
ASEAN Economic Community: Opportunity and Feasibilities of Thailand's Rubber Industry Investment

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Abstract The study demonstrated the feasibility of Thailand's business in rubber sector towards ASEAN Economics Community (AEC). In order to enhance a clear understanding, the research is conducted through both primary and secondary sources for solid explanation. The purpose of this is to shed a light on the implication of ASEAN's role that has an influence on Thailand's rubber industry by the analyzing on strength, weakness, opportunity and threat the affect to Thai NR industry and propose for the strategic policy and measures for Thailand rubber industry to adapt and prepare for its readiness to enter into AEC by December 2015. In order to derive with the correct information for further analyzing, the study has included various sources from primary data where by total sampling surveys of 3,443 holders under the Office of Rubber Replanting Aid Fund (ORRAF) are collected and a workshop is conducted in Nakhon Si Thammarat Central Rubber Marketing participated by all stakeholders from upstream until downstream sectors. In addition, the analysis on the Revealed Comparative Advantage (RCA) method and the analysis of Thailand status on rubber export (BCG Method) to compare with other competitor within ASEAN and global world were also employed.

From the above analysis, it was revealed that rubber smallholder under ORRAF replanting and new planting scheme have owned rubber area at the average of 13.54 rais with the average unsmoked sheet of 303.90 kilogram/rai/year with may not sufficient enough for the family income during the price declining period. It was also quite obvious that rubber smallholder in Thailand has full knowledge and high skill in rubber planting and rubber maintenance particularly on tapping skill but Thailand still has one disadvantage on high cost of rubber production compared with other producing countries in ASEAN. However, Thailand has an advantage on midstream level with its strong and efficiency of 471 factories whilst in downstream level even though Thailand can gain more advantage on her leading position as the top car manufacturer ranking number 9th of the world in 2014 and enhancing domestic rubber consumption within the country but newly investor still lacking of technical knowhow that need the government to support on both technical knowledge and soft loan. In the study, technique on Reveal Comparative Advantage and BCG Matrix were employed. The result from BCG Method was confirmed Thailand position at the "cash cows" status meaning that rubber can contribute lot of income to the country although the growth rate is significantly low. Therefore in order to achieve the maximize profit for Thailand when entering into AEC, Thailand need to encourages rubber smallholders to produce rubber more efficiency and apply sufficiency

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economy philosophy to produce rubber on the sustainable basis. For the downstream level, government sector should lending support to newly investor and encourage foreign investment through Board of Investment (BOI) by exercising income tax reduction and also allow foreign investment to occupy land for specific purpose.

Keyword: ASEAN Economic community AEC

Introduction

Thailand's high reputation as the world's immense natural rubber producer has made the country the hub of rubber-based in agriculture industry. In 2012, Thailand's rubber production reached 3.778 million tons where 3.121 million tons (82.6%) exported to other countries. This indicates the significance of Thailand's role in the international market based upon the growing demand in rubber.

By the end of 2015, Thailand as a member of the Association of Southeast Asia Nations (ASEAN), will joint AEC which will create an opportunity to establish economic cooperation with the member states. Through integration under the ASEAN Economic Community (AEC) platform, Thailand can accelerate the economic growth through partnership to the expansion of trade in natural rubber products.

It seems judicious that Thailand is challenged to take the triple-track process into a careful consideration. Alternative policies affiliate with the upstream, midstream and downstream process to ameliorate sustainable growth in rubber-based agriculture industry. Quite recently, considerable attention has been paid to the downstream part of the supply chain. The location preferences and highly skilled farmers may add to upstream operations but without an achievement in mutual linkages with the rest of the process, Thailand may lose its crown as the world's largest exporter. Thus the development of rubber-industry investment requires strategic approach and enforcement layout to sustain high standards in international agro-business. Hence, this inadequacy gives rise to the present study.

This research is designed to explore the opportunities and feasibilities of Thailand's agriculture investment under rubber sector. Following this introduction, three major aspects on Thailand's rubber investment will be analyzed as follow; 1. Marketing production, 2. Opportunities in AEC, 3. Overview in manufacturing process. Specifically, the study seeks to develop industrial strategies and modals to contribute to the rubber product development. Alternative tactics aim to strengthen Thailand's rubber investment and to be on top of the chain as the most desirable exporter.

Materials and methods

Significantly, the research strives to obtain a holistic picture of the opportunities in the AEC that allow Thailand to expand rubber-based products. The researcher acts as an observer and the prime instrument for both data collection and data analysis. The process of gathering useful information includes both primary and secondary sources through the combination of qualitative and quantitative analysis is as follows:

Data Collection

Primary data refers to original sources of information that are first-handed. Three different primary sources were obtained as data collection; questionnaires from 3,443 farmers, interviews from 26 employees and observation in a meeting consisted of 30 members. Questionnaire of 3,443 farmers are taken from rubber smallholders under Rubber Replanting Aid fund)ORRAF (program in 2014 totaling of 277,633 farmers though out the country and taken a sampling using taro Yamane Methods. This research also include the dialoged meeting and workshop which was held at Nakhon Si Thammarat on 22 July 2015 comprised of stakeholders in clouding upstream, midstream and downstream people..

Conversely, qualitative method is primarily exploratory research that transforms data into findings; no formula exists for that transformation (Patton, 2002). In other words, interpretive practice through direct content analysis is being applied to generate a clear understanding of what is being studied. The goal of a directed approach to content analysis is to validate or extend conceptually theoretical framework or theory (E.Shannon).

Analysis

On the analysis part, this paper will highlight the data collected from the field to confirm the status of rubber smallholders in Thailand whether or not they can still survive once Thailand has to open for the free flow of much cheaper raw material from neighboring country. In term of analysis all data collected will be analyzed in qualitative part explaining the situation of rubber production marketing and exporting. The study employed SWOT analysis for rubber at all level covering from upstream, midstream and downstream level in order to point out the opportunity and capability of Thailand rubber industry after jointing with ASEAN into AEC. In addition, the analysis of the Revealed Comparative Advantage: RCA was also employed in the study to compare Thailand status in term of competition with the others like Indonesia, Malaysia, Vietnam and Lao using the export data during 2004 – 2003 for computation. Moreover, for in depth result, the BCG Matrix Method was also study to

compare Thailand status on rubber export compared with Indonesia. Malaysia using exporting figures during 2004 – 2008 compared with 2009 – 2013 export data for calculation.

According to Gall, Borg and Gall (1996, p.18), they presented quantitative paradigm as the belief that physical and social reality is independent of those who observe it. Quantitative sources provide high-quality databases that require the researcher to generate practice-relevant information by employing systematic observation. Conversely, qualitative method is primarily exploratory research that transforms data into findings; no formula exists for that transformation (Patton, 2002). In other words, interpretive practice through direct content analysis is being applied to generate a clear understanding of what is being studied. The goal of a directed approach to content analysis is to validate or extend conceptually theoretical framework or theory (E. Shannon).

Result and Discussion

Thailand rubber production, marketing and rubber industry

In the short period of 2010 to 2014, tapping area has increased from 12.77 million rais to 17.22 million rais whilst the year 2012 alone has marked the highest tapping area of 15.75 million rais with equivalent to 23.37 growth rate compared to the year earlier due to government project of one million rais in the North and North East at the year 2000 (Table 1).

Table 1 Rubber area, production and yield per rai

Year	Plantation Area (Sq.)	Tapping Area (Sq.)	Growth Rate (%)	Production (Ton)	Growth Rate (%)	Production Per Unit (Kg.)	Growth Rate (%)
2008	16,716,945	11,371,889	2.98	3,166,910	4.78	278	1.75
2009	17,254,317	11,600,447	2.01	3,090,280	-2.42	266	-4.34
2010	18,095,028	12,058,237	3.95	3,051,781	-1.25	253	-5.00
2011	18,461,231	12,765,636	5.87	3,348,897	9.74	262	3.65
2012	21,991,550	15,748,503	23.37	4,139,403	23.60	263	0.19
2013	22,477,723	16,462,714	4.54	4,305,069	4.00	262	-0.51
2014		17,217,529					
*		9	4.56	4,419,015	2.65	257	1.85

Source: Office of Agricultural Economics (OAE), 2014

* Estimated figure

During the year 2011 – 2015, Thailand rubber export has increased from 3.06 million tons 2011 to 3.86 million tons in 2015 due to continuously high demand on raw material from rubber auto and other rubber industry products from china with the increasing of 14.56 percent annually from 1.34 million tons in the year 2011 to 2.30 million tons in the year 2015. Malaysia also import more from Thailand during the same period due to flooding in its territory where by japan and United Starts were import less due to the slowdown economy. For the type of rubber export, Thailand still export more on technical specifics rubber (TSR) with the proportion of 41.76 percent in the year 2015 whereas the rest comprise of compound rubber at 19.75 percent, rubber smoked sheet at 18.97 percent concentrated later at 17.90 percent and other at 1.62 percent (Figure 1)

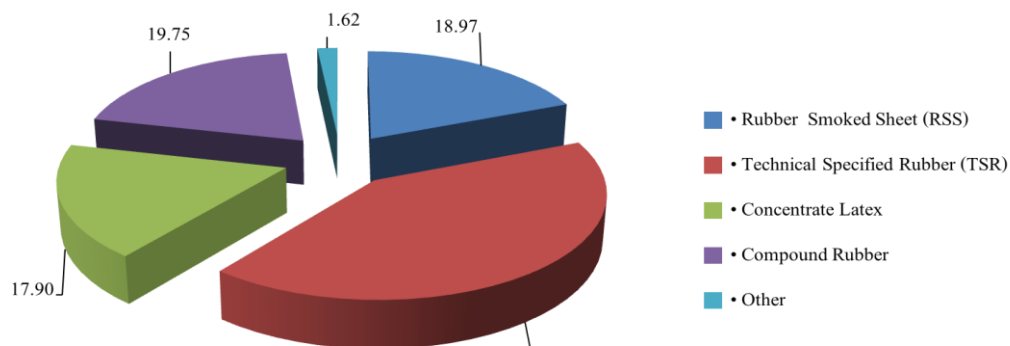


Figure 1. rubber export from Thailand classified by type
Source: Rubber Institute of Thailand, 2013

From the above structure, Thailand has a very strong point on midstream level where there are 471 factories scatter around the country. Meanwhile upstream and downstream levels need to develop and improve in order to compete with other competitor in ASEAN. On the upstream level, since the majority of rubber smallholder is reaching ageing society and required hire tapper, therefore the cost of production based on profit sharing basis is calculated to be the highest compared to other producing countries and will definitely be an disadvantage for the country if Thailand has to give permission for the free flow of much cheaper raw material from neighboring country to process in Thailand. For the downstream level, Thailand still lacking of technical knowhow and the private sector has more advance knowledge compare with those who works in the government sector hence making the slow movement on rubber strategic policy to be implemented.

AEC: Opportunity and potentiality of Thailand rubber industry

1. Upstream Industry Thailand rubber smallholder has a strength point on rubber knowledge that was strongly support by the government for a long period over 50 years including the group processing and marketing. In term of rubber quality, government sector also give fully support on the processed rubber hence to raise higher income to rubber institution that would like to sell rubber I the form of rubber smoked sheet rather than unsmoked sheet. However, as already mentioned earlier that most of the rubber plantation in Thailand is rubber smallholders at approximately of 95 percent and their occupied area from the study was at the average of 13.54 rais, therefore their income during the slowdown economy may not sufficient enough. This is due to consider by the government since Thailand has to allow for importing of raw material within ASEAN and will affect to Thailand rubber smallholders that produce rubber at the high cost of production.

2. Midstream level Thailand midstream level can be regarded as a strongest country in ASEAN since its has all together now 471 rubber processed factories surrounding the country making both rubber purchasing and exporting to be more effective. Notwithstanding the above advantage, it was also found out that the capacity of the smoked house in the major factory is reaching the maximum of 60 tons per room compared with the smokehouse of rubber institution or small smokehouse of only 1.5 tons per room. This is one of the advantage points for Thailand midstream level that was far behind other competition in this region. It is also found out that Thailand midstream level are now also move to invest in other neighboring country like Indonesia, Vietnam, Laos, Cambodia and Myanmar that have more comparative advantage on land and labour which are cheaper.

3. Downstream level Thailand has an appropriate location as a center of the region so call logistic hub of ASEAN and has motivate foreign investor to come to invest in Thailand. However, most of the rubber product entrepreneur still lacking of technical knowhow and capital investment whereas Thailand brand may not be accepted in the rubber global due to standard improvement limitation and lack of support from rubber authority concerned. These are the main point that need the government consider in order expediting the trade volume in the world market.

4. Revealed Comparative Advantage: RCA

According to the data analysis of rubber export from major NR producing countries during 2004 – 2013, it was found out that Thailand has the

average RCA of 29.00 higher than Malaysia (9.15), Vietnam (17.28), Laos (8.90) but slightly lower than Indonesia (29.85) . In term of rubber export within ASEAN, Thailand has the RCA value at 3.99 which is higher than other NR producing countries in ASEAN including Indonesia, Malaysia, Vietnam and also Laos meaning that Thailand has more comparative advantage than other competitors. (Table 2).

Table 2. Average RCA of Thailand rubber export to the world market as and ASEAN market compared with other competitor

Country	Thailand	Indonesia	Malaysia	Vietnam	Laos
RCA world market	29.00	29.85	9.15	17.82	8.90
RCA ASEAN market	3.992	1.462	0.055	1.652	0.138

Source: From computation,

5. Thailand status on rubber export

From the study using BCG matrix technique, it was found out that Thailand status on rubber export is on “Cash Cows” position (figure2) meaning that rubber can attribute a lot of income to the country whilst Malaysia and Indonesia as a competitor are both in the “Dogs” position which are less competitive to Thailand. In term of competitiveness in ASEAN as shown in figure 3, it was found that both Thailand and Indonesia are in the “Cash Cows” position where as Malaysia is in the “Dogs” position. This can be conclude that Thailand competitiveness either in ASEAN or in the global world are both have a high market share although the growth rate is decreasing. Therefore, Thailand need to maintain its market share and also try to withhold its annual growth rate of rubber export at a steady rate.

Relative Market Share

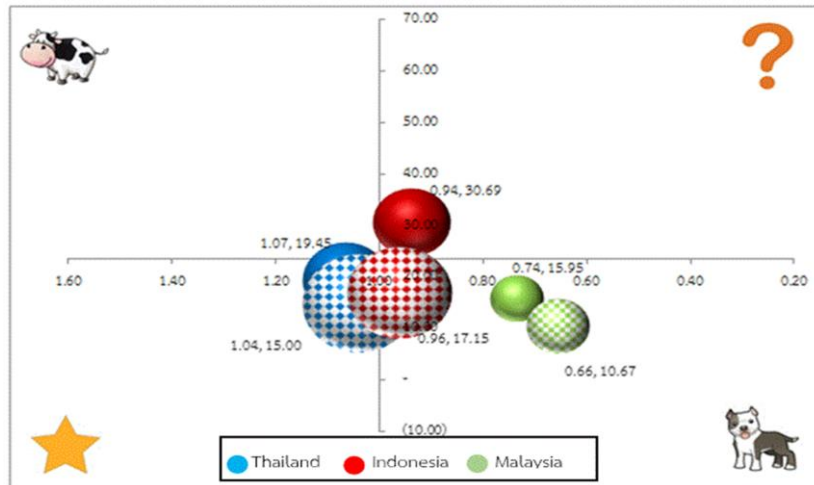


Figure 2. BCG matrixes positioning of Thailand, Indonesia and Malaysia in the world market during 2004 – 2015 (Source: from calculation)

Relative Market Share

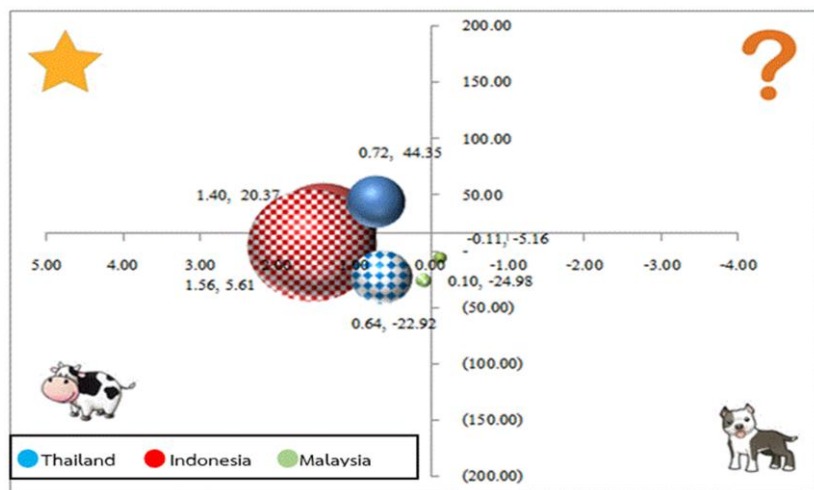


Figure 3. BCG matrixes positioning of Thailand, Indonesia and Malaysia in the world market during 2004 - 2008 and 2009 - 2013

Source: from calculation

General information on Thai rubber industry

Data from the survey have revealed that rubber smallholders in Thailand occupied rubber plantation at the average of 13.54 raise per family with its production of either unsmoked sheet at 303.90 kilogram/rai/year or field latex at 279.25 kilogram/rai/year. Famers in the South and the Eastern prefer to produce field latex whilst farmer in the North and Northeast are preferably to produce cub lump. In term of rubber development, the government still faces with the tremendous challenging on rubber smallholders income contributing from price volatility and high cost of production. In addition, rubber products manufacturing which can contribute high value to rubber industry are also lacking fully support from government especially during the past.

Conclusions and Recommendation

This research aimed to study the strength, weakness, opportunity and threat of Thai rubber industry in all sector involved ranging from upstream until downstream level and aim to propose policy and measures to be implemented as Thailand will entering into AEC from December 31, 2015 onwards. The information of this research comprising of 3,443 surveys sampling around the country whereas the comments are taken from the dialogue and workshop being held at Nakhon Si Thammarat Central Rubber Market. On the analysis of Thailand opportunity and potentiality on AEC, it was revealed that rubber smallholders has long experience and knowledge on rubber planting and maintenance which bringing Thailand to be the world largest rubber producer since 1991. Meanwhile on the midstream level, there are no sign of any problem on the private factories's implementation since all 471 factories around the country can cover all production area and even some factories have moved to the neighboring country for their investment. However, Thailand have disantantage on downstream level that need full support from the government on technology knowhow which can link to the least cost and enable manufactures to compete with other competitors in the world market . For further analysis on RCA during 2004-2013, Thailand has more comparative advantage than other competitors in ASEAN but for the world market Thailand is the second after Indonesia. In addition, on BCG matrix, it is confirmed that Thailand position is at the "cash cows" in which the country can still earn a lot of income from rubber even though the growth rate is quite low. Therefore, Thailand need to maintain its market share and endeavor to maintain its growth rate.

Proposed strategic policy and rubber development framework

1. Production strategy

It is recommended that Thailand need to restructuring production sector that belongs mainly to rubber smallholder more than 90 percent into sustainable management. This is due to less productive planting area in unsuitable land and also in the illegal area including forest and national park. It is also recommended that the government has to prepare for the problem of labor shortage through tapping system of 1/3s 1d3 to allow for hired tapper to tap simultaneously in three nearby holdings. These can fulfill the tapper need that they can tap rubber and earn income on the profit sharing rom rubber owner every day and at the sometime, the smallholders can prolong tapping panel whilst the total annual yield will only be slightly amount lower than their former practices on intensity tapping of 1/3s 2d3

2. Marketing strategy

Rubber marketing need to be restructuring on the production from rubber smallholders that tend to move their selling pattern from sheet rubber to field latex. Central rubber Market and local market under Rubber Authority of Thailand (RAOT) located around the country may consider how to monition every day field latex selling price to enable the farmer to receive reasonable and remunerative price as much as possible. Next step that Thailand has to perform is to tackle on price volatility caused by both fundamental and non-fundamental factors and affecting to insufficiency income for rubber smallholders especially in this prevailing low price. This includes the establishment of Rubber Regional Market (RRM) comprises of rubber market in Thailand, Indonesia and Malaysia to make an electronic platform on physical rubber delivery of Rubber Smoked Sheet (RSS 3) and Technical Specified Rubber (TSR 20). These market can reduce the risk of price volatility arising from future with the expectation that rubber price quote by RRM can represent the real rubber spot price that being traded from producing country.

3. Industry strategy

Government need to give lending support to the industry sector which lacking of technology knowhow and inefficiency machine and equipment in their production line. The institution involved need to put more effort to help these industry sector including the Thailand Research Fund (TRF), Agricultural Research Development Agency (ARDA), National Research Council of Thailand (NRCT), National Science Technology and Innovative Policy office (STI) and National Science Technology Development Agency (NSTDA). The establishment on nation auto testing center is one example that can enable Thailand investor on rubber tire to reduce their cost in producing rubber tire and try to create new brand for international market. In

addition, Board of Investment (BOI) can also play a significant role to encourage newly investor to use Thailand as their industrial based.

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