

THE EFFECT OF ASEAN ECONOMIC COMMUNITY IN THAI GEMS AND JEWELRY INDUSTRY DEVELOPMENT

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Abstract

Thai Gems and Jewelry Industry has been ranked as one of the top worldwide manufacturing exporter from 2005-2013. Gems and Jewelry industry has allowed stable economic growth with a high employment rate. In terms of the industrial development, the industry highly relies on government and supporting industry, such as Materials, Human resources and Production technology. Along with the upcoming ASEAN Economic Community (AEC), which will become effective on 2015, subtle changes to economic, social and culture are expected. Based on these changes, AEC will impact directly to Thailand Gems and Jewelry Industry development. This research is aimed to examine the current state of the two relationships between Supporting Industry and Government to Gem and Jewelry Industry Development and compare it with the future state of the forthcoming AEC. Comparisons will be analyzed through statistical program (Statistical Package for Social Science: SPSS) in order to understand the descriptive nature of the data and a structural equation model will be proposed and validated through AMOS to verify the fitness of the model. The proposed model can be used as a guideline in making strategic decisions for Thai Gems and Jewelry Industry development toward ASEAN Economic Community (AEC).

Keywords: Gems and Jewelry Industry, ASEAN Economic Community, Supporting Industry, Industrial Development, Factor analysis

Introduction

Thai Gems and Jewelry Industry has been ranked as one of the top worldwide manufacturing exporter from 2005-2013. See as Table 1

Source: Department of Foreign Trade Ministry of Commerce (2013)

Industry	Value (Million)
1. Automobile parts and accessories.	707,711.9
2. Computer, Equipment and component s.	588,398.7
3. Gems and jewelry	408,040.2
4. Oil	398,485.5
5. Rubber	270,153.8

Table 1: Shown the top 5 export value of Thailand in 2013.

Business trends of the gems and jewelry industry growth and statistics have indicated that Gems and jewelry industry is significance to Thailand economic. Gems and jewelry industry production has increased by orders from Asia because of the growing purchasing power. (Bank of Thailand, 2013) Moreover, Thai Gems and Jewelry Industry have a number of entrepreneurs and workers in related such as many mining industry, industrial design industry manufacturing and assembly industry and industrial packaging materials, etc. Thai Gems and Jewelry industry seems to have a positive economic growth due to continuous improvement in quality through technologies such as heat treatment techniques and increase in dedicated skill personnel. However, Thai Gems and Jewelry Industry have limitations on expansion. For instance, Thailand is mainly dependent on foreign raw materials because of insufficient domestic material. The technology development of design and cutting remained low compared to its competitors. Entrepreneurs do not all have equal technology in producing standardized products. As a result, gems and jewelry business in Thailand has decline in terms of quality and global image. Furthermore, with the forthcoming AEC event, the feasibility of the Thai Gem and Jewelry industry is questionable (A business analyst for Academic Unit, 2004).

ASEAN was initially established in 1967, whose initial member states namely, Brunei Darussalam, Indonesia, Malaysia, Philippines, Singapore and Thailand. Later on, additional four countries, namely Cambodia, Laos, Myanmar and Vietnam, also called the CLMV have also joined to become a part of ASEAN. The initial vision of the ASEAN was to promote peace in the region which will contribute to the growth of economy, society and culture, and has integration to expand cooperation and trade between each other. On 2003, the member states has agreed and introduced the ASEAN Community which is aimed to become effective by 2015. The AEC is one of the three pillars of ASEAN, the other two main pillars are ASEAN Security Community and ASEAN Socio-cultural Community and has prepared the ASEAN Charter to operate towards the ASEAN Community. The blueprint for the establishment of the AEC is provided here under (Table 2).

Source: Department of Trade Negotiations (2013)

Single Market and Production Base	Competitive Economic Region	Equitable Economic Development	Integration into the Global Economy
- Free flow of goods	- Competition Policy	- SME Development	- Coherent Approach towards External Economic Relations
- Free flow of services	- Consumer Protection	- ASEAN Integration	- Enhanced participation in global supply networks
- Free flow of investment	- Intellectual Property Rights		
- Freer flow of capital	- Infrastructure Development		
- Free flow of skilled labour	- Taxation		
- Priority Integration Sectors	- E-Commerce		

Table 2 : ASEAN Economic Community (AEC Blueprint)

Other than the Gem and Jewelry industry itself, supporting industries or industries which are related to Gem and Jewelry are important and are usually complex. It is still ambiguous and without consensus in definition. Whether "Supporting Industries" is understood broadly to include all industries that provide production inputs or narrowly as industries that provide only parts, components and tools for certain industries depends much on the user. On a practical level, Thailand defines supporting industries to be enterprises that produce parts and components that are used in the final assembly processes. For instance, Thai Gems and Jewelry Industry needs industries which produce body parts of Jewelry, Gems enhancement Industry, Gems Coating Industry, Rubber Wax and Plaster Industry. Including, Packaging Industry and Tourism Industry.

The Royal Thai Government had prepared strategic plans and development strategies and plans for the Gem and Jewelry Industry. However, lack of integration plan, lack of staff and lack of coordinated remained as one of the main obstacle. Especially in the case of a strategic overview of the country and promoting. In addition, Industrial Development also the responsibility of several agencies, both public and private. Including the Ministry of Industry Ministry of Commerce, Ministry of Interior Ministry of Finance Ministry of Science And private agencies such as the Board of Trade of Thailand. FTI Confederation involved.

Research model and Hypotheses

This study examined at the ASEAN Economic Community influencing the development of Thai Gems and Jewelry Industry with the role of supporting industries and Government supporting. And compare variance by The study of cooperation between Supporting industries and Government supporting. Based on the extant literature, the proposed relationships among 4 elements (ASEAN Economic Community, Supporting industries and Government supporting).

Supporting Industry versus Industrial Development

Gems and jewelery industry in Thailand has to import raw materials from foreign countries. In terms of production, Gems and jewelery industry be able to use modern technology to enhance the value of precious gemstone. But the technology used with semi-precious stones of the industrial enterprises

Thailand still considered a low technology level because of The restrictions on investment and technology transfer skills leads to The global market of Thailand business has not achieved (Jakkrit, 2013).

Government Supporting versus Industrial Development

Government's role in the creation of the database industry and research development. For instance assessments and industrial environments. Research taste for domestic consumption and export. Recommend consulting services to improve marketing ventures, investments and joint ventures. Business links Which is associated with the Thai gem and jewelry industry to guide the state should be a emphasize.

AEC versus Industrial Development

AEC is a chance of Gem and jewelry industry in Thailand should be expanded to more regions. As a result, obtaining benefit from the integration. In order to Thailand is the world's leading center for gems and jewelry. With the development of infrastructure and contributing to increase competitiveness (Office of Policy and Planning Ministry of the Interior, 2555) When AEC occur Thailand jewelry industry expecting. The entrepreneur can access the lower labor cost. There are chance for export to ASEAN and non-ASEAN countries.

AEC versus Government Supporting ;

For the purpose of Thai Gem and jewelry industry as a hub. Thailand government should Infrastructure development and contributing to increase competitiveness (Office of Policy and Planning. Ministry of the Interior, 2012) Therefore, it is necessary to have a government continue supporting. Because the policy is linked to industry development. Although Thai Gem and jewelry industry supported from multiple agencies. But most of government officials are still lack a deep understanding of the industry environment. AS a result, the services and programs of the various states is not achieved and cannot support the SME entrepreneurs effectively.

AEC versus Supporting Industry ;

Supporting Industry access to cheap raw materials from ASEAN countries. The research and development needed from ASEAN countries. Including the opportunity to hire workers with lower cost countries such as Burma, Laos, Cambodia and foreign workers, they may have the language ability workers abroad than Thailand.(Office of the National Economic and Social Development, 2012) (Quesada et al, 2012) (Academic center of Chulalongkorn University, 2014) (Patteera, 2011) The proposed relationships among Asean Economic Community, Supporting Industry, Government Supporting and Industrial Development are discussed and hypotheses related to these variables are developed as follow figure 1. Research model for Relationship of dependency between Supporting Industry and Government Supporting for Industrial Development of Thai Gem and jewelry industry in present.

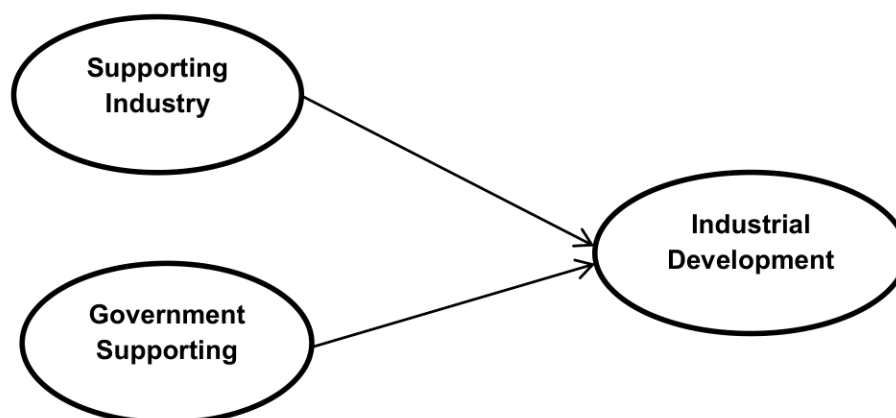


Figure 1: Research model

To understand the present of situation on dependency of Thai Gems and Jewelry Industry Development, research hypothesis was created based on the research model, which is designed to examine the causal effects of each element.(Table 3)

H ₁ :	Supporting Industry has an influence in Thai Gems and Jewelry Industry development.
H ₂ :	Government supporting has an influence in Thai Gems and Jewelry Industry development.

Table 3: Research Hypotheses

In addition, Research model for The Effect of Asean Economic Community in Thai Gems and Jewelry Industry Development (Figure 2)

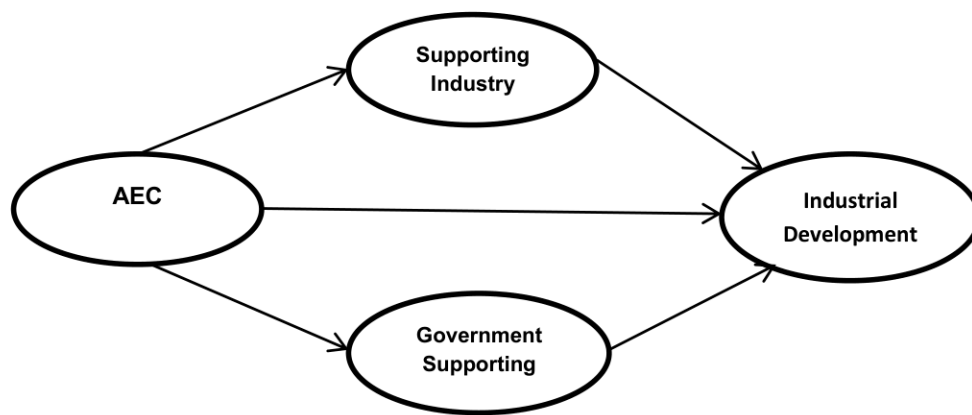


Figure 2: Research model

To understand the effect of Asean Economic Community in Thai Gems and Jewelry Industry Development, research hypothesis wrer created based on the research model, which is designed to examine the causal effects of each element.(Table 4)

H ₁ :	Asean Economic Community has a motivate Supporting Industry to develop Thai Gems and Jewelry Industry.
H ₂ :	Asean Economic Community has a motivate Government supporting to develop Thai Gems and Jewelry Industry.
H ₃ :	Asean Economic Community has a directly motivate Thai Gems and Jewelry Industry development.
H ₄ :	Supporting Industry has an influence in Thai Gems and Jewelry Industry development.
H ₅ :	Government supporting have an influence in Thai Gems and Jewelry Industry development.

Table 4 Research Hypotheses

Objective

There are two objective of this research. Firstly, To analyze the relationship of dependency between industry supporting and governments in the development situation of Thailand's gems and jewelry industry in present situation. And The ASEAN Economic Community occurs. Secondly, To compare the results of dependency on Thailand's gems and jewelry industry from government and supporting industry. Present and on into the ASEAN Economic Community.

Research methodology

Sample and data collection

The questionnaire and a letter will email to the sampled subjects. The respondents were asked to respond via email. A survey instrument was developed to investigate the impact of The Effect of Asean Economic Community in Thai Gems and Jewelry Industry Development. The questionnaire going to pre-tested several times to ensure that the wording, format, and sequencing of questions were appropriate.

Data for this study is going to collect using a self-administered questionnaire with 5 likert scale that will distribute to 2,000 SMEs entrepreneur or a senior officer/executive in charge of SCM practices. in the Manufacturing and people in government unit which involved in Thai gems jewelry industry development.

Analysis the Data

After collecting data, it going to edited to check for completeness, consistency and reliability. Afterwards, the data was transferred to the STATS. An analysis of the returned questionnaires was conducted using an SPSS computer package.

Exploring confirmatory models

There is an important difference between the factor analysis models that most statistic research analysis use and the kind estimated for a SEM. Most applications of factor analysis are “exploratory” meaning that the goal is to reveal the relationships underlying a set of variables. Exploratory factor analysis (EFA) able to use for the objective is to reduce a set of variables to a smaller, more manageable, number.

In the case of either EFA the loadings of any observed variable on any factor can assume any value. That is, which variables load on which factors is not fixed, or constrained, in any way. What is constrained is the number of factors, and often the correlations between the factors are constrained to zero. But the observed variables are allowed to load on any and all factors.(Browne, M.W. and R. Cudeck, 1993)

When using SEMs, you take an approach like confirmatory factor analysis (CFA).Then, specify which loadings and path coefficients are free to vary, and which are to be fixed at particular values. You also specify whether variables are independent of each other, or whether they co-vary. See Bollen (1989) for a more detailed discussion of the various differences between exploratory and confirmatory factor analysis.

Using Amos for structural equation modeling

SEM models can never be accepted; they can only fail to be rejected. This leads researchers to *provisionally accept* a given model. SEM researchers recognize that in most instances there are equivalent models that fit equally as well as their own provisionally accepted model. Any of these models may be “correct” because they fit the data as well as the preferred model. Researchers do their best to eliminate alternative models, and by extension alternative explanations, but this is not always possible. The use of SEM thus entails some uncertainty, particularly with cross-sectional data that are not collected under controlled conditions.

For this reason, SEM software programs require researchers to be very explicit in specifying models. While models that fit the data well can only be provisionally accepted, models that do not fit the data well can be absolutely rejected. For instance, if you fit a single factor confirmatory factor analysis model to a set of ten survey items, and the model is rejected, you can be confident that a single factor is not sufficient to explain the items’ shared variance, a useful finding, particularly if you believe that one common factor is not enough to explain the items’ shared variance. Suppose you ran a single factor model and then a dual factor model on the same set of ten items; the former model is rejected but the latter model is not rejected. Now you know that more than one factor is needed to account for the shared variance among the measured items.

In addition to evaluating the absolute goodness of fit of single models, This also can evaluate competing models by using likelihood ratio chi-square tests to compare them. Returning to the previous example, you could compare the single and dual factor models to each other using a statistical test. If that test statistic is significant, you can conclude that the more complex two factor model fits the data better than the one factor model.(Browne, M.W. and R. Cudeck,1993)

Limitations

This paper focuses on research framework, where actual data collection will begin after the completion of this paper. This paper goes through a systematic method of creating a research framework which covers ground of model validity and data reliability. The main analysis of this paper uses quantitative data collected via questionnaire. Therefore, the number of questionnaire will determine the level of validity and reliability of the result. Nevertheless, the output of this research will allow practitioners a better understanding of the importance of Asean Economic Community in and its impact on Thai Gems and Jewelry Industry Development.

Benefits/Anticipated Outcome

This paper attempts to propose a systematic model of The Effect of Asean Economic Community in Thai Gems and Jewelry Industry Development. Through the literature review, a conceptual model was presented with guidance to allow it to be measured quantitatively. The anticipated Outcome of this paper has 2 two ways. Firstly, the benefit can be measured quantitatively in the relationship of dependency between industry support. And governments in the development of Thailand's gem and jewelry industry in present and when the AEC occur. Secondly, To compare the level of dependence on responsible jewelry industry jewelry of Thailand. Furthermore, the Government and Supporting Industries which are related in Thai Gems and Jewelry Industry can use the models to create the strategies for Thai Gems and Jewelry Industry Development to obtain the benefits form Asean Economic Community. It will be useful, if the organization try to use strategies in the systematic process of development.

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