

THE FUTURE OF THAILAND'S LOGISTICS COMPANIES

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ABSTRACT

Logistics companies are well established in Thailand. They service trading companies within Thailand and beyond its borders. There is tough competition in an ever increasing global complex world, in which mega-trends will greatly influence societies, businesses, and logistics firms. As one of the ten members of the Association of Southeast Nations (ASEAN), Thailand faces the imminence of the ASEAN Economic Community (AEC) in December 2015, which presents challenges and opportunities. ASEAN becomes a single market and production base, which, with near-zero customs barriers, will enable easier flow of goods and services as well as of investment, capital, and professionals. This will also help ASEAN countries to become more integrated in the global economic community. AEC has tremendous implications for logistics companies in Thailand, which has a geographically advantageous central position, and which could become the transport hub. There is a need for well-educated, multi-skilled graduates, to take a variety of jobs in logistics companies.

บทคัดย่อ

บริษัทลอจิสติกส์มีฐานที่มั่นคงในประเทศไทย เพราะเป็นผู้ให้บริการบริษัทต่างๆ ทั้งในและนอกประเทศ เนื่องจากการแข่งขันที่รุนแรงในโลกที่ซับซ้อน ทำให้แนวโน้มใหญ่ในโลกใบนี้มีอิทธิพลอย่างมากต่อสังคม ธุรกิจ และบริษัทลอจิสติกส์ การที่ประเทศไทยเป็นหนึ่งในสิบประเทศสมาชิกของสมาคมประชาชาติแห่งเอเชียตะวันออกเฉียงใต้ (อาเซียน) ซึ่งเข้าร่วมในสมาคมเศรษฐกิจอาเซียนที่กำลังมาถึงในเดือนธันวาคม พ.ศ. 2558 ถือเป็นเรื่องท้าทาย และนำมาซึ่งโอกาสต่างๆ โดยอาเซียนจะเป็นตลาดและฐานการผลิตร่วมกัน เพราะการที่กำแพงภาษีศุลกากรลดลงจนเกือบจะเป็นศูนย์ ส่งผลให้เกิดการส่งผ่านสินค้าและบริการที่ง่ายขึ้น รวมถึงการส่งเสริมการค้า การลงทุน และวิชาชีพต่างๆ ซึ่งจะช่วยให้ประเทศสมาชิกอาเซียนสามารถบูรณาการเข้ากับการเป็นประชาคมเศรษฐกิจโลกได้มากขึ้น การเป็นสมาคมเศรษฐกิจอาเซียนส่งผลอย่างมากต่อบริษัทลอจิสติกส์ในประเทศไทย ซึ่งมีความได้เปรียบจากสภาพภูมิศาสตร์ที่ตั้งอยู่ส่วนกลางของภูมิภาค ทำให้มีโอกาสที่จะเป็นศูนย์กลางทางการขนส่ง จึงก่อให้เกิดความต้องการผู้สำเร็จการศึกษาที่มีความรู้ ทักษะรอบด้านเพื่อรองรับต่อการทำงานที่หลากหลายในบริษัทลอจิสติกส์

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INTRODUCTION

It is a paradox of our modern world that the more we achieve the faster we have to run. The more agile and lean we become, the less spare there is in our companies to survive misfortune. The more we satisfy customer demands, the higher their expectations. All of us, manufacturers, logistics providers, suppliers, customers, are caught in an ever increasing cycle. Technology provides and globalization pressurizes: one can enable, the other can enfeeble. Fierce competition is now the norm, within and across borders. But new techniques and strategies, and human cognitive skills, are the mediating influences which can be our drivers into a successful ever-changing future.

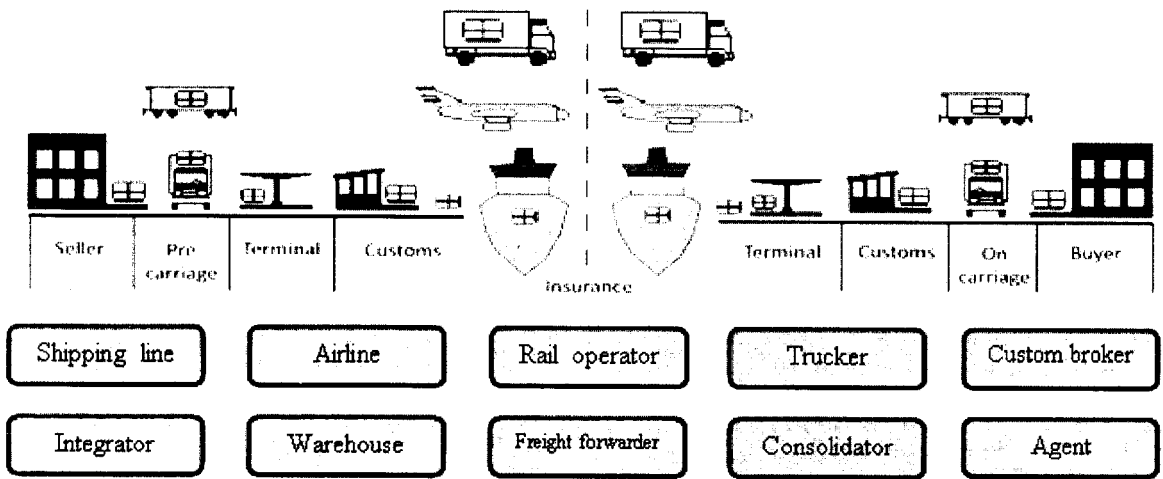
Logistics companies are in the thick of this. They have to work and think hard to maintain and expand their business as third-party logistics providers. The following sections explore the challenges that they and all firms in Thailand face; challenges from the world market and from the soon-to-be ASEAN single market known as the Asean Economic Community (AEC) which begins on 31 December 2015. The AEC involves Thailand and nine of its neighbours. The implications of this are considered, and the possibility of Thailand being the transport hub of AEC, especially through its unrivalled geographical position in ASEAN.

PLAYERS IN THE LOGISTICS INDUSTRY

Logistics and supply chains affect all aspects of our lives, and without them many of the goods and services we enjoy would not be possible. They also have a major economic effect on nations and societies (Grant, 2014). Logistics Service Providers exist because of a need by other firms to outsource their logistics activities; they transfer selected operations. They do this for several reasons: cost reduction, operational constraints, and access to specialised experience (Nordigarden, 2007). A major reason is to free the outsourcer to focus on its firm's own core competencies by divesting itself of what is considered to be non-core (McCarthy and Anagnostou, 2004). Selecting a logistics company needs great care, as there are many varieties and different levels and types of expertise. Massimiliano, Tuck, and Hague, (2007). It should be expected and demonstrated that a logistics provider is a specialist, with greater knowledge, more investment in specific software and hardware, and greater efficiency (Quinn, 1999).

Many types of organization are part of the logistics industry, including exporters and importers, road and marine transport operators, warehouse storage, third party logistics providers, distribution centres, and customs brokers. Hertz and Alfredson (2003) said that logistics firms which transformed from only transportation into being multi-functional service providers should be called Advanced 3PLs and usually perform better. Various types of logistics providers are shown in Figure 1.

Figure 1: The Variety of Players in the Logistics Industry



Source: Centre for Logistics Research: Thammasat University

It is obviously a sophisticated interconnected system, aimed at supporting supply chains, and enhancing trade, in efficient and effective ways.

HIGHLIGHTS OF MEGA TRENDS IN 2020

The macro trends in the world are global, sustained, economic forces of development that impact business, society, culture, and personal lives. What is happening is defining our future world. Mega trends have a different meaning and impact for different industries, companies, and individuals. These macro trends are:

Aging Population

Which causes a shrinking population, and emerging businesses for the elderly

Globalization

Which increases liberalization and expands trade

Urbanization

The emergence of new mega-cities, particularly in emerging markets
 60% of world population will live in around 500 urban cities
 Expansion of infrastructure and transportation networks

Technological Development

The internet will be a breeding ground for completely new industries
 Big impact on information technology, biotech, nanotech, and energy

Health and Environment

Will drive change in lifestyle, creating new industries
 Renewed focus on corporate policy and social responsibility

These trends will influence the growth and development of the logistics and transportation industry for the next 5 – 10 years, in the following ways.

- # The market will continue to expand
- # There is need for an emerging market strategy
- # There is need for network expansion to capture the new market opportunities.
- # Agility and speed-to-market will become even more crucial.
- # Logistics providers with integrated capability will have the upper hand.
- # There are environmental considerations.

The global growth rebound, after, the financial crises which began in 2008 in USA and Europe, and developed in many other countries, will be only modest. USA growth will speed up, but European growth will be sluggish at best. China will continue to grow, but at a slower rate. Other emerging markets are likely to slowly improve. Unemployment rates in the developed world will remain high. The financial problems and a slow rebound have led to excess capacity in shipping lines and airlines. The overall impact is felt in high competition coupled with low profit margins. A consequence is the imperative of a shorter market cycle.

This slow growth in a highly competitive world, cries out for company survival strategies. There at least four choices: Cost Leadership, Differentiation, Partnership, and Acquisition strategies. Each has to be analysed and evaluated for how it fits the characteristics of a particular firm. Logistics providers, and other businesses in Thailand, have to select a strategy quickly, if they have not already done so, to engage in the immediate challenges and opportunities of their intimate involvement in AEC.

THE ASEAN ECONOMIC COMMUNITY (AEC)

The Association of Southeast Asia Nations (ASEAN) was formed in August 1967 by the ‘Bangkok Declaration’ at a meeting of representatives of the original five countries, Indonesia, Malaysia, Philippines, Singapore, and Thailand. The secretariat is in Jakarta, Indonesia. For almost two decades these five were the only members. Since then it has acquired five more neighbours, Brunei, Cambodia, Laos, Myanmar and Vietnam.

In December 2015, ASEAN becomes a single market and production base which will enable easier flow of goods and services as well as investment, capital, and people. The decision is in Section 9 of the AEC Blueprint agreed at the ASEAN Summit Meeting in Singapore in 2007 (ASEAN, 2008). Unlike the European Community, it will not be a monetary and currency union, as the ten countries will retain control over those vital functions. With a wider purpose, AEC will help ASEAN countries to have greater power in dealing with the global community, and facilitate their integration into the world economic community (Amador, 2014). The official motto for AEC is: ‘A Community of Opportunities’, and there is an official anthem.

The AEC market should create free trade, minimize transaction costs, and maximize trade. AEC would become an important global trading region, as a regional production hub favorable to inter-regional trade. It enhances the existing ASEAN+3 (China, Japan, Korea), and ASEAN+6 (plus India, Australia, New Zealand). Competition will increase, leading to lower prices to consumers, better quality

services, and better transfer of knowledge and skill from within and beyond the region in such aspects as business organization and management, through foreign participation (Trairatvorakul, 2013).

AEC will provide Thailand with a market five times bigger than its own, and nine times its population, available from its strategically central geographical position through its borders with neighboring countries. For example, this will enable it to become involved in Myanmar's natural gas supply, and Laos' water-power electricity supply, and provide it with access to coal and oil in Indonesia, and oil in Brunei and Malaysia (Channak, 2013).

It has taken ASEAN 47 years to reach this stage. It has been suggested that ASEAN has two distinct groups: one inward-focused caught between China and USA rivalry, worried about foreign-made goods, and the other outward looking, taking a regional view, making its own decisions (Setboonsarng, 2012). Malaysia's commitment to free trade has been questioned as it uses subsidies for welfare projects and mega-projects. Indonesia has protective mining laws. Myanmar and Thailand are beset with internal political problems. Singapore is the favored destination of professionals. Philippines is worried about the effect on its agricultural sector. Each country has its own legal system, some with a basis in English or American law, and it has been mooted that AEC should design its own model legal system (Jikkham, 2013).

AEC is a single regional common market of the ten ASEAN countries. AEC creates a competitive market of about 620 million people. Its geographical area is 4.5 million square kilometers. Its GDP in 2013 was US\$ 1.843 trillion. Its GDP per capita was US\$ 3,071, and GDP growth was 5.89%. Foreign investments in ASEAN were US\$ 63,928 million. If ASEAN were a single entity, it would rank as the world's seventh largest economy (SCIF, 2013). The Australia & New Zealand Banking Group (ANZ, 2015) expects trade in AEC to soar within the next 15 years, to US\$5 trillion from intra-regional trade, and US\$3.7 trillion from trade with China, Europe, Japan and USA. The ANZ report says that greater integration within ASEAN is essential to realize this potential. Indeed economic integration has become a necessity as investors prefer large markets, and individual ASEAN countries will find it hard to compete with the likes of China, Japan and India; with AEC, the region becomes a mega-market (Tan, 2015).

Yet, with all that promise, ASEAN's diversity is so wide that the idea of a cohesive ASEAN community seems like a dream. It would be difficult to find another 10 countries that are more dissimilar, but there is an organic process driving them together, not necessarily at the speed once intended. For example, the pace of regulatory harmonization is frustratingly slow, and government mindsets need to change. December 2015 should be seen as a milestone on the way, not an arrival (Tan, 2015). However, it should be remembered that all trade agreements, including EEC and WTO, had initial (and continuing) problems. It is natural that a new partnership has to find its way and settle irritations. Many practices and processes have been updated in preparation. For example, there are ASEAN Rules of Origin for goods to earn preferential export tariffs, and these Rules have been updated for AEC.

The master plan for AEC connectivity has three major aspects: Physical, Institutional, and People-to-People. Physical Connectivity involves a transportation network and

short sea shipping. It also involves transport itself, ICT, and energy. Institutional Connectivity involves agreement for trade liberalization and facilitation, customs integration, and a regional transport agreement. This includes multimodal transport, facilitation of goods in transit, and interstate transport. People-to-People Connectivity involves easing visa requirements for ASEAN nationals, and a mutual recognition of the key enablers of AEC development as a facilitator for economic integration.

Mutual Recognition Agreements (MTA) have been signed by AEC countries to ease the free movement of professional and skilled labour across borders. Those to whom it applies are doctors, nurses, architects, accountants and other professionals, who will be able to have their qualifications recognized throughout EAC. However, obstacles such as visa restrictions and language requirements could be obstacles. Lower skilled workers will not have the same opportunity, although that can be irrelevant as some of the more prosperous (and aging) countries such as Thailand need such workers, legal or not.

AEC IMPLICATIONS FOR THE LOGISTICS INDUSTRY

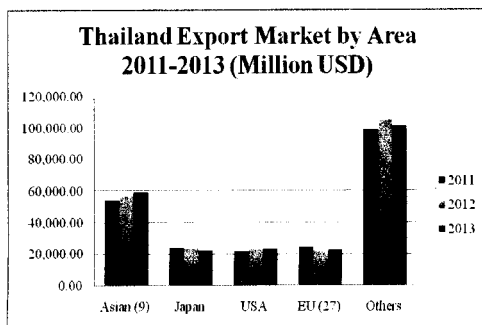
The main five implications are: Free flow of Goods; Regulatory Change; Network Improvement; Logistics Industry Liberalization, and Freer Movement of Professionals.

Free Flow of Goods, and Regulatory Change.

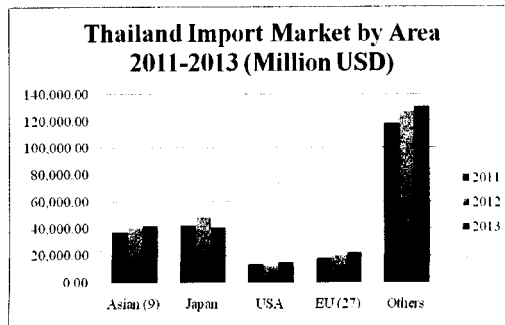
Trade between these ten countries is set in the context that AEC will have the 3rd largest population, after China and India. The easing of barriers will lead to the growth of trading among AEC countries. Some industries have been given temporary non-compliance, as is the case for the Thai insurance industry which has been given until 2020 to liberalize its restrictions (Channak, 2013). The Figure below shows which AEC countries are export and import partners.

Figure 2: Thailand Export- Import Market

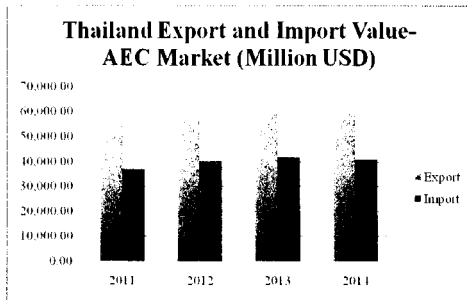
2a.



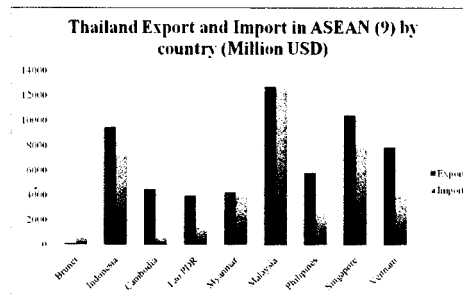
2b.



2c.



2d.



Source: Bank of Thailand (2014)

Research by Aggarwal and Park (2014) found that customs procedures and inspections were the biggest hindrance to cross-border trade in ASEAN. The demand for documentation, with different classifications in each country, was a frustrating waste of time. Differing regulations for trucks also caused delay; Singapore ranked ‘high’ in ‘logistics friendliness’, Brunei and Thailand were ‘good’, with the rest being ‘average’ or ‘weak’.

There is much scope for manufacturers to improve on transportation, storage, and payment systems. Internet access is very poor in some countries, and only one-third of the Myanmar population has electricity (World Bank, 2014).

Regarding customs duties on imports following regulatory change, the free trade agreement is based on four criteria:

- *to have simple harmonized and standardized duties
- *to reduce transactional costs;
- *the integration of ASEAN into a single market and production base;
- *to enhance export competitiveness.

In general, the eventual aim is to have 0% customs duties within ASEAN, with no exceptions for subsidized, restrictions, and ‘sensitive’ goods. However, some commodities are regarded as ‘sensitive’, that is, very economically important to one country or another which feels the need for some protection. For these, the import duty should be a maximum of 5%. Examples, all at 5% are:

- BRUNEI: coffee and tea
- CAMBODIA: poultry, live fish, some fruits, vegetables and plants
- LAOS: live animals, bovine, beef, poultry, some fruits, vegetables, rice, tobacco
- MALAYSIA: some live animals, bovine, poultry, eggs, some fruits, vegetables, tobacco
- MYANMAR: nuts, coffee, sugar, silk, cotton
- PHILIPPINES: some live animals, bovine, poultry, tapioca, corn.
- THAILAND: coffee, potato, copra, cut flowers
- VIETNAM: some live animals, poultry, eggs, processed meat, sugar
- SINGAPORE and INDONESIA: None

For the four less developed countries, Cambodia, Laos, Myanmar and Vietnam, zero import duty is deferred until 2018 at the latest.

Network Improvement

There is a need for supply chain integration across ASEAN. Some of its countries have made remarkable increases in national wealth, mostly based on manufacturing, and the resulting middle class provides a thriving domestic market. However, the challenge now is to develop world-class supply chain expertise, consistent quality, and effective infrastructure (Elliott & Catto-Smith, 2014).

Some ASEAN countries drive on the left, some on the right. Road quality and extent vary. The Trans-Asian Highway, 38,400 km, is almost complete, a notable achievement, but some strategic links are missing and surface quality varies. Rail networks vary: Thailand's system has hardly changed in 100 years, but fortunately this is now being seriously addressed, with huge investment planned. There are 47 sea ports in ASEAN, but only Malaysia, Singapore, and Thailand are world-class, the others varying in their quality of handling cargo.

Hard infrastructure is a major target. This means that infrastructure development and network connectivity are needed as major milestones in AEC development. This will fuel the growth of land transport and cross-border activities. Road transportation will be gaining the highest share of total transportation, with improved efficiency and lower cost. Also involved will be Information & Communication Technology (ICT) connectivity, and energy, a sort of international grid.

Logistics Industry Liberalization

Through liberalization of restrictive regulation, there will be an increase in equity participation by investors, up to 70%, in logistics companies. In some countries it is 49% or lower, to prevent foreign control of a business. AEC gives the opportunity for firms in each of the ten countries to establish a presence beyond its present borders. Of course, that can also be seen as an incoming threat from the other countries entering the local market. Small logistics players are at risk of losing market share or being acquired. While the market will grow within AEC, logistics providers will be forced to look beyond local markets and adapt to upcoming changes over the next several years.

Various logistics firms in Thailand have expressed their eagerness for AEC. The Thai Logistics & Production Society reports this sector's growth and how entrepreneurs will thrive in this greater market and customer base, if they enhance the capabilities of human resources to face the coming competition. Quality services need strategic planning (Nualkaw, n.d.).

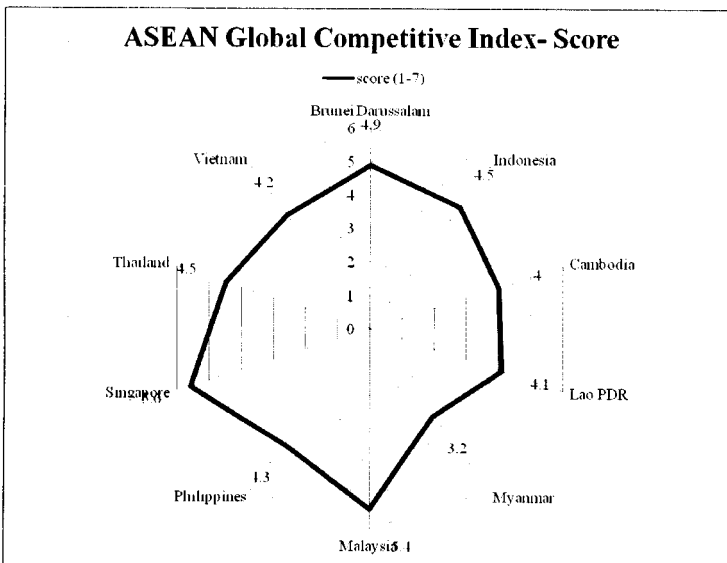
Thailand's huge modern container port, Laem Chabang, aims to be a transportation and logistics hub in AEC. It has three missions: to expand the port and related businesses, to develop its resources, and to raise its management standard. This includes a Rail Transfer Terminal, a coastal terminal, and improved traffic arrangements within the port. It will also become capable of berthing post-Panamax ships, and increase its multimodal facilities (Hatthawong, n.d.).

THAILAND AS THE TRANSPORT HUB FOR ASEAN

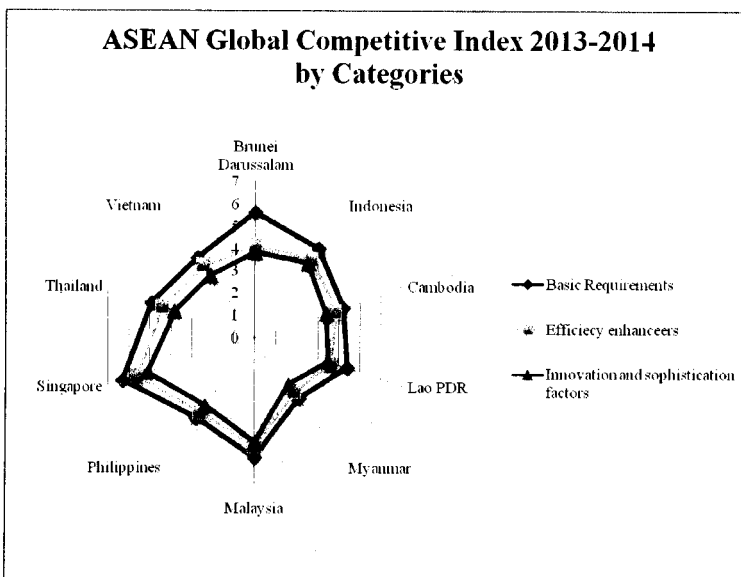
Thailand is the second largest economy in Southeast Asia, after Indonesia. It ranks second in competencies after Singapore and Malaysia. It is the 4th Southeast Asian nation in terms of GDP per capita, after Singapore, Brunei, and Malaysia. Thailand ranks 3rd or 4th in most of the key parameters, as shown in the Figure below.

Figure 3: Pentagon diagram Ranking AEC members and Thailand Competitiveness Index 2013-2014

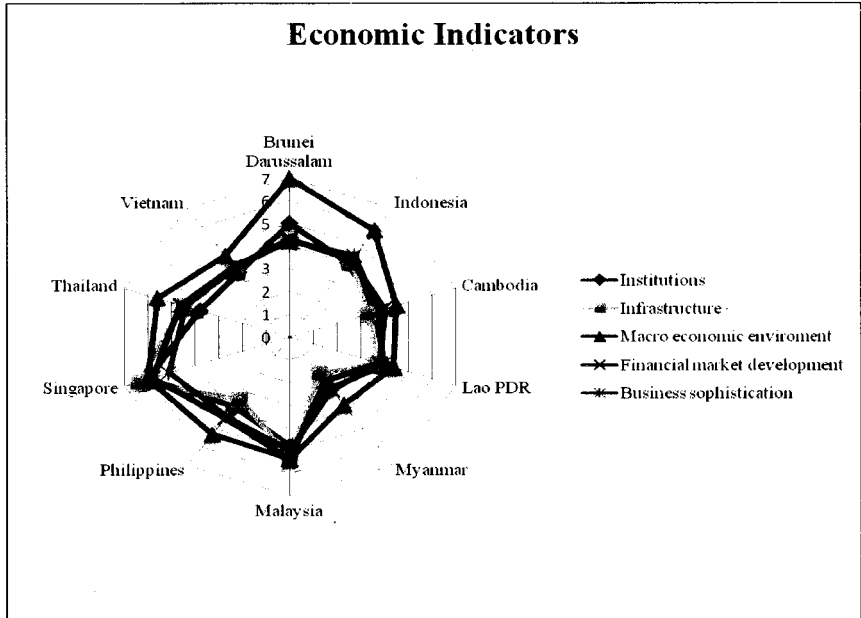
3a. ASEAN Global Competitive Index- Overall



3b. ASEAN Global Competitive Index by categories



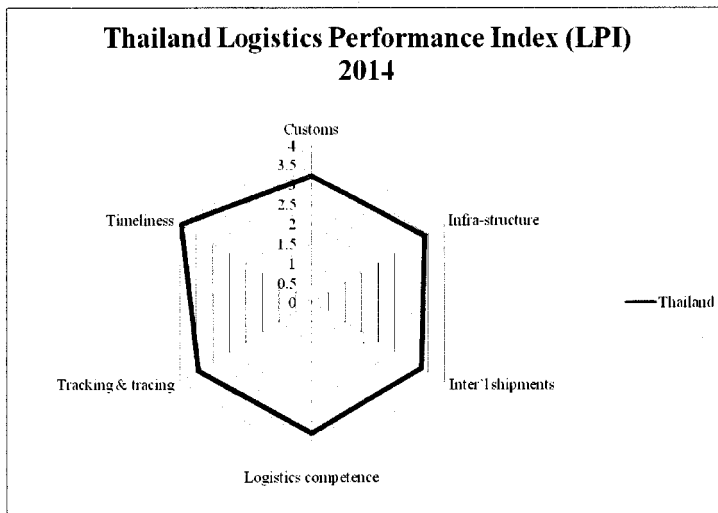
3c. Selective Competitive Index



Source: Schwab and Sala-i-Martin (2013)

Thailand's logistics competencies, and that of other countries, are shown in the three Figures below.

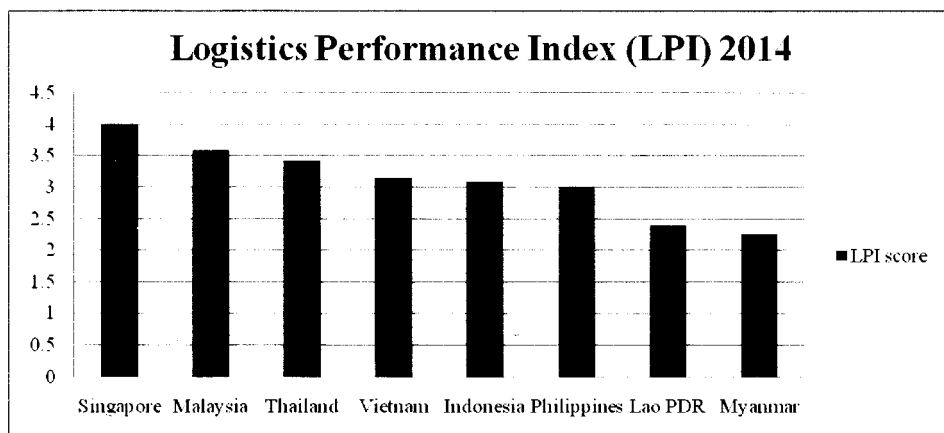
Figure 4: Thai Logistics Competencies



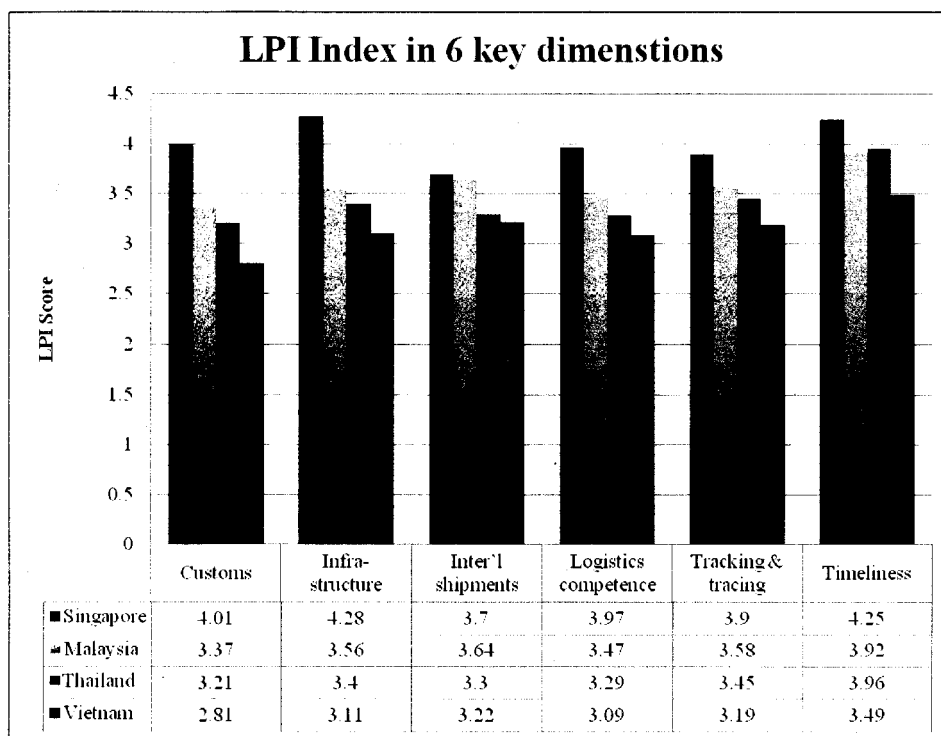
Source: World Bank (2014)

Figure 5: Overall Logistics Performance in AEC Countries

5a.



5b. LPI Index from Top 4 in ASEAN



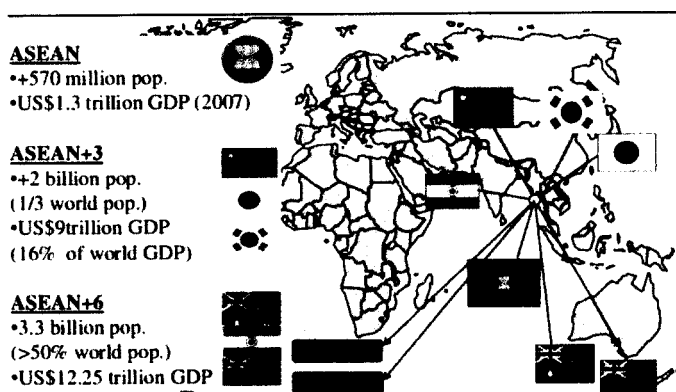
Source: World Bank (2014)

In mainland ASEAN, Thailand has geographic advantages, surrounded by Myanmar, Laos, Cambodia and Malaysia. Thailand is positioned at strategic crossroads.

- Myanmar: 10 of Thailand's provinces in its northern, central and southern regions link with Myanmar, with a longest total length of 2,400 km.
- Laos: 11 provinces of Thailand's northern and northeast regions connect with Laos, with a total length of 1,810 km.
- Cambodia: 7 provinces of Thailand's northeastern and eastern regions share common borders with Cambodia, a total length of 725 km.
- Malaysia: 4 provinces in Thailand's southern region share common borders with Malaysia, with a total length of 647 km.

Thailand has the unique advantage of being situated in the heart of Southeast Asia, with access to AEC countries, and through ASEAN+3 with China, Japan, and Korea, and through ASEAN+6 with India, Australia, and New Zealand as shown in the figure below.

Figure 6: Thailand's Advantageous Location

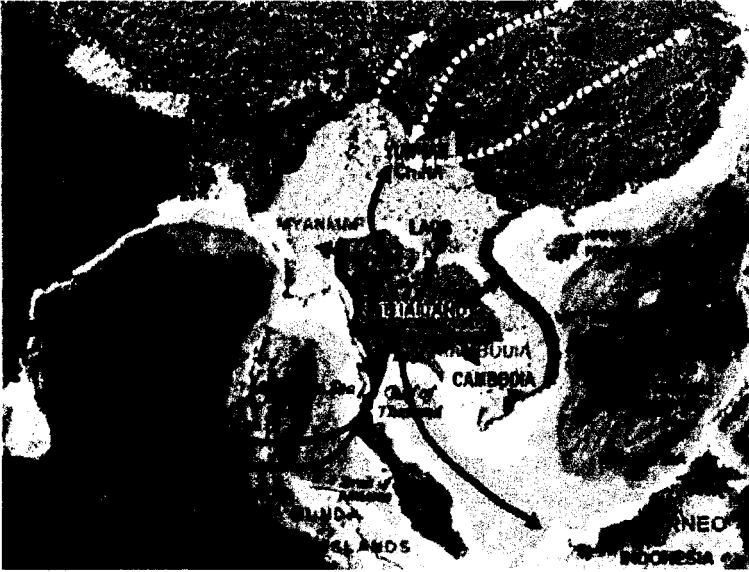


Source: Ms. Ajarin Pattanapanchai: Deputy Secretary General, Thailand Board of Investment

This concept is also designed to promote a new trade lane for Thailand's connectivity to global markets through 5 strategic gates:

- North Gate: Myanmar, Laos, and China
- Northeast Gate: Laos, Vietnam, China and East Asia
- West Gate: Myanmar, India, and the BIMSTEC member countries (Bangladesh, India, Myanmar, Sri Lanka, Thailand, Bhutan, Nepal, a geographically contiguous trading bloc)
- East Gate: Cambodia, Vietnam, and China
- South Gate: Malaysia, Singapore and Indonesia

Figure 7: Thailand in the Wider Geographical Context



Source: Logistics Development in the GMS by Assoc. Prof. Ruth Banomyong (PhD) Thammasat Business School

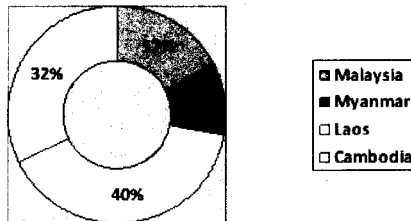
There are four economic corridors which pass through Thailand.

- Route 3: North-South Economic Corridor*
South China – Laos – Myanmar – Thailand
- Route 2: East-West Economic Corridor*
Myanmar – Thailand – Laos – Vietnam
- Route 1: Eastern Economic Corridor*
Thailand – Cambodia – Vietnam
- Route 10: Southern Coastal Economic Corridor*
Thailand – Cambodia – Vietnam

Cross-border transportation has already expanded Thailand's border trade with Malaysia, Myanmar, Laos, and Cambodia. The proportions of this trade with those four countries are shown in the Figure below.

Figure 8: Thailand's Border Trade by Country

Thailand border trade



Thailand border trade (Million Baht)	2012	2013	2014
Malaysia	90,115.59	74,700.45	42,328.92
Myanmar	- 40,520.21	-37,967.18	-26,373.89
Laos	86,102.08	85,073.60	96,810.73
Cambodia	67,753.97	74,339.49	78,986.60
Total	203,451.43	196,146.36	191,752.36

Source: Border trade service center, Department of foreign trade: Ministry of commerce

THE LOGISTICS INDUSTRY IN THAILAND

There are several factors which are influencing logistics in Thailand. Outsourcing is on the rise. There is higher demand for 4PLs (a logistics specialist hired to coordinate two or more logistics outsourcing providers). Cross-border transportation will grow at a faster pace. There is a shortage of labor. There is high competition in this fragmented market. A consequence for Small-Medium Size local logistics companies is that they will need to redefine their strategy to survive. These factors will now be explored.

Outsourcing

With the need for performance improvement in difficult market environments, logistics outsourcing is one of the common strategies adopted by companies. The major benefits are as follows.

- * It improves working capital and reduces overheads
- * It frees the firm to focus on core competencies.
- * It provides flexibility and control.
- * The firm benefits from the efficiency, expertise, and technology of logistics providers.

Strategic Choices

Local logistics firms in Thailand have a choice of strategies which can enable them to survive and expand. These are:

- Develop a one-stop service capability.
- Leverage core competencies.
- Become a niche player in a specialized segment.
- Mergers and Acquisitions of competing firms.
- Form strategic partnership to create scale, synergy, and competency.
- Become an outsourcing unit of an international logistics company.
- Expand geographically.

This is how local logistics providers can stay competitive:

Develop a clear roadmap

Play on strengths

Develop talent.

Improve efficiency

Drive cost

THE LOGISTICS JOBS MARKET FOR GRADUATES

What are the prospects for graduates considering joining logistics firms? Good, because production companies are increasingly realizing how aspects of logistics can improve operational and business performance. There is market expansion due to economic growth and the outsourcing trend. Yet there is a shortage of experienced human resources, leading to a high demand for skilled labor and specialists. More customers for logistics firms will need well educated clever entrants to provide the services they want. Senior and experienced logisticians are at a premium, because scarce. An expanding market, providing more jobs leads to a better career structure.

There are three types of employer in the logistics field: Logistics Service Providers; Manufacturers and Traders with a Logistics or Supply Chain Department; and Logistics Consultancies. The next Figure shows the various functions.

The following are typical entry-level roles in a Logistics Provider for new graduates.

Communications and Marketing

- Solution design and development
- Sales & Business Development
- Marketing Executive
- Key Account Officer
- Account management

Warehouse and Transport

- Transport Co-ordinator
- Warehouse Co-ordinator
- Inventory Controller
- Warehouse Analyst
- Load Planner
- Transport Analyst

Operations

- Client/Customer service Consultant
- Operation Co-ordinator
- Program management
- Pricing / Carrier management
- Booking
- Procurement
- Product development

Business Process Improvement

- Process Analyst
- Lean Specialist
- Process design
- Programmer
- IT support
- Systems Analyst

Business Support

- Supply Chain Analyst
- Logistics Analyst
- Implementation Executive

Figure 9: Logistics Organization Chart

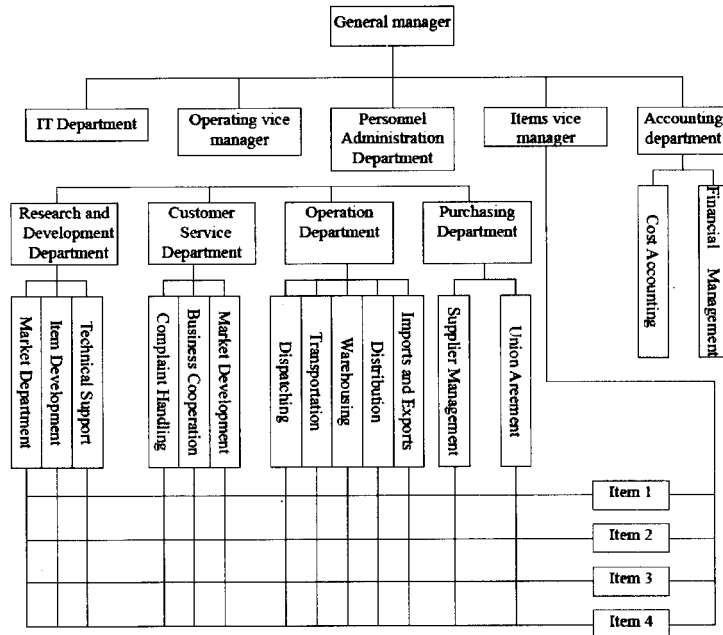


Figure 1. Class Matrix logistics organization structure

Source: adapted from figure 1. Class Matrix logistics organization structure. Zhou & Xie (2010).

Project Management

The general recruiting requirements for all these jobs are: a willingness to learn, adaptability, interpersonal skills, multi-tasking skills, service minded, attention to detail, sense of urgency, and self motivated.

CONCLUSION

Membership of the ASEAN Economic Community is a glittering opportunity for Thailand's economy and people. Logistics firms need to evaluate and apply appropriate strategies to become smart enough and capable enough to prosper from this liberalized area with its greater competition. This is a spur to Thailand with its great advantage of the central geographical position, with five member countries on its borders, and many others in a contiguous geographic group, accessible through these five neighbours or directly by sea. As its motto says, AEC is a 'Community of Opportunities', in itself, its member countries, and the wider world.

REFERENCES

Aggarwal, Vinod K; Park, Bora (2014). The ASEAN Economic Community, 2015: Implications for supply chain management. *Berkeley BASC News*.

- Amador III, J., Teodoro (2014). A united region: The ASEAN Economic Community 2015 (www.rappler.com).
- ANZ (2015). ASEAN the next horizon. Report delivered at the 12th ASEAN Leadership Forum, Kuala Lumpur, 27 April.
- ASEAN (2008). ASEAN Economic Community Blueprint. www.asean.org/archives.
- Bank of Thailand (2014). International Trade. Retrieve from: <https://www.bot.or.th/English/Statistics/EconomicAndFinancial/ExternalSector/Pages/StatInternationalTrade.aspx>
- Channak, Angsana (2013). Preparing insurers in Thailand for the ASEAN economic community. *Journal of Risk Management and Insurance*, 17 (71- 85).
- Elliott, Barry; and CattoSmith, Chris (2014). The need for ASEAN supply chain integration. *Supply Chains* magazine, 6 June (<http://supplychains.com>).
- Grant, David, B., (2014). Trends in logistics and supply chain management: A focus on risk. *Journal of Supply Chain Management: Research and Practice*, 8(2) 1-12.
- Hatthawong, Sutthinan (n.d.). Laem Chabang pklrt aims to be ASEAN logistics hub. *Freight Max*, Issue 23, p19.
- Hertz, S., and Alfredson, M. (2003). Strategic development of third party logistics providers. *Industrial Marketing Management*, 32, 139-149.
- Jikkham, Patsara (2013). Indonesia works to spread AEC knowledge. *Bangkok Post*, 9 April, p4.
- Massimiliano, R., Tuck, C., & Hague, R. (2007). Make or buy analysis for rapid manufacturing. Loughborough University, England: *Rapid Prototyping Journal*, 13(1), 23-29
- McCarthy, I., & Anagnostou, A. (2004). The impact of outsourcing on the transaction costs and boundaries of manufacturing. *International Journal of Production Economics*, 88(1), 61-71.
- Nordigarden, D. (2007). *Outsourcing in the wood product manufacturing sector*. Linkoping University, Sweden, PhD Dissertation.
- Nualkaw, Suwat (n.d.). Logistics growth of 7%, ready for AEC. *Freight Max*, Issue 23, p21.
- Quinn, J.B., & Hilmer, G.F. (1994). *Strategic outsourcing*. Sloan Management Review, 43-55.
- Schwab K. & Sala-i-Martin X. (2013). *The Global Competitiveness Report 2013–2014: Full Data Edition*. World Economic Forum Geneva. Retrieve from: www.weforum.org/reports/global-competitiveness-report-2013-2014
- SCIF (2013). ASEAN Community in Figures, Asean Secretariat. (www.asean.org).
- Setboonsarng, Chayat (2012). Multilateralism key to Asean's success. *Bangkok Post*, 6 December, p8.
- Tan, Elaine (2015). Unleashing ASEAN's full potential. *China Daily*, May 1-7, p16.
- Trairatvorakul, Prasarn (2013). Attributes of quality; global citizens in the next decade. Speech delivered at the *International Conference on General Education*, Bangkok, 12 January.
- World Bank (2014), Powering up Myanmar: More than 7 million new electricity connections needed by 2030. *The World Bank News*, October.
- World Bank (2014). *Logistics Performance Index: International Scorecard*. Retrieve from: <http://lpi.worldbank.org/international/global?sort=desc&order=Logistics+competence#datatable>
- Zhou X. & Xie X. (2010). A Study on the Organization Structure of Third-party Logistics Enterprise Servicing for Manufacturing Enterprise. *International Journal of Business Management*.5(1), p203.