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Original Paper

Has Financial Integration of ASEAN and APEC Contributed to Economic Growth?

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Abstract

As globalization prevails, financial integration has been ongoing. The movement of globalization has occurred from the 1980s and a lot of attention has been paid to occurred issues from of aspects. This study focuses on whether financial integration in ASEAN and APEC promotes economic growth or not. These areas have attempted to tackle integration and cooperation and to achieve growth. Also, a global financial crisis occurred in the 1990s, and the 2000s made policy makers and business persons aware of potential contagion. Globalization sometimes has caused a contagion of financial crises. On the other hand, cooperation promoted recovery from the damaged economy in some areas. So the pros and cons have been examined, however, a definite answer whether financial integration is correct or not remains unknown. Using available data, empirical analyses are conducted in this study to examine the relationship between financial integration and economic growth. The empirical results show that financial integration has contributed to economic growth in ASEAN, however, this result cannot be applied clearly to APEC. The variety of participating countries in APEC may have affected the result. Moreover, there are some problems to be solved for sound economic growth for these areas.

Keywords

APEC, ASEAN, economic growth, financial integration

1. Introduction

After World War II, globalization occurred rapidly. In the 1980s, much deeper globalization along with liberalization occurred. This trend has not been limited to international trade and investment, and global financial transactions occurred rapidly from the 1980s. Under such circumstances, financial integration and cooperation has been ongoing. Not only ASEAN and APEC but also other agreements have been realized and conducted. The movements of globalization occurred from the 1980s and a lot of attention has been paid to these issuess. This study focuses on whether financial integration in ASEAN and APEC promotes economic growth or not. These areas have attempted to tackle integration and cooperation, and to achieve growth. Also, a global financial crisis occurred in the 1990s, and 2000s policy makers and business persons may have taken caution. For example, the Euro area experienced serious crises. South-American countries were also hit by crises during the 1980s.

ASEAN countries have matured and become financially integrated. Regional agreements under ASEAN have caused financial integration. Concretely, liberalization and development of financial services, capital account, and capital market have contributed to financial integration. On the other hand, while financial integration has been ongoing, ASEAN economies seem to be more integrated with some developed global financial markets located outside of the ASEAN. Liquidity, infrastructure, freedom from regulation are more attractive in global markets (Rillo, 2018).

ASEAN has aggressively promoted financial integration. The Asean secretariat (2007) stated "strengthening ASEAN Capital Market Development and Integration" in the blueprint (AEC 2015). They are; "i) Achieve greater harmonization in capital market standards in ASEAN in the areas of offering rules for debt securities, disclosure requirements and distribution rules; ii) Facilitate mutual recognition arrangement or agreement for the cross recognition of qualification and education and experience of market professionals; iii) Achieve greater flexibility in language and governing law requirements for securities issuance; iv) Enhance withholding tax structure, where possible, to promote the broadening of investor base in ASEAN debt issuance; and v) Facilitate market driven efforts to establish exchange and debt market linkages, including cross-border capital raising activities." These concrete measures are listed to promote financial integration.

In 2015, the Asean secretariat (2015) announced the blueprint for 2025. AEC 2015 pursued concrete financial market integration. On the other hand, AEC 2025 financial stability seems to be more emphasized. ASEAN summit in 2015 adopts the AEC 2025. They are; "Ensuring that the financial sector is inclusive and stable remains a key goal of regional economic integration. The financial sector integration vision for 2025 encompasses three strategic objectives, namely financial integration, financial inclusion, and financial stability, and three crosscutting areas (Capital Account Liberalization, Payment and Settlement Systems, and Capacity Building). Strategic measures include the following: Strengthen financial integration to facilitate intra-ASEAN trade and investment by increasing the role of ASEAN indigenous banks, having more integrated insurance markets, and having more connected capital markets. These will be supported by robust financial market infrastructure that is safe, cost-efficient, and more connected. Financial liberalization will be undertaken with greater regulatory cohesiveness to keep requirements for regulatory compliance to a minimum to reduce costs, while remaining prudent." Not only financial market integration but other aspects are included and these are intended to promote economic growth.

In APEC, The APEC Finance Ministers' Process (FMP) was established in the 1990s and has contributed to state regional macroeconomic and financial issues. Forums have been held for APEC members to discuss issues for APEC.

Ministers sometimes meet from the establishment. Recently Finance and Central Bank Deputies met and stated; "The strategic goals of the FMP are to promote sound and credible policies for: Sustainable, inclusive and broad-based growth and development in the APEC region; Macroeconomic stability in the APEC region; Prudent public finance management; Good corporate governance; Stable and efficient financial markets; Greater economic cooperation, integration, and openness among APEC economies; and Facilitation of economic and technical cooperation within the region in pursuit of the above goals; The FMP works closely with the APEC Business Advisory Council (ABAC) and the following key external partners: Asian Development Bank (ADB) Inter-American Development Bank (IADB) International Monetary Fund (IMF) Organization for Economic Co-operation and Development (OECD) World Bank Group (WBG)." Recent topics are different from ASEAN, however, cooperation has been ongoing and financial integration has been intended to promote. On the other hand, there are some concrete differences between ASEAN and APEC. In APEC, some large and industrialized economies are included. The large variety of countries in APEC seem to cause the difference and it should be analyzed with care.

This study uses some indicators for financial integration for ASEAN and APEC and empirical analyzes are employed to examine whether financial integration promotes economic growth or not.

This study is structured as follows. Following section 1, section 2 overviews existing studies and the purpose and contribution of this study are made clear. Section 3 provides information about preliminary points for empirical analyzes. Section 4 is a main part of this study and empirical studies are conducted. Based on the results, analyzes and evaluations of the empirical results are performed. Finally, this study ends with a brief summary.

2. Overviews for Financial Integration

There exist many studies which deal with financial integration. However, there are few papers which focus on ASEAN or APEC. Lack of data is one reason for this study. Moreover, common ideas have not yet been made and shared. There is room for further study.

There are many kinds of provided indicators of financial integration. Brezigar-Masten, Coricelli and Masten (2008) showed that financial integration in European countries contributed to a higher degree of financial development positively. Cunha (2019) found that an increasing degree of financial integration causes positive effects in economic recession terms on the global financial cycles. Amir, Lilian, and Bruno (2020) showed that industrialized economies show deeper levels of financial and economic integration than developing economies. Taghizadeh-Hesary, et al. (2019) suggested that financial integration-degree nexus is contingent with the openness of the economy, national income, and quality of domestic institutions.

Towards these, there are many indicators which evaluate financial integration. This study employs deposit rate, lending rate, policy interest rate, and the interest rate spread for indicators of financial integration. Especially, the spread, namely, lending rate minus deposit rate is focused on for financial integration.

Financial integration is necessarily linked with globalization. Also, globalization sometimes causes financial crises through contagion of each financial market. This phenomenon has been becoming clearer and the scope continues to increase. Brezigar-Masten, Coricelli, and Masten (2011) found that an openness of financial markets tends to decrease the contagious affects of crises. Luca & Giovanni (2012) indicated some caution in assessing the risks of contagion on the basis of quantitative measures of financial integration such as cross-border balance sheet exposures. Lane (2013) showed that financial globalization means that countries in Asia are not insulated sufficiently from international financial markets.

Finally, this study examines the relationship between financial integration and economic growth mainly. Some studies examine this issue directly. Robert, Guevata and Joaquin (2012) showed that there are no reversals of growth as financial integration recently occurring. Nurullah (2013) found that financial integration's positive effect on international exports disappears. Fetai (2015) showed that financial integration and financial development both have influence on economic growth positively in transition countries. Gur (2015) indicated that financial integration increases employment relatively, more than in countries thet are financially dependent. Yasin (2016) showed that more financially integrated economies are able to keep themselves from idiosyncratic shocks and countries with more developed financial markets take less consumption risk sharing with other economies due to their developed financial markets. Mazhar and Rehman (2019) showed that financial depth contributes to economic growth more than stock market developments. Rahman and Farihana (2019) found that financial integration has positive impacts on the real economy in ASEAN+3. Hoffmann, Kremer, and Zaharia (2020) showed a positive relationship between financial integration and economic growth in Euro area significantly. Rillo (2015) stated that increasing financial integration of capital and financial markets have been promoted as shown in the huge accumulation of both foreign assets and liabilities by countries all over the world. Cheng and Daway (2018) showed that financial development's impacts on financial integration is relative to positive economic activities.

Some studies focus on the relationship between financial integration and economic growth with many indicators, however, this paper uses more concrete indicators and focuses on ASEAN and APEC. These are not included in other studies.

3. Data and Preliminary Analyses

It is quite difficult to collect common data. There is a limitation to collecting data from public announced information The countries used in this study are as follows.

ASEAN: Indonesia, Malaysia, Philippines, Singapore, Thailand

APEC: Australia, Canada, Indonesia, Korea, Malaysia, Mexico, Papua New Guinea, Peru, Philippines, Singapore, Thailand, US

Due to lack of data, the number of countries is limited as previously mentioned. The data used in this study are real economic growth rate, deposit rate, lending rate, policy interest rate, and the interest rate spread for indicators of financial integration. The sample period is from 2009Q1 to 2019Q4. The data source is from International Financial Statistics (IMF). Most of the data of 2020 can be obtained; however, COVID-19 occurred in that year, so the data of 2020 is omitted for empirical analyses.

For most studies, unit root tests are conducted for further empirical analyzes. According to many other studies, the Dickey-Fuller test is employed to indicate whether the data (rate) have unit roots or not. Table 1 shows the results of the test. It only lists the 'average' (mentioned after) of each one.

Table 1. Augmented Dickey-Fuller Test

	ASEAN		APEC	
Deposit rate	-3.40	0.02	-4.09	0.002
Lending rate	-2.93	0.05	-2.64	0.09
Policy rate	-4.66	0.02	-3.82	0.005
Spread	-2.47	0.13	-1.81	0.37
Spread (1st difference)	-2.88	0.05	-4.73	0.0004

In Table 1, all of the data except spread, have no unit roots as in other studies using 'rate' of data. Owing to these test results, the data employed in this study can be used for estimations, however, when using the data, spread, the first difference should employed for estimations.

The data used in this study are divided into average, panel data, and another method for regression analyzes. The latter's indicator is formalized as follows (1).

In order to construct indicators of financial integration, it is necessary to make theoretical indicators that reveal a condition of perfect integration. The max and min are the date at each time.

$$\frac{max(x)-min(x)}{max(x)} \tag{1}$$

When using this indicator, panel data are used for estimations. Finally, along with LS (Ordinary Least Squared), GMM (Generalized Method of Moments) is used for estimations. GMM can be useful in solving the endogeneity problem in regressions. As an explanatory variable, lagged dependent variable is used, which can solve the correlation with fixed effect of error terms as in many studies. By transforming the variables in the first differences, the country fixed effect is removed. The lagged differences in the regressors are utilized as instruments in this analysis. Based on this idea, empirical analyzes are performed in section 4.

4. Empirical Analyses

In this section, empirical analyzes for the relationship between financial integration and economic growth are conducted.

The equations performed are basically (2) and (3), though they are regressed via different methods.

$$\textit{Economic growth} = \alpha + \beta\ \textit{spread} \tag{2}$$

$$\textit{Economic growth} = \alpha + \beta_1\,\textit{deposit rate} + \beta_2\,\textit{lending rate} + \beta_3\,\textit{policy rate} \tag{3}$$

The results of the regressions are from Table 2 to Table 5. Table 2 and Table 4 are the cases of equation (2), and Tables 3 and 5 are the cases of the equation (3). Tables 2 and 3 are the results of ASEAN and Tables 4 and 5 are those of APEC.

Table 2. ASEAN: Spread (equation (2))

Method	LS (average)	LS (panel)	LS (max/mini)	GMM (average)	GMM (panel)	GMM (max/mini)
C	8.07***	8.18***	8.23***	6.64***	7.33***	6.93***
	(7.42)	(6.02)	(8.08)	(3.27)	(3.31)	(3.37)
Spread	-2.56**	-2.46***	-2.63***	-1.86*	-2.04*	-1.99*
	(-4.89)	(-3.76)	(-5.33)	(-1.68)	(-1.78)	(-1.78)
Adj.R2	0.33	0.21	0.39	0.30	0.19	0.36
F-statistic	23.69	14.15	28.39			
Prob(F-statistic)	0.00	0.00	0.00			
J-statistic				3.37E-45	2.10E-45	1.40E-45

Note. Parentheses are t-statistic. ***, **, and * denotes significant at 1, 5, and 10% respectively.

Table 3. ASEAN: Deposit, Lending, and Policy Rate (equation (3))

Method	LS (average)	LS (panel)	LS (max/mini)
C	2.86	19.88***	20.42***
	(0.88)	(5.37)	(5.15)
Deposit rate	2.38**	3.83***	3.07***
	(2.07)	(4.13)	(3.32)
Lending rate	-2.54***	-2.28***	-2.56***
	(-3.95)	(-4.62)	(-5.41)
Policy rate	1.17	-3.49***	-2.82**
	(0.97)	(-2.79)	(-2.34)
Adj.R2	0.25	0.44	0.49
F-statistic	6.69	13.45	14.88

Prob(F-statistic)	0.00	0.00	0.00

Note. Parentheses are t-statistic. ***, **, and * denotes significant at 1, 5, and 10% respectively.

Table 4. APEC: Spread (equation (2))

Method	LS (average)	LS (panel)	LS (max/mini)	GMM (average)	GMM (panel)	GMM (max/mini)
C	3.07***	3.38***	2.34**	2.96***	3.28***	2.26**
	(5.11)	(4.99)	(2.53)	(4.06)	(4.89)	(2.24)
Spread	-0.15	-0.25	0.07	-0.12	-0.22	0.10
	(-0.89)	(-1.29)	(0.26)	(-0.59)	(-1.17)	(0.31)
Adj.R2	-0.004	0.01	-0.02	-.0004	0.01	-0.02
F-statistic	0.81	1.65	0.07			
Prob(F-statistic)	0.37	0.21	0.79			
J-statistic				0.00	0.00	0.00

Note. Parentheses are t-statistic. ***, **, and * denotes significant at 1, 5, and 10% respectively.

Table 5. APEC: Deposit, Lending, and Policy Rate (equation (3))

Method	LS (average)	LS (panel)	LS (max/mini)
C	1.93**	0.33	-1.38
	(2.26)	(0.23)	(-0.86)
Deposit rate	0.53	0.48	0.23
	(0.72)	(0.65)	(0.30)
Lending rate	-0.37	-0.39	-0.20
	(-1.23)	(-1.21)	(-0.50)
Policy rate	0.35	0.82	1.13
	(0.45)	(0.82)	(1.11)
Adj.R2	0.06	0.09	0.11
F-statistic	1.93	2.39	2.56
Prob(F-statistic)	0.14	0.08	0.07

Note. Parentheses are t-statistic. ***, **, and * denotes significant at 1, 5, and 10% respectively.

The results are clear. In ASEAN, financial integration has been attaining economic growth. The results seem to be steadfast. On the other hand, the results are inconclusive for the case of APEC. Almost all the results of the regressions are not conclusive.

Compared to ASEAN, APEC is slower in transforming policies into actual regulations as opposed to ASEAN. Of course, this statement does not denote criticisms of policies in APEC. APEC has several mature, individual characteristics in financial markets. Also, emergent policies do not need to be conducted, for example, comparing to ASEAN, so it would not be necessary to cooperate for financial integration. However, not only ASEAN but APEC have many potential opportunities (Kurihara, 2006).

5. Conclusions

This study focused on whether financial integration in ASEAN and APEC promotes economic growth or not. These areas have attempted integration and cooperation, and to achieve growth. However, globalization sometimes has caused contagions of financial crises. So the pros and cons have been examined, however, an answer whether financial integration should be promoted or not has not been determined. Using available data, this paper conducted empirical analyses to examine this issue. The empirical results showed that financial integration has contributed to economic growth in ASEAN, however, this result cannot be found clearly in APEC. The variety of participating countries including developed economies may have affected the results.

Financial regulations would be necessary for constructing sound financial markets, however, clarity is important for almost all cases. Information openness and transparency would be essential. Also, harmonization of account standards and rules would be keys for achieving sound financial markets. Moreover, uniformity of payment systems would be convenient, and supporting usages of the system in each area would be helpful. Along with pursuing efficiency, making sound and stable financial markets would be crucial issues for achieving economic growth.

Along with financial markets integration, cooperation in macroeconomic policies would be important. Trade policies and financial policies should be examined and altered to cooperate more. However, these problems would be tasks for the future.

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