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The Convergence of Banking Efficiency in ASEAN-5 Banking

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The Convergence of Banking Efficiency in ASEAN-5 Banking

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ABSTRACT

The convergence hypothesis, which is developed in the context of commercial banking in ASEAN-5 countries and has been applied in this study. Apart from that, Phillips and Sul convergence test is a nonlinear model which contains time varying components. Therefore, this nonlinear model is very crucial as it investigates the possible convergence or divergence over time of commercial banks in ASEAN-5 in terms of efficiency performance and observes the heterogeneous transition paths across countries commercial banks. From this study, results on the research indicate that commercial banks from Indonesia are converging among themselves. Indonesian government intervention to aid its banking sector leads to increment in efficiency. As a result, the banking sector in Indonesia becomes more resilience to another financial shock in 2008 and makes the commercial banks efficiency and performances sustainable. Another observation from this study implies that ASEAN-5 commercial banks tend to converge together. From the results, commercial banks from Malaysia and Singapore are converging towards the same efficiency path. Commercial banks from Philippines and Thailand are also converging under the same efficiency performance. All in all, it is crucial to see the efficiency performance of commercial banks in ASEAN-5 economies whether they are converging or diverging towards a common path. This is because it allows for these countries namely Malaysia, Singapore, Indonesia, Thailand and Philippines to take a similar action to any economic and financial shock to avoid the action of ones' country from jeopardizing stability of banking sector in other ASEAN countries.

Keywords: ASEAN-5, convergence, banking sector, Non-linear Factor Model

Penumpuan Kecekapan Perbankan dalam Perbankan ASEAN-5

ABSTRAK

Hipotesis konvergensi, yang dikembangkan dalam konteks perbankan komersial di negara-negara ASEAN-5 dan telah digunakan dalam kajian ini. Ujian penumpuan Phillips dan Sul merupakan model linear yang mengandungi tempoh masa yang berbeza komponen. Model in penting bagi menyiasat penumpuan atau perbezaan yang mungkin dari masa ke masa mengikut bank perdagangan dalam ASEAN-5 dari segi prestasi kecekapan dan memerhati laluan peralihan heterogen bank perdagangan seluruh negara. Keputusan kajian menunjukkan bahawa bank-bank komersial dari Indonesia adalah tertumpu di antara mereka dan campur tangan dari kerajaan Indonesia untuk membantu sektor perbankan membawa kearah kenaikan dalam kecekapan. Hasilnya, sektor perbankan di Indonesia menjadi lebih berdaya tahan untuk satu lagi kejutan kewangan iaitu pada tahun 2008 dan mampu membuat kecekapan bank perdagangan serta prestasi yang mampan. Kajian ini menunjukkan bahawa bank perdagangan ASEAN-5 cenderung untuk berkumpul bersama-sama. Bank perdagangan dari Malaysia dan Singapura menumpu ke arah jalan kecekapan yang sama. Bank perdagangan dari Filipina dan Thailand juga tertumpu di bawah prestasi kecekapan yang sama. Sehubungan itu, ia adalah penting untuk melihat prestasi kecekapan bank perdagangan di negara-negara ASEAN-5 sama ada mereka menumpu atau mencapai ke arah jalan yang sama. Ini kerana ia membolehkan negara-negara iaitu Malaysia, Singapura, Indonesia, Thailand dan Filipina untuk mengambil tindakan yang sama dengan apa-apa kejutan ekonomi dan kewangan untuk mengelakkan tindakan negara dari menjejaskan kestabilan sektor perbankan di negara-negara ASEAN yang lain.

Kata kunci: *ASEAN-5, penumpuan, sektor perbankan, Model Faktor tidak-linear*

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER 1

INTRODUCTION

1.1 Introduction

A bank is recognized as financial institution licensed to receive deposits and make loans. It also provides financial services, such as wealth management, currency exchange and safe deposit boxes. The importance of the banking sector is promised claiming banks are the main channel of savings and allocations of credit in an economy (Levine, (1997); Dell' Ariccia and Marquez, (2004)). The banking sector provides important financial intermediation function by converting deposits into productive investments, King and Levine (1993a, 1993b). According to Arun and Turner (2004) stated that in other developed nations, financial markets and banking sector works in unison to channel funds, meanwhile in developing countries, financial markets are undersized and sometimes completely absent.

1.2 Banking in Asia

According to Sufian (2010) explain in other developing economies, the banking system plays an important financial intermediary role as in the Malaysian economy. The banking sector controls most of the financial flows and accounts for more than 70 percent of the financial system's total assets. Therefore, it is reasonable to expect that an efficient and profitable banking sector may help ensure an effective financial system which is conducive to economic growth and development.

The financial systems of Indonesia, Singapore, Malaysia, Philippines and Thailand have long been dominated by commercial banks. In all countries, the commercial banking sector is dominated by a few large domestic commercial banks with extensive branch networks.

Foreign banks, which are often disadvantaged by many restrictions, account for a relatively small amount of bank assets and mostly provide trade finance to multinational firms. Other large groups of financial institutions are the finance companies in Malaysia and Thailand, and the merchant banks in Korea.

Finance companies and merchant banks faced more restrictions and engaged in different activities than commercial banks. Thai finance companies, for example, were not allowed to mobilize demand or time deposits, but were only permitted to issue fixed-term promissory notes and certificates of deposits to fund their businesses. In view of these restrictions, Thai finance companies could not effectively compete for most of the commercial bank mainstream business and were largely left to engage in riskier activities. Commercial banks had more freedom to choose their business mix and faced similar restrictions across countries. For the above reasons, we exclude finance companies and merchant banks from our analysis and focus only on commercial banks.

The local commercial banks in all five East Asian countries were originally set up by the State, a handful of families who controlled large enterprises (such as rice farms in the case of Thailand), or by trading houses. Despite attempts by the government to diversify the ownership of the local commercial banks, Indonesian and Thai commercial banks are still dominated by a handful of families. All the banks have powerful connections with the local and international business community and with the government.

In Korea, the largest banks are typically connected to a large conglomerate, the so-called *chaebol*, by acting as the main bank. The State is involved in the commercial banks through ownership of large savings banks that are important for channelling private savings to investment projects.

All five East Asian financial sectors had financial liberalization, a weak regulatory and supervisory framework, poor risk management and excessive lending in common. But there were differences in magnitudes and origins. In 1983, Indonesia started to liberalize its financial system after declining oil prices in 1982 and had led to a devaluation of the rupiah. The main financial sector reform was the dismantling of the credit ceiling system, which was imposed in the 1970s to control credit growth and money supply. The reform was directed to private banks only. For state banks, credit restrictions remained in place. In fact, Indonesian state banks had limits on their asset growth up to the crisis year 1997.

Montes *et al.* (1998) argued that the flexibility to extend credit led private banks to take on riskier projects, while state banks, hampered by cumbersome procedures in granting loans, were more successful in attracting deposits, as they owned large branch networks and were considered less risky by the public, who assumed an implied government guarantee. To foster competition, Indonesia introduced another financial reform package in 1988, which included the reduction of bank reserve requirements from 15 to 2 percent of assets and permitting public sector entities to place up to 50 percent of their deposits outside state banks.

Montes *et al.* (1998) reported that the introduction of these measures led to an explosive growth of new banks from 124 in 1988 to 244 in 1994. The increased competition, subsequently, led most of Indonesia's large conglomerates to set up or acquire at least one bank. As in the other countries, financial liberalization sparked a lending boom in Indonesia, with large exposures to the property development sector. Since the private banks showed the largest growth of loans during the 1990s and had significant cross-ownership links with other financial institutions and conglomerates, Montes *et al.* (1998) argues that they did not necessarily fare better in terms of their loan performance than did state-owned banks. In Thailand, financial liberalization in 1992 enabled commercial banks to borrow more freely in foreign currencies from abroad, which subsequently led to substantial borrowing from abroad and a high level of investments. Lauridsen (1998) reported that during the 1990-96 periods, the investment ratio was over 40 percent and that by August 1997 the foreign debt was about US$ 90 billion, of which US$ 20 billion was due by the end of 1997. The massive inflow of money caused a misallocation of investment resources and a boom-bust cycle involving property and stock markets. Lauridsen (1998) reported that loans from financial institutions to property developers tripled during the period 1992-1996 causing inflated assets in the real estate sector. Not only had the Thai commercial banks contributed to the lending boom, but the 91 Thai finance companies as well.

In Malaysia, major companies borrowed heavily from abroad as well, at least until 1994 when restrictions on foreign borrowing were put into place. However, compared to Thailand and Indonesia, a lower share of foreign borrowing was of a short-term nature and a higher proportion was hedged. But as in the other countries, Malaysia also seems to have mis-allocated investments. According to Jomo (1998), in the period 1992-96 more than 70 percent of bank lending in Malaysia has not been for investments in manufacturing, agriculture or mining, but for other purposes, most notably real property and share purchases.

The story of the Philippines slightly differs, since the Philippines entered the 1990s with an economic recession, while the other four countries seemed to fare well under export-led growth. The Philippine financial system has been small compared to the other four East Asian countries, because high inflation has discouraged household savings. In 1992, the Philippines agreed to a debt restructuring program based on the Brady plan which converted loans into long-term bonds and started to liberalize its financial system by easing the entry of banks. Financial liberalization also allowed unhanged foreign borrowings, which, as Lim (1998) notes, was attractive because the central bank’s policy of a stable currency made sure that domestic interest rates were above foreign rates. Financial liberalization without sufficient prudential regulation and enforcement by the central bank also led in the Philippines to an over exposure to risky loans, especially real estate loans, foreign borrowings and consumer loans to high risk groups.

1.3 Banking Efficiency Performance

Berger and Mester (1997) discuss the investigation of bank efficiency is important from both microeconomic and macroeconomic. Banking sector serves as an important part in ASEAN economies. The efficiency of banking sector influences the cost of financial intermediation and the soundness of financial market. Thus, an improvement in the banking performance represents a better allocation of financial resources which results in higher private investments that favors economic growth. Various studies have been made by researchers in this respect. These dimensions are difficult to estimate. As previous test conducted by Wang (2012) tests income convergence within the ASEAN and APT region using the panel unit root approach and finds that the original ASEAN countries show income convergence within the period of 50 years while within the period of 22 years, only three-member countries of ASEAN (Malaysia, Myanmar, and the Philippines) are found to support the existence of convergence. Cristobal-Campoamor and Parcero (2013) conduct through eastern Europe found out that first half of the period, liberalization leads to divergence of GDP per capita. However, the process reverses during the second half of the period. Therefore, an alternative approach is using data envelopment analysis (DEA) to fix this problem. DEA is a nonparametric method to measure the relative efficiency of a homogenous group of organizations (called decision making units, DMUs) that perform similar functions. Efficiency is an important attribute because all inputs are scarce. Thus, efficiency is one of the performance parameters that are theoretically underlies the whole performance of a company. The ability to generate maximum output with existing input, a measure of expected performance. At the time of measurement of the efficiency, banks are faced with the challenges of how to get optimal output level with the level of the current input or use minimum input level with a given level of output (Hadad *et al.*, 2003).

1.4 Background of Study

International structure had undergone a vast change throughout end of World War II, whereby according D.P Calleo (1996) stated the international structure was dominated by superpowers with a system called bipolar. This development of international system had affected other countries, as well as countries in Southeast Asia. Southeast Asian (SEA) countries constantly conform to current demands to ensure national security due to influenced by superpowers stratagem and competition in international level. According Mohammed Ayoob (1995), in the 1950s and 1960s a good number of SEA countries were newly ‘born’ after achieving independence from colonization. Due to the SEA countries were very young, these countries faced tremendous internal political instability, ethnic conflict, unity problem and weak security and defense system. According K.R Singh (1987), the problem faced by SEA countries had alerted and motivated SEA to consider a formation of a state or regional organization that can be an alternative for regional peace foundation. In the end 1950s and 1960s, the Southeast Asia region comprises of very young countries in terms of national development or nation building. The study mainly focuses on ASEAN-5 member’s country. The Association of Southeast Asian Nations or ASEAN was established on 8th August 1967 in Bangkok, Thailand. According to Ghazali Shafie (2002), the concept of establishment is open to create friendship with every country in the world regardless of political ideology so that peace and security in this region Is further guaranteed. ASEAN consist of 10th country, namely Indonesia, Malaysia, Philippines, Singapore, Thailand, Brunei Darussalam, Vietnam, Laos PDR, Myanmar and Cambodia. These starts with the signing of the ASEAN Declaration, also known as the Bangkok Declaration by foreign ministers of Indonesia, Malaysia, Philippines, Singapore and Thailand. ASEAN members keep increasing which included Brunei (joined in 1984), Vietnam (joined in 1995), Laos and Myanmar (both joined in 1997) and Cambodia (joined in 1999).

Figure 1: Map of Southeast Asia (ASEAN)
Source : https://i2.wp.com/von.gov.ng/wp-content/uploads/2017/06/ASEAN.jpg?resize=500%2C375&ssl=1

Figure 1 shows the map of ASEAN which consists of ten-member countries. The initial objective of establishment of ASEAN is aimed to accelerate the economic growth, social progress and development in the region and joining together to strengthen the foundation for a prosperous and peaceful community of Southeast Asian Nations. Secondly, ASEAN aims to promote regional peace and stability through rule of law in the relationship among countries members. ASEAN also promote collaboration and mutual assistance between member's country on matters of common interest in economic, social, cultural, technical, scientific and administrative fields. Thus, their aim is to maintain close and beneficial cooperation with existing international and regional organizations and to explore all avenues for closer cooperation among themselves.

Aslanyan *et al.* (2002) said that there are two key economic characteristics of ASEAN countries. First, most pursue policies of export-oriented growth directed toward markets outside the region. Second, the economies of ASEAN countries tend to be stratified between the relatively high-performing countries (Indonesia, Malaysia, Philippines, Singapore and Thailand) and the low-performing economies of a country (Brunei, Cambodia, Laos, Myanmar and Vietnam).

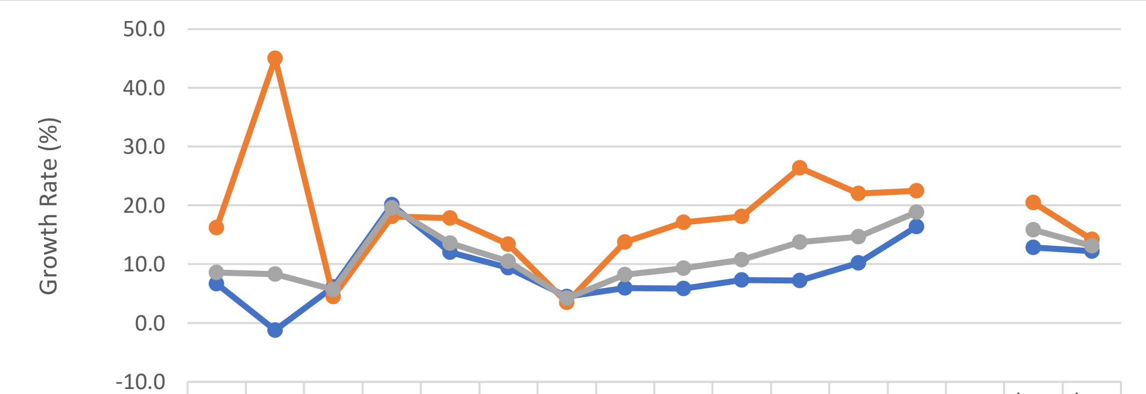
However, in these study, ASEAN-5 which include; Malaysia, Thailand, Singapore, Indonesia & Philippines were selected due to less study has been conducted within other ASEAN countries. Furthermore, the reason these countries had been chosen were due to their different economic status. The Asian Economic Community (AEC) known as "the realization of the end goal of economic integration" as envisaged in Vision 2020, declared in 1997. It is "a stable, prosperous and highly competitive ASEAN economic region in which there is a free flow of goods, services and investments, a freer flow of capital, equitable economic development and reduced poverty and socio-economic disparities." Therefore, to establishing the AEC and make it realization, ASEAN has agreed to adopt "the principles of an open, outward-looking, inclusive, and market-driven economy consistent with multilateral rules as well as adherence to rules-based systems for effective compliance and implementation of economic commitments."

1.4.1 ASEAN Banking Sector

ASEAN has taken a new step forward towards an integration which can be seen through banking market. ASEAN banking sector continues to be the high degree of government evolvement in financial intermediation. Those interactions led to a specific outcome across the region which, collectively, may restrain market development. First interaction is based on reliance on rules-based approaches. These rules-based were focus on achieving compliance with these rules. Whereby excessive reliance on rules-based supervision often detracts from supervisors' using their own judgment. Secondly is on limited supervisory independence. It can be elaborated through the insufficient or ineffective corrective action frameworks due to supervisors are challenged in disciplining the state and its agents. The Malaysia FSAP points to the need to address existing legal provisions that can undermine the operational independence of supervisors.

These ASEAN 5 countries take a slow step to develop by opening their banking industry, cross-border banking and the cross-border penetration of ASEAN-based banks within ASEAN. Reference made to year 2010, non-ASEAN-based commercial bank had either a branch or a subsidiary in all ASEAN member country. However, three ASEAN banks known as Maybank, Bangkok Bank, and United Overseas Bank from ASEAN member comprising of Malaysia, Thailand and Singapore has an operation in seven ASEAN member countries.

In contrast, global commercial banks have a large presence in the region. For example, Standard Chartered Bank has subsidiaries in seven-member country and representative offices in three. Meanwhile Citibank and HSBC also have subsidiaries in seven-member country. Therefore, in-order to compete effectively, ASEAN banks must develop financial resources and managerial capacity which meet international standards and achieve similar levels of regional penetration. Liberalization alone will not achieve the intended result of banking integration since some ASEAN banks will still fall short of national regulatory standards compared with foreign banks. According to Dayang Affizah (2011) ASEAN continuous effort to foster closer political ties as well as to strengthen economic cooperation are justified from its huge market opportunities, its democratic political belief (except Myanmar), and its closer proximity within the Southeast Asian region. In 1997, the ASEAN leaders adopted the “ASEAN Vision 2020” which envisaged a “concert of Southeast Asian nations, living in peace, stability and prosperity, bonded together in a partnership of dynamic development and in a community of caring societies” (ASEAN Secretariat, 2005; Economic Analytical Unit, 2006).



	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013		Jun-13	Jun-14
On-site	6.7	-1.2	6.1	20.1	12.0	9.4	4.5	6.0	5.9	7.3	7.2	10.2	16.4		12.9	12.2
Off-site	16.2	45.0	4.5	18.1	17.9	13.4	3.5	13.8	17.1	18.1	26.4	22.0	22.5		20.5	14.2
Total	8.6	8.3	5.7	19.6	13.6	10.5	4.2	8.2	9.3	10.8	13.8	14.7	18.9		15.9	13.1

Figure 2: Banking System Comparative ATM Growth

The banking system continues to improve its performance by capitalizing on the use of various electronic banking (e-banking) channels to cater the needs of a diverse and increasingly sophisticated market. However automated teller machines (ATMs) remain a key e-banking platform.

According to Figure 2, system’s ATM network growth is slow and shrunk at the end-Jun 2014. Off-site ATMs, nonetheless, grew at a faster rate by 14.2 percent compared to on-site ATM’s growth of 12.2 percent year on year. Throughout the history of the Philippines financial system, it has shown the characteristics of a developing financial system, where the system has shown the periods of moderate to extreme financial repression, followed by the