Causal Analysis Models Influence the Business Environment of the Agricultural Industry in Thailand

[1] Pattarapon Chummee

[1] College of Innovative Management, Valaya Alongkorn Rajabhat University

[1] atta9899@hotmail.com

Abstract

The crisis of the covid-19 virus epidemic severely affects the economy many industrial sectors had to close. The situation of the products agricultural industry decreased by 3.9 percent. This research aims (1) to research factor analysis of the business environment affecting export planning, and (2) to analyze the causal effect between the components business environment that are related to the export planning. The target population for this study includes entrepreneurs in the agricultural industry in Thailand using a Purposive random sampling of 145 cases. The instrument used for data collection was a questionnaire developed from the literature review. Statistical analyzes used confirmatory factor analysis and causal analysis with the structural equation modelling techniques.

Confirmatory factor analysis results found that the domestic market environment includes the domestic market condition, process barrier to export, and government export assistance. Moreover, the foreign market environment consists of foreign markets condition and foreign government regulations. These results are consistent with the exploratory factor analysis.

The results of the assessment of the causal analysis fit index revealed that the conceptual framework was consistent with the empirical data. The fit index showed that $x^2 = 788.88$, df. $= 431$, $x^2/df. = 2.00$, GFI $= 0.95$, NFI $= 0.89$, and RMSEA $= 0.056$

Recommendation and new finding: pay attention to hygiene, Cleanliness, and safety in production to build consumer confidence, including packaging that must be free from germs. Moreover, employees and operators must be inspected for an adverse germ-free condition or obtaining a safe vaccination. New findings revealed that the situation of foreign markets, such as political, social, and legal status in foreign countries, does not affect export planning. Due to the outbreak of the Covid-19 epidemic, this makes it impossible to perform different or reduced export operations. As a result, the situation in the international market does not affect export planning.

Keywords— Business environment, agricultural industry, causal analysis

I. INTRODUCTION

The crisis of the covid-19 virus epidemic severely affects the economy. Many industrial sectors had to close their business. Because the business is in bankruptcy and the lack of financial liquidity increases the number of unemployed people. As well as the situation of products in the agricultural industry. The study of [2] found that the products in this category decreased by 3.9 percent due to drought. Such delaying orders resulted in reduced products in the fishery sector decreased by 4.3%, or products in the fruits and vegetable group decreased by 10.3%.

In terms of consumer demand for products in this group [2][7], expected that the production index of the food industry Overall in February 2021, a slight contraction from the same period last year because there are still many measures to prevent the spread of the Covid-19 virus, such as setting the closing time of restaurants no later than 9.00 pm., banning alcohol in restaurants and entertainment venues, et cetera.

The main reason Thai food products can stand up to any crisis is that Thai food is famous. Good quality and taste It is also trusted in safety. Certified by international agencies, as a result, has advantages in exporting over many countries. More people stay at home, especially in the Covid-19 crisis, where consumers worldwide have a new normal behavior. Customers cook more, but they just ordered from a partner country. Accelerate the import of food products to support short-term quarantine. [1]

Thai food export situation in 2020, according to the report of [6], was found that Thai food exports valued at 980,703 million baht, shrank by 4.1 percent, resulting in a decrease in the share of the world market to 2.32 percent from a hundred. 2.49 each, making Thailand the 13th largest food exporter in the world from 11th place last year. Bangkok Bank (2021) study found that Thai deliveries in the food industry valued at 1.08-1.10 trillion baht, an increase of 10.2-12.2% compared to a year ago that contracted from the impact of COVID-19. The prices of some agricultural commodities tend to increase especially renewable energy crops such as soybean, oil palm, corn, sugarcane, cassava, et cetera.

As demand for renewable energy and the appreciation of various Asian currencies increase, more agricultural products will be exported, mainly to China. These will have a positive effect in terms of incentives to increase the productivity of Thai farmers. Recently, the production of raw materials in the agricultural sector of Thailand gradually recovered in the second half, causing prices and farmer incomes to increase at an accelerated rate. These have a positive effect on raw materials and support domestic consumption.

For the exporting company is generally exporting will increase sales for the company. Moreover, the results have been found that exporting gives the company an advantage over its competitors. Help maintain financial status, increase investment and help to upgrade the technology in

production, expand the market base, and developing new markets. Therefore, the high volume of exports and the high growth in export sales contribute to the long-term profitability of the enterprise and reduce the unit cost to the exporting company.

In addition, the researcher hopes that this research will be able to find answers on the methods for the analysis and assessment of business environment factors of the agricultural industry effectively as well as pointing out various factors that need to emphasized in export planning and operations, including suggestions and new findings that will benefit future export decisions.

II. RESEARCH OBJECTIVES

1. To analyze the corroborating elements of the business environment affecting export planning.
2. To analyze the causal influence between the business environment components concerning to export planning.

III. LITUREATURE REVEIWS

The domestic market situation is the driving force for an organization or company to seek new markets abroad. The researcher found that many factors vary according to the situation. Whether the competitive condition of the domestic market slowing economic growth rate or even the size of the domestic market is small. These factors affect the organization or company. That is necessary to seek new markets abroad in order for the organization to survive. As confirmed by studies of [5] and [8], if the domestic market is strong, that will also support the success of export operations.

Obstacles to the export process are one of the significant problems in the planning of export decisions. These may cause delays in the complexity of the documentation process as well as causing many problems, which lead to reduced ability to export. The component weight test [10] proved the obstacles in the export process and the complexity of the export work process. It is the most critical barrier to export (0.876). The obstacle in the export process also affects other factors. Companies with less export experience will have more barriers to export than companies with less export experience. Experienced in exporting and found that the barriers in the export process are more than in smaller companies, for example.

Compared to Thailand, the government aid index and the flexibility of doing business in Cambodia, Laos, Myanmar, and Vietnam (CLMV) countries. A total of 183 countries were ranked, Thailand was ranked 12th. At the same time, Vietnam was 93rd, Cambodia was 145th, and Laos was 167th convenience business flexibility or receiving assistance from the Thai government ranks better than all of its neighboring countries, affecting the country's ability to export to increase. [6][7]

Therefore, getting help from the government regarding information or support through policy-making tax measures or even assisting in organizing trade shows abroad and providing loan services, etc. The government assistance that entrepreneurs in the Netherlands export sector needed the most was information and news about overseas export markets, including training and organizing additional special education courses on export in educational institutions [12][13].

When studying the export market abroad, a researcher found that most industrial operators in Germany tend to export to traditional markets. That is, it will not expand its exports to new markets. Moreover, the review found no statistical significance in selecting or changing export markets abroad [4][9]

In addition, the situation of the overseas market studied in this study literature review based on the conceptual framework of [8][9] and additional studies conducted on various issues. The following essential issues create questions: exchange rate, economic situation, political situation purchasing power, international market competitors, and physical distance.

IV. RESEARCH METHODS

A. Sample Size

The population studied in this research were executives in the agricultural industry in Bangkok and its vicinity. Based on the database of the department of export promotion, that was found that the target sample size in the agri-industry group was a total of 145 companies were performed from a group of agricultural industry operators [14].

B. Research Statistics

Factor analysis is an analytical technique used to categorize a large number of variables. To be categorized also allows the researcher to classify variables if the researcher does not know how to categorize the variables. [11]

Structural equation modelling analysis to analyze the problem of lack of representation of the relationship between variables. The researchers then chose to use relationship analysis to solve the problem, helping them test the relationship between variables, whether they were related or not, and test the assumption that they were consistent.

V. RESEARCH RESLULTS

The exploratory factor analysis revealed that the domestic market environment consists of 3 components. Component 1, the situation of the domestic market. The researcher measured with eight questions, component 2, and government assistance measured with five questions. The final component, barriers to export, measured five questions with eigenvalue at 6.733, 2.784, and 2.193, respectively. Regarding elements of the foreign environment, consisting of 2 components: foreign government regulations measured with three questions and the international market situation measured with nine questions with eigenvalues 6.856 and 2.338, respectively.

The corroborative confirmatory factor analysis (CFA) revealed that the domestic market environment contains the domestic market barriers to export and receiving assistance from the government. On the other hand, the international market environment consists of foreign markets' situation and foreign governments' regulations; the factor is consistent with the exploratory component analysis.

Model adjustment results from the CFA. Techniques revealed that the chi-square value was 110.17, the GFI index was 0.87, the AGFI index was 0.82, the CFI index was 0.98, the RMR was 0.34, and the RMSEA was 0.056, showing the model values as follows. Results found that the results of the

assessment of the confirmatory factor analysis of the model by analyzing the confirmatory components of the export planning of the agri-industry passed the required criteria and was consistent with the primary empirical data from which the model adjusted to be consistent with the recommendations. Therefore, this model is consistent with the empirical data.
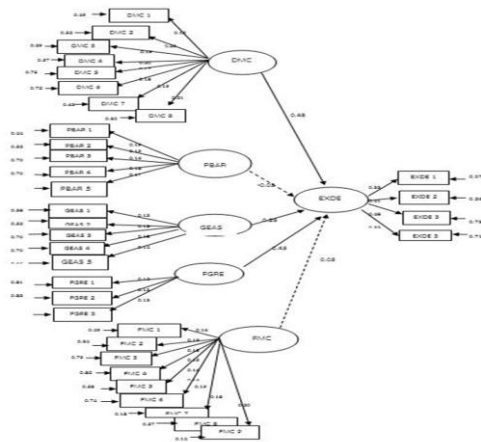
Chi-square=893.73, df.=431, p-value=0.00, RMSEA= 0.056
Figure 1: Casual analysis of business environment

The results of the analysis of the causal influence of the business environment affecting export planning showed that the influence path between the domestic market situation (DMC) to the export planning (EXDE) was statistically significant (B = 0.25, t = 3.38). On the other hand, the influence path between government assistance (GEAS) to export planning was statistically negative (B =0.053, t= -2.05), and the influence path between obstacles in the export process (PBAR) to export planning was statistically insignificant (B=0.14, t=-0.37), all of these are components of the domestic environment.

The elements of the foreign environment When analyzing the causal influence, the results of the analysis of the influence path between the foreign market situation (FMC) to the planned export (EXDE) were not statistically significant (B=0.013, t=-0.17) and the influence path between the foreign government regulations (FGRE). To export planning was statistically significant (B=0.27, t=2.56).

The results of the assessment of the conformity index, the causal influence analysis revealed that the conceptual framework was consistent with the empirical data. The results showed that the chi-square statistic (x^2) was 788.88, the degree of freedom (df.) was 431, and the relative chi-square (x^2/df.) was 2.00. The absolute fit index, comprising the Harmony Level Index (GFI) conformity factor, was 0.95. The Adjusted Harmony Index (AGFI) was 0.65, adjusting model 0.91. The relative conformity index (relative fit index), the NFI (normed fit index) was 0.89, the NNFI (non-normed fit index) was 0.89, and the conformance index in the tolerance form consisted of RMSEA (root mean square error of approximation) had the value is 0.056.

VI. SUMMARY AND DISCCISION

Summarizing the research results found that the domestic market situation and foreign government regulations have a positive relationship. Moreover, the results of export found that the assistance from the Thai government was negative. Therefore, export planning for the international market

situation and the obstacles in the export process do not affect the export planning and discussion of the results.

Therefore, when considering the domestic market situation, there is a positive relationship with export planning because if the situation in the country, such as the political situation, was volatile. Unstable will directly affect export planning. That is to say, that may cause export operators to stop exporting or unable to export. Consistent with the study results [8], the domestic market situation is the driving force for companies to seek new markets abroad. Domestic decreased annual growth rate or factors related to the size of the market in small countries all of these factors cause organizations/companies to search for new markets in order for them to survive.

In addition, foreign government regulations positively correlate with export planning as agricultural industry operators have to comply with regulations to meet export standards. This factor was becoming more critical. Consistent with the study results [10][15], understanding international trade measures and regulations promote up to 100% international trade. International trade is inevitable that every business must suffer, leading to the great need to seek information and learn about laws and regulations.

The assistance from the government in the country found that the statistics were statistically negative because the assistance from the Thai government did not meet the needs of the agricultural industry. Consistent with the study of [3], due to budget constraints or operating funds, lack of support to solve financial problems for exports, such as funding for the purchase of modern machinery, et cetera., including knowledge export recommendations, has not been successful. Furthermore, the demand for products and competitors in the international market does not help promote exports.

Significant new findings revealed that foreign markets such as political, social, and legal status in foreign countries do not affect export planning. The outbreak of the Covid-19 epidemic makes the company impossible to perform different or reduced export operations. As a result, the situation in the international market does not affect export planning. Exports to foreign markets do not depend on the epidemic situation, however. Nevertheless, on the contrary, the consumption of food and various products cannot be stopped; therefore, they must be exported or consumed all the time.

VII. RECOMMENDATONS

A. Suggestions for expanding government assistance

The Thai government's assistance is not as successful as can explain that there is little assistance from the Thai government. Not exactly where the exporter wants or the needs of exporters in the agricultural industry. Therefore, the government should build a network of transport. In order to reduce the barriers and costs of exports such as trains, water, and air. The researcher found that the transportation of goods in Thailand is not popular with rail transport which has a much cheaper transportation cost, but it is more popular to transport by car leading to higher costs and less security. Therefore, the government sector should encourage more rail transport by building a railway line between the factories in the industrial estate to the shipping source, port, or warehouse for further distribution. Moreover, planning to build the factory in the future, the government sector must

consider building a factory in the back of the source of loading and unloading and various raw materials.

B. Recommendations on operational planning

Must plan to expand production bases to countries with the cheap labor due to increased high wages of domestic workers. There is a limited amount of labor that must imported from abroad. Therefore, entrepreneurs should consider expanding to invest in foreign countries such as China to produce and sell products in China or expand to India because labor wages are cheaper than in Thailand. The study also has a large population—worth the investment. However, cooperation in planning negotiations must be obtained from the government sector as well. Pay attention to hygiene, cleanliness, and safety in production to build consumer confidence, including packaging free from germs. Moreover, employees and operators must be inspected for an adverse germ-free condition or obtaining a safe vaccination.

REFERENCES

1. Bangkok Bank. (2021). Opportunity and Risk of food export in 2021. From: https://www. bangkokbanksme.com/en/opportunities-and-risks-of-thai-food-export-business-2021. 11 June 2021.

2. Industry department. (2021). Export of Agriculture Industry. From: https://www. industry.go.th/th/. 11 June 2021.

3. Laosirihongthong, T., Paul, H., & Speece, M. (2003). Evaluation of new manufacturing technology implementation: An empirical study in the Thai automotive industry. Technovation, 23, 321-331.

4. Lejpras, A. (2009). Determinants of internationalizations: Differences between service and manufacturing SMEs. Retrieved February 20, 2011, from http://www.diw.de/English/products/publications/discussion_papers/ 27539.html

5. Naik, S. S., & Reddy, Y. V. (2013). Structuring the prediction model of export performance of selected Indian industries: A comparative analysis. Retrieved May 20, 2000, from http://dx.doi.org/10.4172/scientificreports667

6. National Food Institute. (2021). Food Export. From: http://fic.nfi.or.th/. 11 June 2021.

7. Siam Commercial Bank, Economic Intelligence Center. (2010). How does the change in the population structure change the consumption of Thailand? 14 April 2012.

8. Pak, J. M. (1991). The export behavior of firms: A study of determinants and decision making in small and medium sized manufacturing firm. Ph.D. Dissertation, University of Alabama.

9. Pattarapon Chummee et al. (2021). Causal Influence Analysis Model of Foreign Environment on Export Capability. Turkish Journal of Computer and Mathematics Education, Vol.12 No.8(2021), 2227-2232.

10. Stioian, Maria-Cristina et al. (2010). Export Performance under the Microscope: A glance through Spanish lens. International Business Review, 2(2), 117-135.

11. Suchart Prasitthiratsin. (2001). The use of statistics in research is accurate and meets international standards. Bangkok: Fuengfah Publishing House.

12. Voerman, L. (2004). The export performance of European SMEs. New York: University of Netherlands.

13. Wood, Van and Karriker, Joy. (2010). Export Market Decision Making, Cognitive Competencies and Export Performance. an Empirical Investigation. EoconoQuantum, 3(2), 33-70.

14. Yamane T. Statistics, An Introductory Analysis. 2nd ed. New York: Harper and Row, 1967.

15. Yannopoulos, P., & Keflaki, M. (2010). An empirical investigation of perception of export barrier using metal model theory. Retrieved July 12, 2012, from http://www.wbiconpro.com/1.%20Peter-Canada.pdf