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ICCFMS - Enhancing a Competitive Advantage for Thailand's IT Entrepreneurs

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***Abstract*—**Since information and communication technology (ICT) plays a critical role in enhancing national competitiveness, it is a driving force for social and economic growth and prosperity. The ASEAN Economic Community (AEC) will integrate this into ASEAN countries as a new mechanism and a measure that will improve economic performance as a global economy. Government policies may support or impede such harmonization. This study was to investigate, analyze the status of Thai IT entrepreneurs and define key strategies to enhance their competitive advantage. Data were collected based on in-depth interviews, questionnaires, focus groups, seminars and fieldwork on information technology excluding communication. SWOT was used as a tool to analyze the study. The results of this study can be used to enable the government to guide policy, measures and strategies for creating a competitive advantage for Thailand's IT entrepreneurs in the global market.

***Keywords*—**AEC, ASEAN, competitive advantage, IT entrepreneurs.

I. Introduction

THE Social and Economic Development Plan XI of the Royal Thai Government determined that the Thai economy will grow 4.6 percent by emphasizing human resources and societal development which will transform the country into a knowledge-based society [15]. In addition, ASEAN Economic Community (AEC) will also be integrated starting in the year 2015. ASEAN people and first eight professionals can move, trade and work freely among the ASEAN nations [9], [12]. Therefore, the government has regarded ICT readiness as a main factor for driving national competitiveness through the increased efficiency in production and services [6]. The government believed that the ICT has played a vital role in enhancing economic and productivity by initiating a framework as well as an ICT Master Plan to ensure the country to moving forward. Five pillars have been set forth to enhance economic development as e-Industry, e-Education, e-Commerce, e-Government and e-Society [7], [9].

Current Status of Thailand's ICT Market

At present, there are almost 3,000 Thai ICT enterprises. Over 98 percent are small and medium-sized (not more than 200 employees). As Thailand's ICT industry continues to experience strong growth, the communication industry makes up the largest portion of Thailand's information and communication technology market, by far, at about 76.7 percent, followed by computer hardware, computer software and services [1], [12]. In addition, growth of the smart-connected devices market and newly developing IT service delivery models are prompting IT service providers, as well as end-users in the enterprise and small and medium business sectors, to evolve new adaptations [10].

Around 23 million internet users in Thailand mainly engage in Bangkok, a capital city with an age range between 15-24 years-of-age valued at 54 percent of the market, 18.5 million people use Facebook followed by Line 18 million [10], [13]. Danuvasin (2012) cited the World Bank study (2010) on his research that a 10 percent increase in points of broadband penetration can accelerate economic growth by 1.38 percent, [2], [3], [15] while the McKinsey study (2009) estimated that every 10 percent increase in broadband penetration in households could stimulate a country's GDP from 0.1 to 1.4 percent [8].

Regarding mobile phones, 89.98 percent of 60 million Thai populations are subscribers. Android OS penetrates the market most at 70 percent [4]. The International Development Corporation (IDC) predicted that the growth of the 2013 ICT market in Thailand was largely driven by four pillars shaping the future of the global ICT world: cloud, mobility, social business and big data/analytics [12], [14]. Demand for mobility from consumers and enterprises, evolving business delivery models that influence ICT spending, and the increasing competition among telecommunication service providers in the 3G era are also among these factors. The IDC indicated that the Thai ICT market expanded by 9.8 percent in 2013, reaching USD 21 billion. However, economic uncertainty and rapidly changing consumer demand may impact upon Thailand's ICT market in the future [5].

The IDC also highlighted the Thailand's ICT spending. Thailand's ICT spending will show solid growth and challenges in adopting emerging technologies. ICT spending in 2013 was mainly by financial services, telecoms and the government. It has been evident since the second half of 2012 that organizations have increased their spending on ICT solutions, especially for hardware. Organizations in the government sector are expected to continue rolling out initiatives to connect with the government cloud (G-cloud) and the Government Information Network (GIN) to align with the Smart Thailand Master Plan [14].

Mobile data services continue to be the highlight of the telecom industry. Mobile data services were expected to soar via services through wireless networks due to the rising demand from end-users and the establishment of fully

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operational 3G services. The IDC forecasted the growth in mobile data spending to reach 14 percent, or USD 1.7 billion, with the proliferation of smart devices being the main catalyst demand for services via wireless network [5].

Further, model growth will be driven by new IT service providers (ITSP). Along with hardware and networking systems, IT service is one of the leading technological areas that contribute to IT spending, in the Thai market, as system integration. IT services offered will be customized to support real business processes. In other words, this delivery model will generate better revenue from the ITSP side through the quality of services. Outsourcing 3.0, multi-vendor management services, as well as on-demand managed services are good representatives of this new delivery model. Thailand's IT services market grew by 14.2 percent year-on-year, reaching USD 1.8 billion.

There is a decrease of growth in the personal computer (PC) market. From 2013 onwards, the PC market tends to slow considerably due to smart devices. However, Thailand's PC market has expanded slightly forcing PC vendors and channel partners to adopt new strategies against new challengers [12].

Increasing popularity of smart phones and tablet PCs have attracted the attention of smart device manufactures. The operating system used by smart phones; see iOS and Android battling head to head to capture the most market share. Meanwhile, emerging Windows Phone 8 (WP8) and Blackberry (BB10) platforms needs to fight to establish their own place in the market. The challenges each platform faces will be different. IOS will have to deploy strategies to protect its market from the challenges of Android and Windows Phone, and Blackberry will inevitably have to present itself as an alternative OS [5].

Moreover, the popularity of smart devices such as smart phones and tablets PC has already influenced the usage of digital content for business content applications, entertainment and lifestyle-related applications. Quick downloading and interaction with digital content has become commonplace for a large portion of the population and this will continue to grow as well as impact both consumer and commercial usage of devices and data.

According to the aforementioned literature, e-industry has thus become the main concern of the Ministry of Information and Communication Technology over its national competitiveness. Strengthening IT entrepreneurs in a global market and paving the way for the AEC in 2015 are necessary for government agencies to figure out how to move Thailand's IT industry forward.

Therefore, this research was conducted to investigate the status of Thai IT entrepreneurs by sending out questionnaires, having interviews, focus groups and seminars. The study, moreover, investigated two respective ASEAN member countries, Malaysia and Myanmar, by focusing on investment policy and promotion strategies driving their IT industry. Malaysia is a robust country trying to leapfrog into the global economy, its country ranking has been growing every year. Myanmar is a newly emerging country freeing from military rule for over 20 years and economic sanctions. Recently Myanmar's new government attempted to motivate foreign direct investors from several countries, particularly Asian countries as Korea, Japan, China and India to invest in Myanmar-massive natural resources in gas and forests and IT workforce.

II. The Objectives and the Scope of the Study

The purpose of this study was to investigate and analyze Thailand's IT entrepreneurs, excluding the communication one and identify key strategies in creating a competitive advantage of Thai IT entrepreneurs. The areas of study were conducted in Thailand, Malaysia and Myanmar.

III. Research Methodology

This research was qualitative in nature and based on in-depth interviews, focus groups, questionnaires and seminars. Data were collected which relied further on primary and secondary data. Primary data included in-depth interviews of IT entrepreneurs, related government organizations, and IT Associations executives from Thailand, Malaysia and Myanmar. Secondary data included literature review, related research and articles, and related websites. SWOT was used to analyze the study and descriptive analysis was used to show the results of the study.

The researchers conducted the study by sending out over 1,000 questionnaires to IT entrepreneurs in order to learn the current status of Thailand's IT industry, including marketing, their problems, obstacles and demands. In-depth interviews were done through IT association members, government officers from related IT organizations, such as Software Industry Promotion Agency (SIPA), Ministry of ICT, and Board of Investment. After that the researchers organized the first focus group for the exchange of ideas and experiences. The researchers continued with trips to Myanmar and Malaysia for in-depth interviews through these IT association members, universities, and government agencies. After that the researchers organized a second focus group and relevant seminars to disseminate knowledge and results of the study.

The study was analyzed by using SWOT in order to embrace the guidelines for IT entrepreneurs and policy recommendations for government agencies and the Ministry of ICT.

IV. Findings

It was found that the Thai government has provided various benefits for any company engaged in IT development and the production of digital content, including animation and games, by luring investors a competitive salary range with a skilled workforce, a geographical advantage, and a domestic market with high growth potential for system integration and the 8-year-tax holidays. Moreover, it can be seen that a number of leading international software firms have entered the Thai market like Microsoft, Oracle, IBM, SAP and Symantec. Thai firms are not only entering the global market, mainly outsourcing, but are also forming partnerships with foreign enterprises especially in the digital content arena.

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These aspects allow Thailand to maintain a favorable climate for foreign investment in the IT and software industries. Furthermore, the Thai government has been instrumental in creating several organizations supporting and strengthening software industry, including Software Park Thailand, and Software Industry Promotion Agency (SIPA). Nevertheless, for the past ten years, even though over 30 IT and digital content associations have been emerged to strengthen their own industry, they still lack a rigid cooperation.

The study found that the large portion of revenue has arisen from mainly large-sized companies covering only 2 percent of the entire industry. The main problems that IT SMEs have been facing, are particular domestic and international marketing, business models, potential partners, financial assistance, innovation, continuation of government policy and measures, and a language barrier. Compared to ASEAN nations during 2012-2013, Thailand was ranked 39 out of 144 countries for a global competitiveness index but scored low on innovation and business sophistication among ASEAN nations [11]. However, the Thai IT workforce, compared to other countries, is more creative. Thai IT workers have more professional skills but they are not enough to serve the market demands and particularly lie low in English

As Myanmar has not been yet in a global competitiveness index, it has a geographical advantage with nearby massive market consumption like China and India except poor infrastructure. Regarding its ICT industry, the government has a strong policy to develop industrial estate with a fully equipped infrastructure and a tax exemption policy to lure foreign investors. The Federation of Chambers of Commerce & Industry and Myanmar Computer Professional Association are the main robust organizations supporting their ICT industry, working closely with their own government and having negotiating power. Further, the government has regarded IT education sector by launching Computer Studies University scattered around the country to produce an ICT skilled workforce.

Malaysia is one of the leapfrogging countries for a global competitiveness and was ranked number 21 ahead of Thailand [11], [14]. This country's rank skips every year. It was noted that Malaysia is very strong in the area of ICT infrastructure, trade, investment policy, various types of funds, skilled labor and innovation. Malaysia has a rigid policy for motivating direct foreign investment by having launched various campaigns and promotions, especially on creative economy which it claims to create added value to its economy. Malaysia Super Corridor (MSC), the National ICT Association of Malaysia (PIKOM) and Multimedia University are major agencies forcing its IT industry. Still, Malaysia is facing shortages of an IT workforce and has small market consumption. This has made Malaysian IT entrepreneurs spearhead to the international market.

V. Discussion

To be able to penetrate the ASEAN market or a global market, it is imperative for government to consider IT entrepreneurs for enhancing its competitive advantage by studying other countries both horizontally and vertically at micro and macro levels. For example, the macro level includes cultural perspective, infrastructure, GDP per capita, investment policy and measures, IT budgets and political stability; the micro level on business models and business partners, venture capital, institutional stability, product differentiations and IT skilled workforce. All these factors have affected national trade and investment. Moreover, a comparative study of other foreign markets can guide IT entrepreneurs to create market opportunities internationally. The Thai government is thus a driving force moving forward Thailand's IT entrepreneurs to create a competitive advantage.

Further, the government sector needs to formulate policy and measures to strengthen Thai IT entrepreneurs. The government also should act as a facilitator in assisting them rather than regulating them. Key strategies include solid infrastructure in assisting IT SMEs and research studies on the ICT industry of targeted countries, such as their cultural perspective and market research. Business matchmaking programs needs to be supported continuously to find appropriate partners who will push the industry forward into the global market.

In addition, Thai IT entrepreneurs have limited funds and loan opportunities. Various types of funds should be provided to SMEs such as soft loans, mezzanine funds, co-production funds or venture capital which helps SMEs expand their opportunities and create innovation to sustain their businesses. Tax exemption measures still stimulate IT entrepreneurs.

Human resource development for Thai IT entrepreneurs includes seminars and training program on business models, business negotiating skills, business plan writing and English proficiency. IT professional institutes, both degree and non-degree levels, should be launched to create more IT-skilled workers to enhance IT productivity under the Ministry of Information and Communication Technology rather than Ministry of Education.

VI. Conclusions of the Study

The government, particularly the Ministry of Information and Communication Technology (MICT) and Board of Investment are the driving force in enhancing the competitive advantage of Thailand's IT entrepreneurs. Thailand's national scheme includes various types of funds, and training program such as English, negotiation skill, and business plan. Investment policies and measures on tax exemption and infrastructure should continue. In addition, IT entrepreneurs should be encouraged to have innovation, appropriate business models, and market opportunity expansion.

Thailand market is quite small, so AEC will strengthen Thailand's ability to expand its market into the global economy. Furthermore, government should guide IT entrepreneurs to pursue IT development through the main cluster approach of the country such as logistics, agriculture, or tourism for supporting and strengthening those industries. The increase of older citizens in an aging population, political instability, an unbalance of income distribution, number of IT

skilled workforce, understanding of market and culture, and infrastructure are all factors and concerns of which IT entrepreneurs should be aware of.

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