

Economic Factors and Settings for Market Transformation in Asia

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Abstract - The Asian region as an economic powerhouse gains more importance every year: the population is becoming more affluent and the role of its markets is increasing on a global scale. This article analyzes the level of economic development of Asian countries. To determine the said level, the corresponding indicators were used, among them, GDP and GDP per capita, exports and imports, key partners in trade relations, the Economic Complexity Index, and the Logistics Performance Index. To order countries by the Economic Complexity Index and the International Logistics Performance Index, quadrants are constructed. The results indicate that Japan, Singapore and South Korea are countries with high scores for both indexes. Countries interested in importing goods but not holding strong positions in the Economic Complexity Index are India and Thailand. The main factors influencing the Asian market development are people's diligence, international trade and investment. Along with investments, global production networks and supply chain management are crucial for the Asian market.

Keywords - market transformation, economic development, supply chain management, Economic Complexity Index (ECI), Logistics Performance Index (LPI)

1. Introduction

The rapid economic growth of the leading countries of Central, South and Southeast Asia lays ground for expanding political and economic dialogue with the developed countries. It also serves good news for those willing to increase the volume of cooperation in the field of trade, economy, science, technology and humanitarian support. In recent years, Asian countries have intensified their participation in existing and creating new political and economic ties with different countries. This entails a transformation of the Asian market.

The overall goal of transforming any market is to increase the share of the most efficient products and services in target markets [1]. This goal is accomplished through fundamental, sustainable changes in target markets. Market transformation is based on doing business with key market players, namely manufacturers, distributors, retailers and consumers. Market transformation is an attractive model for achieving implementation of efficient technologies on a larger scale.

The growing importance of Asia is not only that a region is a place where the most important and dynamically developing economies of the world (China, Indonesia, Japan, Korea, and Vietnam) are located. The region is strengthening its economic coherence. In general, the Asian continent has achieved one of the most profound economic transformations in the history of mankind. At the same time, Asia is the fastest growing region in the world [2, 3].

Global dynamics and an unpredictable environment provide tremendous opportunities for market development, but this also creates challenges for companies [4]. In order to compete successfully in the global market, companies focus their attention on creating a strong collaborative supply chain. Effective collaboration with supply chain partners requires organizations to share valuable information in real time. The current-day advances in information and communication technology made it possible to jointly and effectively prepare all participants for global diversification, especially in Asia.

Sustainability is an important topic in supply chain management research and practice [5]. The basic idea behind supply chain management is that optimized value creation can bring more value to organizations than the individual firms could create on their own. Transparency and information sharing between supply chain partners facilitate such cooperation.

In the light of marketization and globalization, the emerging Asian markets are influenced by numerous global factors, such as the business cycle, economic and monetary policy uncertainty, financial and commodity markets, and investor sentiment [6, 7]. The supply chain resources are increasingly becoming a part of a strategic set needed to achieve a competitive advantage [8]. The recurring inconsistencies associated with supply chain resilience suggest that companies with a global presence are struggling to improve environmental, social, and economic outcomes in global supply chains [9].

Global supply chains pose unique challenges. They have distinct geography that involves the dimensions of production, distribution and consumption. [10]. This geography, at the heart of many sourcing strategies, is often neglected by supply chain managers, or at least scholars investigating supply

chain management. The supply chain technology (SCT) facilitates information transfer within and across firm boundaries [11]. However, institutional environments in emerging markets give rise to challenges that inhibit the implementation of SCT and the consequent realization of its benefits. Unfortunately, there is a lack of understanding as to the nature or the extent of these implementation challenges. A grounded theory study was conducted in the emerging market of India. Based on the analysis of interviews with 50 supply chain managers, it revealed that early adopters of SCT experience significant and numerous unmet expectations associated with SCT implementation.

The purpose of this study is to analyze the level of economic development of Asian countries and to identify factors entailing significant transformations in the Asian market.

2. Materials and Methods

This study was conducted on materials relating to Asian countries with different levels of economic development. To determine the level of a country's development, GDP and GDP per capita are most often used. GDP is the sum of the gross value added of all resident units engaged in production (plus any taxes on products and minus any subsidies not included in the value of products) [12]. It is calculated without deductions for the depreciation of fixed assets or for depletion and degradation of natural resources. The GDP growth rate is often used as an indicator of the overall state of the economy. In broad terms, an upward trend in real GDP mirrors good economic performance.

The Economic Complex Index (ECI) is one of the predictors of GDP per capita growth. ECI is a more accurate measure than traditional measures of competitiveness management, such as the Global Competitiveness Index [13]. ECI measures the production capabilities of large economies. The ECI takes data on exports and reduces a country's economic system into two dimensions: the 'diversity' of products in the export basket, and the 'ubiquity' of products in the export basket. Diversity is the number of products that a country can export competitively. Ubiquity is the number of countries that are able to export a product competitively [14].

The Logistics Performance Index (LPI) measures the country's performance across the supply chain of logistics services. LPI offers a quantitative and qualitative assessment. It helps build profiles of logistics friendliness for countries and provides an assessment from two perspectives: national and international.

LPI ranks countries on 6 dimensions of trade. The data used in ranking comes from logistics professionals [15]. Components analyzed in the International LPI are custom, infrastructure, the ease of arranging

shipments, quality of logistics services, tracking and tracing, and timeliness.

To order countries by the Economic Complexity Index and the International Logistics Performance Index, quadrants were constructed. The top right quadrant is for countries with high ECI and high International LPI. These are countries producing diverse and usually high-tech products. In logistics friendliness, they occupy high positions. In the lower left quadrant is for countries with low ECI and low International LPI. These countries do not supply products to the external market and are not able to provide logistics services at the appropriate level. This quadrant is for countries with a low level of economic development. The top left quadrant is for countries with high International LPI but with low ECI. Such countries are interested in importing products, but their exports are not necessarily essential. The lower right quadrant is for countries with high ECI but with low International LPI.

3. Results

The economic prospects of Asia vary greatly across countries. In some countries, including Singapore, South Korea, Thailand and India, economic conditions are mostly positive. It can be seen that GDP growth remains stable after 2015 (Figure 1). On the contrary, in Japan and China, GDP is higher, but the growth rates have deteriorated noticeably after 2012.

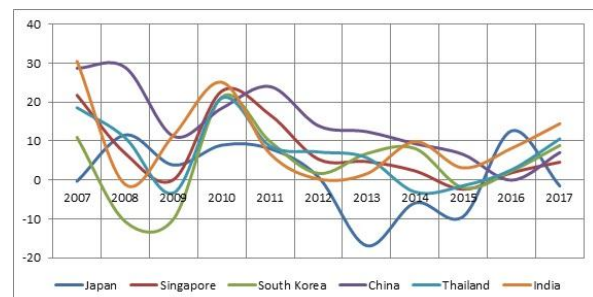


Figure 1. GDP growth rates

GDP per capita is the gross domestic product divided by the average annual population [12]. GDP per capita growth rates are stably positive only in China. Given the large size of the Indian economy, its position is still moderately favourable, especially compared to other developing regions. The GDP per capita growth rate increased to 13% in 2017. In Japan and China, which are representatives of large economies, the growth of GDP per capita slowed down (Figure 2).

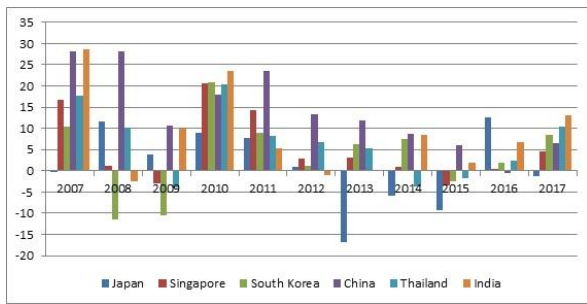


Figure 2. GDP per capita growth rates

Figure 3 shows ECI for studied countries. Japan has a relatively high ECI because of diversified exports (Figure 4), with a relatively large share of medium and high technology products (about 57%). The cause is the presence of transnational companies. The main export items of Japan are passenger cars, integrated circuits, spare parts for cars, industrial printers, and passenger and cargo ships.

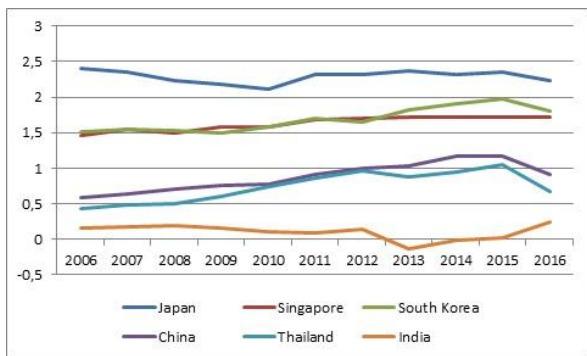


Figure 3. ECI

South Korea and Singapore show a slight increase in ECI over the years 2006-2016, while China and Thailand increased their ECI from 0.5 to 1.1 over the same period. By contrast, India shows a relatively low ECI due to exports, which are highly concentrated in sectors producing Precious Metals, Chemical Products, Textile and Mineral Products.

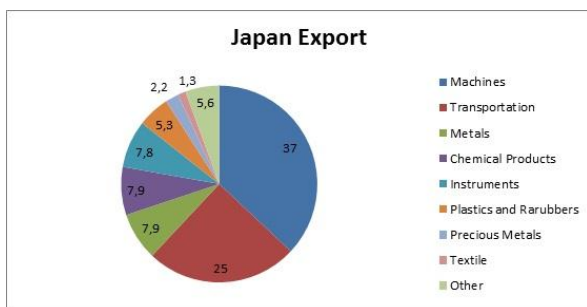


Figure 4. Japan Exports

Thus, as of 2016 (Figure 5), only Japan with a developed economy has ECI of 2.3. India and Thailand have to solve this problem through an integrated political approach. Policies aimed at strengthening the business environment, with a focus on industry issues, can have a positive impact on investment prospects. Changes in trade policy can

significantly reduce the increased trade costs in the region and facilitate access to foreign resources for exporters. Moreover, policies on foreign direct investment and multinational firms can stimulate not only financial flows but also production linkages, technology transfer, and labour force training.

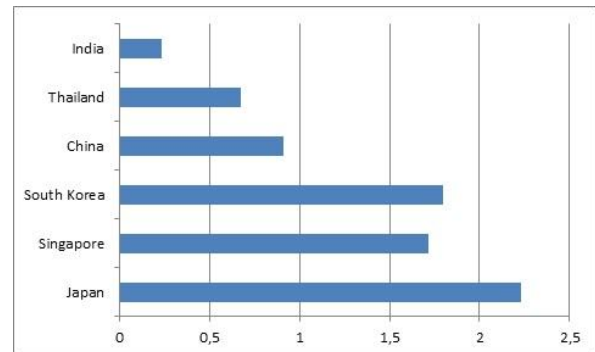


Figure 5. ECI 2016

The studied countries build their trade relations mainly with the Asian countries (Figure 6). The main export destinations of Japan are Asia (56%) and North America (24%). Then, 61% of imports come from Asia [16]. Singapore exports 70% of its products to Asian countries. These are mainly refined petroleum, integrated circuits, computers, oxygen amino compounds, and packaged medication. The main importing countries of Singapore are China, Malaysia, the USA, Japan and other Asian countries [16]. At the same time, 69% of products are imported from Asian countries. The main export destinations of Thailand are the USA, China, Japan, Australia and Hong Kong. Thailand also does the export: 60% of products are exported to Asian countries, while the import is 76% [16]. South Korea exports 61% of products to Asia and 63% of imports come from the same area [16]. The main export items of China are computers, broadcasting equipment, telephones, integrated circuits and parts of office machines. The country imports crude oil, integrated circuits, gold, iron ore and cars. The main export destinations of China are the USA, Hong Kong, Japan, Germany and South Korea. The imports come mainly from the USA, South Korea, Japan, Germany and other Asian countries.

The main export destinations of India are the United States, the United Arab Emirates, Hong Kong, China and the United Kingdom. A total of 45% of exports go to Asian countries. The main sources of imports are China, the United States, the United Arab Emirates, Saudi Arabia and Switzerland. The share of imports from Asian is 59%.

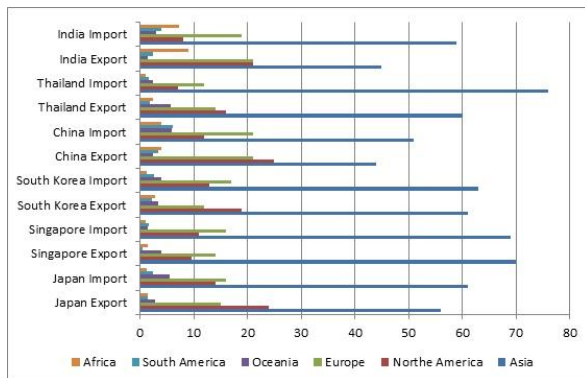


Figure 6. Exports/imports across countries

Let us position the countries by ECI and International LPI (Figure 7). The top right quadrant is for countries with high ECI and high International LPI. These countries are Japan, Singapore and South Korea. There are no countries in the lower left and right quadrants. These supposed to be countries with underdeveloped logistics infrastructure. The upper left quadrant is for countries interested in importing products but without a strong position in ECI. These are India and Thailand. China is on the dividing line by ECI.

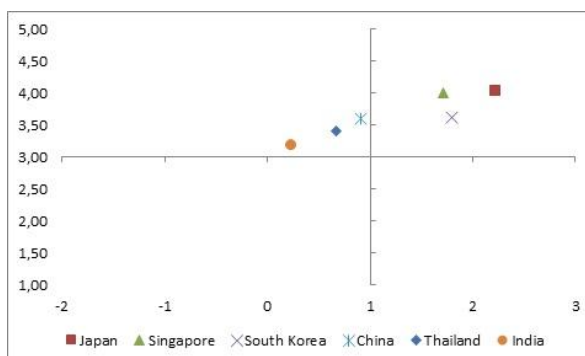


Figure 7. Asian countries in ECA and International LPI ranking

The main factors influencing Asian market development are people's diligence, international trade and investment. After World War II, Japan attracted a significant amount of American investment and became a world-famous manufacturer of technological products. South Korea, Taiwan and Singapore have taken up the baton. In recent years, the price of Chinese labor has risen. In response to this rise, large factories are increasingly being built in Thailand, Vietnam, the Philippines and Malaysia. Global production networks and supply chain management are as important as the investment. Global Value Chains mean that products are produced in one country, raw materials are bought in another country, and goods are sold in the third investor-country. Experts note that the economic growth of Asian countries largely depends on how involved they are in global production networks. Global production networks allow companies to differentiate sales and production, and provide impetus to development in

regions. Supply chain management allows you to keep a competitive advantage.

4. Discussion

Today, East Asia is the fastest-growing region in the world. Asia's GDP rises by 7 per cent per year [2]. East Asia is the centre of the wider Asia-Pacific region, which also includes Oceania and Pacific America. Most of the countries from these three regions are members of the Asia-Pacific Economic Cooperation Forum, the world's largest economic group, accounting for about 60 per cent of the global economy. In the 1990s, the volume of trade and investment transaction flows exceeded the transatlantic flows for the first time ever. This made the Asia-Pacific region the main centre of economic attraction in the international system. Until the mid-1990s, regional economic ties that linked East Asia and countries in the Asia-Pacific region were based primarily on business interests. However, after the East Asian financial crisis of 1997–1998, governments in the region began to develop more substantial economic diplomacy. This led to the creation of new international agreements, frameworks and organizations. By the beginning of the 2010s, regionalism in East Asia and the Asia-Pacific region was developing in different directions. Nevertheless, serious challenges for regionalism in this part of the world are still ahead [2, 17].

Exploring the remarkable political and economic changes sweeping Southeast Asia, some authors took as their starting point the trend, albeit uneven, toward democratization [18]. They focused specifically on Asian democracy, a form that has been adopted by Southeast Asians to suit their own particular needs. They investigated the unique Asian style of democracy, which borrows democratic political institutions and meshes them with the cultural patterns specific to each country. An assessment touch upon the prospects for democracy in that nation as well as an evaluation of whether democratic regimes are necessary for developing successful economies and societies in the new international era.

The global value chain concept gained popularity as a prerequisite for the active development of Asian economies [19]. The key dynamics of contemporary global supply chains and their implications for global production and trade are illustrated by: (1) the consolidation of global value chains and the new geography of value creation and capture, with an emphasis on China; (2) the key roles of global supermarkets and private standards in agri-food supply chains; and (3) how the recent economic crisis contributes to shifting end markets and the regionalization of value chains.

5. Conclusion

The economic importance of the Asian region is growing every year: the population is becoming more affluent, and the role of local politicians in the world arena is becoming stronger. Over the past decades, the newly industrialized countries, the active and influential players, have entered the international economic and political playground, claiming their place in the world markets. They achieved impressive successes so far. These countries include South Korea, Taiwan, Hong Kong, and Singapore. In general, we can speak about the emergence of a special new industrial model of economic development. By key indicators, such as economic development and GDP, growth in foreign trade, new jobs creation, population welfare, etc., newly industrialized countries are increasingly ahead of a number of old industrialized countries. Therefore, it is natural that these have clout in the global economy and international politics.

Japan, Singapore and South Korea hold top positions in ECI and International LPI: these countries have both indexes high. India and Thailand are countries interested in importing products but not holding strong positions in ECI. China occupies the middle position in ECI.

The main factors influencing Asian market development are people's diligence, international trade and investment. Global production networks and supply chain management are as important as the investment. The degree of involvement in global production networks greatly affects the economic growth of Asian countries. Skilful supply chain management allows keeping a competitive advantage in sales markets.

Reference

- [1] Valentine, C., & Attamah, N. (2017). *Comparative Analysis of the Effectiveness of Coub-Douglas, Real Business Cycle, and Keynesian Growth Models in Determining Economic Growth in Nigeria*. *Journal of Empirical Studies*, 4(1), 1-14.
- [2] Dent, C. M., "Paths ahead for East Asia and Asia-Pacific regionalism", *International Affairs*, Vol. 89, No. 4, pp. 963-985, 2013.
- [3] Loukil, K. (2017). Technological Innovation in Central and Eastern Europe: What's the Contribution of Innovation Policy?. *The Economics and Finance Letters*, 4(1), 1-8.
- [4] Sivarak, O., *Global Supply Chain in Asia. Internationalization and Managing Networks in the Asia Pacific*, Chandos Publishing, pp. 99-121, 2017.
- [5] Busse, C., Meinschmidt, J., Foerstl, K., "Managing Information Processing Needs in Global Supply Chains: A Prerequisite to Sustainable Supply Chain Management", *Journal of Supply Chain Management*, Vol. 53, No. 1, pp. 87-113, 2016.
- [6] Dong, X., Yoon, S.-M., "What global economic factors drive emerging Asian stock market returns? Evidence from a dynamic model averaging approach", *Economic Modelling*, 2018.
- [7] Lien, D., Lee, G., Yang, L., Zhang, Y., "Volatility spillovers among the U.S. and Asian stock markets: A comparison between the periods of Asian currency crisis and subprime credit crisis", *The North American Journal of Economics and Finance*, Vol. 46, pp. 187-201., 2018.
- [8] Ellram, L. M., Tate, W. L., Feitzinger, E. G., "Factor-Market Rivalry and Competition for Supply Chain Resources", *Journal of Supply Chain Management*, Vol. 49, No. 1, pp. 29-46, 2013.
- [9] Koberg, E., Longoni, A., "A systematic review of sustainable supply chain management in global supply chains", *Journal of Cleaner Production*, 2018.
- [10] Khan, Y., & Mingyi, W. (2018). How the GCC Economic Crises Effect Labor Migration: Evidence from Pakistan. *Asian Journal of Economics and Empirical Research*, 5(2), 139-146.
- [11] Saldanha, J. P., Mello, J. E., Knemeyer, A. M., Vijayaraghavan, T. A. S., "Implementing Supply Chain Technologies in Emerging Markets: An Institutional Theory Perspective", *Journal of Supply Chain Management*, Vol. 51, No. 1, pp. 5-26. 2014.
- [12] Vlasov, P., & Kiseleva, A. (2017). Ideology and Distortions of the Entrepreneurial Concept. The Results of Conflict in Organizational Culture. *International Journal of Emerging Trends in Social Sciences*, 1(2), 90-96.
- [13] Economic Complexity Index <https://www.revolvy.com/page/Economic-Complexity-Index>
- [14] How and why should we study 'economic complexity'? <https://ourworldindata.org/how-and-why-econ-complexity>
- [15] International LPI. The World Bank. <https://lpi.worldbank.org/international>
- [16] The Observatory of Economic Complex <https://atlas.media.mit.edu/en/>
- [17] RJ Muscat - 2016 The Fifth Tiger: Study of Thai Development Policy: Study of Thai Development Policy Published 2015 by Routledge 2 Park Square,
- [18] Neher, C. *Democracy and development in Southeast Asia: the winds of change* Pub. New York, pp. 244, 2018.
- [19] George, M., & Georgios, M. M. (2017). The Expansion of the Contemporary Economic Role of Crete throughout its Extensive History. *International Journal of Economics, Business and Management Studies*, 4(1), 17-37.