge, skills, and techniques for the improvement of the product standard and quality (CN7) with a weight of 0.43. Apart from sharing the resources, a group of businesses with a collaboration network could also share new knowledge, skills, techniques, and technology to develop the quality of their products.

For the creativity variable, it was measured through two factors, (i) the implementation of technology for modern product design to meet consumers' demands (C6) with a weight of 0.54. When modern design products are created using advanced technology, it can attract customers and enhance the sales figures. (ii) Product creativity combined with urbanism, architecture, and multimedia (C7) with a weight of 0.61. Each community applied its cultures and urbanism to design unique products so that it could enhance the product value and prices.

For the production and inventory management variable, it was measured by two factors (ii) the high emphasis on the manufacturing plan based on the market demands for cost savings (PIM2) with a weight of 0.55. Proper production plan affects the business management in all ways, for example, the distribution of products related to customers' demands could be properly managed and this also prevented the products from becoming obsolete (ii) the proper inventory management for products from becoming obsolete and defective (PIM7) with a weight of 0.42.

The results of the study revealed that the above factors (variable mentioned above) will help the entrepreneurs of

SMEs implement the operational model with their business and also gain sustainable business growth.

5. Discussion

The results of the analysis of the 2nd order CFA found that the major component with the high weight in the business operational model of SMEs in the textile and clothing industry was the marketing mix. (The Office of SMEs Promotion, 2018). The entrepreneurs should develop the quality of products to meet the customers' demands, and also provide sufficient raw materials to consistently produce the products and satisfy the customers (Boeringer, 2015). In a time of recession, it is necessary to maintain and further strengthen relations between suppliers, their immediate customers, and customers of these customers up to the end customers. The means to do this is partnership and flexibility in serving customers including organizing special events for customers. Lostakova and Pecinova (2014) defined each aspect of the partnership and flexibility in serving target markets and their role in enhancing the coherence and development of relations between manufacturers and customers in the B2B market and summarized the results focused on mapping benefits and actual level of the individual aspects of the partnership and flexibility for developing and strengthening relationships with customers in the customer network. This is also in accordance with the study of Prongpromarat (2016) who studied factors affecting the purchase of premium brand clothing in the Bangkok Metropolitan area. Results revealed that product and price, location, and promotion are the top 3 factors that have an impact on the purchase decision. On the contrary, online channels and product image do not influence the purchase decision of premium brand clothing. It stated that the market mix variable is the key indicator of decision to purchase, enhancing customers' satisfaction, and meeting the customers' demands. The market trends depend on the consumers' lifestyles and behaviors and the number of products to be manufactured changes according the customers' demands. Through the survey of customers' demands and changes in their needs and preferences, quality products can be manufactured that satisfy consumers' changing tastes and preferences.

If the quality of products meets the customers' demands, it will enhance the relationship between the entrepreneurs and the customers (Callaghan, 2014) and also continuously improve teamwork and operational procedure to get the product quality according to the customers' demands. This is in accordance with the study of Trakoolchokumnay (2015) who stated that the consumers' demands influence the designs of products because the consumers get easily bored and require new things. Therefore, innovation and creativity

meet the consumers' demands and help the entrepreneurs manufacture fashionable and beautiful clothes, reduce manufacturing costs and consumption of limited resources and meet the consumers' maximum satisfaction (Chesbrough, 2003). The quality of the product can be improved with collaboration management such as sharing knowledge, skills, and techniques including manufacturing technology and innovation (Dundon, 2002; Deng, 2016). This is also in accordance with the study of Roopsing and Suk-Kavessako (2020) who revealed that garment industry management for sustainability consisted of marketing management, innovation management, resource management, and manufacturing management. Each guideline had the highest mean score as follow: marketing management, i.e. customer needs analysis survey was used as supplementary data for product design; innovation management, i.e. information technology, both hardware, and software, was brought to design products; resource management, i.e. provision of modern machinery being environmentally friendly for garment production; and manufacturing management, i.e. production quality was controlled to ensure that it meets international standards. Hypothesis test result indicated there was no statistically significant difference ($p > 0.05$) among small, medium, and large size businesses giving importance to guidelines to garment industry management for sustainability.

When innovation and creativity are implemented in manufacturing products, appropriate prices of the products can be assigned to get profits. This is in accordance with the study of Hugo et al. (2017) who addressed two major issues. The first dealt with process efficiency and the reliability and resilience of technologies for small-scale processing to be competitive. The second dealt with localization of processing and the advantages and disadvantages of technologies for small-scale processing. Novel technologies, especially those based on electro-thermo-dynamic principles, may emerge with characteristics that appear more beneficial for applications at small-scale, and so may well contribute to the competitiveness of local producers of food and bio-based products valorizing renewable resources in an integrated manner for a variety of business sectors. However, these novel technologies should go hand in hand with end-to-end innovation of the local food and biobased product system to be competitive with international-scale enterprises. Anurattanapon et al. (2019) studied the work process in the warehouse to improve the performance by re-arranging the stocks to make it easier than the present way. ABC analysis theory and compatible warehousing were used for reducing working times and warehouse costs. The research procedure improved the stock placement. The picking time of old position placement was compared with that of the re-arrange position placement. The frequency of purchasing, stocks weight of re-arranged position placement were applied to the ABC analysis theory and the efficiency increase by

warehouse management was optimized for faster working and lower cost. The samples were picked in purchasing order to keep time data for finding the best time to optimize their work. It was found that cost reduced by 0.76 baht per piece, working time reduced by 14.48%, and the efficiency increased by 13.24%.

6. Conclusion and Recommendation

Most entrepreneurs are the entrepreneurs of small enterprises, limited partnerships, and businesses operated over 10 years. The textile and clothing products are produced by the entrepreneurs to sell within the country and made to order, and the products are not branded. Most financial sources used to support businesses are banks and financial institutes. And the entrepreneurs collaborate with the Department of Business Development of the government sector during product exhibition or market fair events. The dissatisfaction with the designs or products is the major market problem.

The business operational model of the entrepreneurs of SMEs in the textile and clothing industry consists of major and sub-variables as follows. The marketing mix consists of the following sub-variables: 1) consumer surveys for product improvement to meet the consumers' demands and 2) appropriate pricing of the product. The collaboration network consists of the following sub-variables: 1) the consumption of the resource among the members for the cost savings and the exchange of knowledge, skills, and techniques for the improvement of the product standard and quality. Creativity consists of the following sub-variables: 1) the implementation of technology for modern product design to meet the consumers' demands and 2) the product creativity combined with urbanism, architecture, and multimedia. The production and inventory management consists of the following sub-variables: 1) the high emphasis on the manufacturing plan based on the market demands for cost savings and 2) the proper inventory management for prevention of obsolete and defective products

Recommendations for further studies are as follows: 1) In the marketing field, the entrepreneur should have their own identity, not copy the production of others because the prices would be consequently reduced. This will cause loss to all people involved and the entrepreneur should manufacture products based on the customers' demands by collecting data earlier to reduce oversupply, 2) the production planning and inventory management must be considered in terms of increasing prices of raw materials. It is necessary to have the sale prospect of the products for the production plans and prevent products from being obsolete. If entrepreneurs can apply the collaboration network for the production planning and management of all aspects, the business operations can be run smoothly and sustainably and

3) the relevant government organizations should support in many ways, such as providing knowledge value-added products by introducing product designers to the entrepreneurs and creating collaboration network among the entrepreneurs throughout the supply chain to promote the production of eco-friendly items. Furthermore, a trade fair should be held occasionally to provide the entrepreneurs a chance to meet their customers and build a good relationship with their prospective customers.

References

- Anurattanapon, C., Klomjit P., Chuenyindee T., & Songsuktawan, P. (2019). Efficiency improvement of drinking warehouse case study of sample drinking company. *Thai Industrial Engineering Network Journal*, 5(1), 49–58. <https://ph02.tci-thaijo.org/index.php/ienj/article/view/183463>
- Aqeel, A. M. B., Awan, A. N., & Riaz, A. (2011). Determinants of business success: An exploratory study. *International Journal of Human Resource Studies*, 1(1), 98–110. <https://doi.org/10.5296/ijhrs.v1i1.919>
- Boeringer, J. M. (2015). *Evaluation of the project management maturity model of small to medium-sized businesses: A quantitative study* [Unpublished doctoral dissertation]. The University of Capella, Minnesota.
- Callaghan, T. J. (2014). *Leadership competencies needed to manage cross-functional work teams: A Delphi Study* [Unpublished doctoral dissertation]. The University of Phoenix, Phoenix, Arizona.
- Chesbrough, H. W. (2003). The era of open innovation. *MIT Sloan Management Review*, 44(3), 35–41.
- Comrey, A. L., & Lee, H. B. (1992). *The first course in factor analysis* (2nd ed.). Hillsdale, NJ: Lawrence Erlbaum.
- Deng, Y. (2016). *Investigating digital divide through value co-creation: Evidence from agricultural communities in China* [Unpublished doctoral dissertation]. The National University of Singapore, Singapore.
- Dundon, E. (2002). *The seeds of innovation: Cultivating the synergy that fosters new ideas*. New York: AMACOM.
- Durst, S., Mention, A. L., & Poutanen, P. (2015). Service innovation and its impact: What do we know about? *Investigaciones Europeas de Direction Economia de la Empresa*, 21, 65–72. <https://doi.org/10.1016/j.iedee.2014.07.003>
- Firman, A., Putra, A. H. P. K., Mustapa, Z., Il Yas, G. B., & Karim, K. (2020). Re-conceptualization of the business model for marketing nowadays: Theory and implications. *The Journal of Asian Finance, Economics, and Business*, 7(7), 279–291. <https://doi.org/10.13106/jafeb.2020.vol7.no7.279>
- Hagedoorn, J., & Cloudt, M. (2013). Measuring innovative performance: Is there an advantage in using multiple indicators? *Research Policy*, 32, 1365–1379. <https://core.ac.uk/download/pdf/6787231.pdf>
- Hugo, D. V., Mikolajczak, M., Salmon, J. M., & Abecassis, J. (2017). Small-scale food process engineering: Challenges and perspectives. *Innovative Food Science and Emerging Technologies*, 1(11), 96–112. <https://doi.org/10.1016/j.ifset.2017.09.009>
- Im, E. (2015). *The effects of interlocal collaboration on local economic performance: Investigation of Korean cases* [Unpublished doctoral dissertation]. The University of Walden, Minneapolis, Minnesota.
- Khunnawatbandit, A. (2018). *Legal problems on national strategies preparation act* [Unpublished master thesis]. Thammasat University, Bangkok, Thailand.
- Lestari, S. D., Leon, F. M., Widyastuti, S., Brabo, N. A., & Putra, A. H. P. K. (2020). Antecedents and consequences of innovation and business strategy on performance and competitive advantage of SMEs. *The Journal of Asian Finance, Economics, and Business*, 7(6), 365–378. <https://doi.org/10.13106/jafeb.2020.vol7.no6.365>
- Lo, Y. H. (2012). Managerial capabilities, organizational culture and organizational performance: The resource-based perspective in the Chinese lodging industry. *The Journal of International Management Studies*, 7(1), 151–157. <http://www.jimsjournal.org/16%20Yin-Hsi%20Lo-2.pdf>
- Lostakova, H., & Pecinova, Z. (2014). The role of partnership and flexibility in strengthening customer relationships in the B2B market. *Journal of Social and Behavioral Sciences*, 25(150), 563–575. <https://doi.org/10.1016/j.sbspro.2014.09.076>
- Prongpromarat, P. (2016). *Factors affecting the purchase of premium brand clothing in the Bangkok Metropolitan Area* [Unpublished master's thesis]. Thammasat University, Bangkok, Thailand.
- Radzi, K. M., Nor, M. N. M., & Ali, S. M. (2017). The impact of internal factors on small business success: A case of small enterprises under the Felda scheme. *Asian Academy of Management Journal*, 22(1), 27–55. <https://doi.org/10.21315/aamj2017.22.1.2>
- Roopsing, T., & Suk-Kavessako, T. (2020). The structural equation model of guidelines for garment industry management for sustainability. *Academy of Strategic Management Journal*, 19(6), 14–29. <https://www.abacademies.org/articles/The-structural-equation-model-of-guidelines-for-garment-industry-management-for-sustainability-1939-6104-19-6-621.pdf>
- Rovinelli, R. J., & Hambleton, R. K. (1977). On the use of content specialists in the assessment of criterion-referenced test item validity. *Tijdschrift Voor Onderwijsresearch*, 2(2), 49–60. <https://files.eric.ed.gov/fulltext/ED121845.pdf>
- Suliyanto, E., & Rahab, E. (2012). The role of market orientation and learning orientation in improving innovativeness and performance of small and medium enterprises. *Asian Social Science*, 8(1), 134–145. <https://doi.org/10.5539/ass.v8n1p134>
- Sumiati, S. (2020). Improving small business performance: The role of entrepreneurial intensity and innovation. *The Journal of Asian Finance, Economics, and Business*, 7(10), 211–218. <https://doi.org/10.13106/jafeb.2020.vol7.n10.211>

- Thai Customs Department. (n.d.). *Exports value of textile and clothing of Thailand between 2008 and 2018, 2019*. http://www.customs.go.th/list_strc_simple_neted.php?ini_content=individual_160503_03_160922_01&lang=en&left_menu=menu_individual_submenu_01_160421_02
- Thailand Textile Institute. (2018). *Industrial factory of textile and clothing (accumulated) in January-March 2018*. <https://www.thaitextile.org/th/insign/detail.251.1.0.html>
- Thailand Textile Institute. (2020). *Trends of labors in the garment industry between 2009 and 2019*. <https://www.thaitextile.org/th/home/>
- The Office of SMEs Promotion. (2018). *Market opportunity of agricultural products in the world market*. https://sme.go.th/upload/mod_download/download-20181005092620.pdf
- The Office of SMEs Promotion. (2018). *How are agricultural industry and processing connecting for sustainable economics?* https://www.sme.go.th/upload/mod_download/download-20181005092433.pdf
- The Office of SMEs Promotion. (2019). *Entrepreneur of textile and clothing industry*. <https://www.sme.go.th/en/>
- Trakoolchokumnuay, K. (2015). Innovation of rice production, rice processing, and rice trade in Thailand. *Journal of Social Development*, 17(2), 51–68. <https://core.ac.uk/download/pdf/5105329.pdf>
- Vanichabuncha, K. (2014). *The SEM analysis using AMOS* (2nd ed.). Bangkok: Lada Limited Partnership.
- Vazquez, R., Santos, M. L., & Alvarez, L. I. (2011). Market orientation, innovation, and competitive strategies in industrial firms. *Journal of Strategic Marketing*, 6(44), 69–90. <https://doi.org/10.1080/09652540123013>
- Wutipornsopon, U., Dhammasuddho, P. A., Chinatuttiyo, P. K., Payago, P. P. S., & Suppa, P. (2017). *Policy and capability development of local administration organization for support elder service in Sampran district, Nakornpathom province* [Unpublished master's thesis]. Maha Chulalongkorn Rajavidyalaya University, Nakornpathom, Thailand.
- Wang, C. H. (2014). Does service innovation matter in a high-tech industry? *Journal of Technology Management & Innovation*, 9(2), 42–55. <https://doi.org/10.4067/S0718-27242014000200004>
- Witell, L., Snyder, H., Gustafsson, A., Fombelle, P., & Kristensson, P. (2015). Defining service innovation: A review synthesis. *Journal of Business Research*, 69(8), 2863–2872. <https://doi.org/10.1016/j.jbusres.2015.12.055>