

Fayyaz Ahmad¹, Muhammad Umar Draz², Su-chang Yang³
**FOREIGN PORTFOLIO INFLOWS AND ECONOMIC GROWTH:
EVIDENCE FROM ASEAN5**

The aim of this study is to examine the causal relationship between foreign portfolio inflows (FPI) and economic growth of ASEAN5. We have used the data of FPI, GDP and FDI from 2001 to 2013 to determine the impact of FPI on the economy. The results of Granger causality and M-Wald test reveal interesting facts about the ASEAN5. The empirical analyses suggest that a significant relationship exists between FPI and the economic growth of ASEAN5, except for Singapore. The results also indicate a positive impact of FDI on economic development, in particular, for Singapore, Indonesia and Malaysia.

Keywords: ASEAN5; Granger causality; FDI; FPI; GDP.

JEL classification: F21; F43; O53.

Фаяз Ахмад, Мухаммад Умар Драз, Су-чанг Янг
**ІНОЗЕМНЕ ПОРТФЕЛЬНЕ ІНВЕСТУВАННЯ ТА ЕКОНОМІЧНЕ
ЗРОСТАННЯ: ЗА ДАНИМИ АСЕАН-5**

У статті досліджено взаємозв'язок між іноземними портфельними інвестиціями та економічним ростом країн АСЕАН-5. В аналізі використано дані щодо іноземних портфельних інвестицій, ВВП та ПІІ з 2001 по 2013 роки. Результати тестів Гренджера на причинність та М-Вальда привели авторів до доволі цікавих висновків: для всіх країн, крім Сінгапуру, підтверджено наявність стійкого та значного взаємозв'язку між іноземним портфельним інвестуванням та економічним зростанням. Крім того, результати аналізу доводять позитивний вплив ПІІ на економічний розвиток, особливо у випадках Сінгапуру, Індонезії та Малайзії.

Ключові слова: АСЕАН-5; причинність за Гренджером; іноземні портфельні інвестиції; ПІІ; ВВП.

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Фаяз Ахмад, Мухаммад Умар Драз, Су-чанг Янг
**ИНОСТРАННОЕ ПОРТФЕЛЬНОЕ ИНВЕСТИРОВАНИЕ
И ЭКОНОМИЧЕСКИЙ РОСТ: ПО ДАННЫМ АСЕАН-5**

В статье исследована взаимосвязь между иностранными портфельными инвестициями и экономическим ростом стран АСЕАН-5. В анализе использованы данные о иностранных портфельных инвестициях, ВВП и ПИИ с 2001 по 2013 годы. Результаты тестов Гренджера на причинность и М-Вальда привели к довольно любопытным выводам: для всех стран, кроме Сингапура, подтверждена устойчивая и значительная взаимосвязь между иностранным портфельным инвестированием и экономическим ростом. Кроме того, результаты анализа доказывают позитивное влияние ПИИ на экономическое развитие, особенно в случае Сингапура, Индонезии и Малайзии.

Ключевые слова: АСЕАН-5; причинность по Грейнджеру; иностранные портфельные инвестиции; ПИИ; ВВП.

Introduction. Liberalized policies since the start of the 21st century have encouraged foreign investors to invest round the globe in search of higher returns and diversification opportunities. During the last decade, capital flows between regions have become frequent due to financial integration of markets. From the economic point of

¹ School of Economics, Lanzhou University, China.

² Corresponding author; Universiti Teknologi PETRONAS, Seri Iskandar, Perak, Malaysia.

³ School of Economics, Lanzhou University, China.

view, these flows are a mixed package. On the one hand, the development of domestic markets, integration with international community, financing the balance of payment deficits, and availability of low cost capital to enterprises, enhancing the exposure of domestic investors and fostering economic growth are well-known benefits of international capital flows. On the other hand, volatile nature of these flows is incredibly dangerous and can trigger financial turmoil during economic "rainy days". This dual aspect of foreign capital makes it extremely important to study its relationship with different economic variables, GDP especially.

During the last couple of decades, economic growth of developing countries in various regions has been an "opening secret". Asian countries are among the world's fastest growing economies and rising economic powers. After integration with international market, foreign capital flows are an important phenomenon in the development of emerging market economies (EMEs). The relationship between growth and capital inflows depends upon types of inflows and economic conditions. As J. Aizenman et al. (2011) have pointed out, both FDI inflows and outflows are associated with significant growth and their impact is large and robust. However, the relationship between FPI inflows and economic growth is not very steady for economically stable economies of East Asia.

The East Asian region is a major recipient of these inflows as compared with other regions, and these inflows have successfully improved economic and living standards of a sizeable portion of population in that particular region (Chakraborty and Rawlins, 2004). Strategically located in an important position, ASEAN-6 which includes Malaysia, Indonesia, Singapore, Vietnam, the Philippines and Thailand has the market of 600 mln people and wide ranging productive capabilities, growing FDI, open trade and investment regimes and robust growth rates (Chia, 2013). During the second half of the last century, and especially since the 1980s, capital flows in the form of FDI and FPI have gained momentum in developing countries. Surges of capital inflows in their various forms started since 1990 at emerging Asian markets.

Generally, this pace of inflows can be divided into two stages: the first stage is the period before the Asian crisis of 1997 and the second stage is before the global financial crisis (GFC) of 2008. R. Balakrishnan et al. (2012) have described that, since the mid-1990s, ASEAN5 attracted ample amounts of FPI. Recently, Indonesia and Thailand experienced significant FPI inflows, while Malaysia suffered from capital outflows after the GFC. Explaining in detail FPI surges, R. Mercado and C.Y. Park (2011) state that ASEAN economies paced up their efforts to liberalize markets. Although some countries encouraged outflows to reduce inflation, overall inflows increased: during 2003–2007 FPI inflows increased to 2.1% of GDP from 1.2% in the previous century. The GFC affected almost all Asian economies; for example, D. Cho and C. Rhee (2013) report that, during the GFC, FPI inflows tumbled to 1.7% from the average of 8.4% of GDP 3 years before the crisis, but that attractive returns and the impressive growth of Asian countries including ASEAN 5 returned FPI inflows to 7.8% of GDP within a couple of years after the crisis.

After the GFC, all ASEAN5 countries restructured their economies and attracted ample amounts of FPI inflows, with Singapore and Malaysia at the top. The overall trend, as shown in Figure 1, is encouraging in all the countries despite being accompanied by several surges and stops at different stages during the sample period.

The global financial crisis is the only event that severely disrupted all of the economies and capital inflows suddenly dropped as compared to the pre-crisis level. A sharp decline in FPI inflows indicates the volatile nature of FPI and underscores various economists' point of view that FPI is not very stable during crises and that sudden reversals can destabilize the economy. Except the year of GFC, no abnormal variations occurred and inflows regained their momentum right after the crisis. Indonesia experienced comparatively stable and accelerated inflows during the post-crisis period as compared to Thailand, while the Philippines was at the bottom throughout the period as compared to all other countries, but with a constant increase after the GFC. In 2013, all the countries' FPI inflows declined except Singapore and Malaysia.

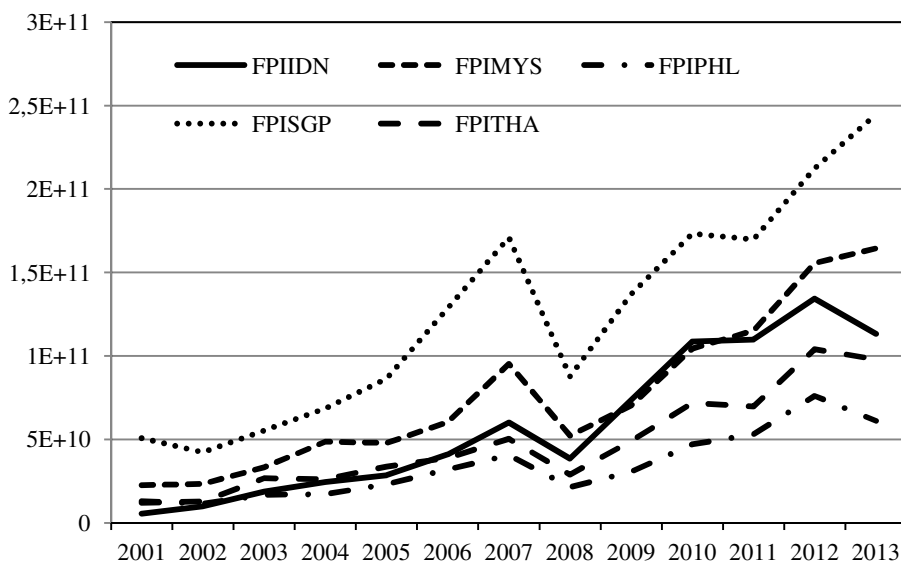


Figure 1. FPI Inflows to ASEAN5

The remainder of the paper is organized as follows. The next section sets out the details of previous studies related to the issue at hand. The subsequent section provides an explanation of FPI inflows during the analysed period. Next, the theoretical background, data and methodology are presented. The paper concludes with summarized findings and a discussion on policy implications.

Literature review. Globalization and economic integration of countries a round the globe has encouraged cross-border capital flows. Among other variables, the relationship between economic growth and both short- and long-term capital flows is crucial. Domestic productivity shocks explain the bulk of variations in both FPI and FDI. Domestic productivity shocks tend to reduce FPI and result in FDI increase. Important factors to attract FPI to EMEs are the growth rate differentials, interest rate differentials and risk aversion. In terms of economic importance, the latter two factors are influential on net FPI inflows and growth differential is always influential on the total FPI inflows. Foreign outputs generally have a negative impact on capital flows while interest rate shocks have a positive effect. Country specific factors control 80% of capital flow fluctuations; regional factors control 5–20% and global factors

cause only a small percentage of variation in capital flows. The relative importance of various push factors of FPI in Asian and Latin America varies; external factors and risk diversification efforts of investors are the dominant factors in attracting FPI. GDP growth plays a negligible role in Asia. Meanwhile, significant relationship exists between FPI and GDP in Latin America (Baek, 2006; De Vita and Kyaw, 2008; Ahmed and Zlate, 2014; Forster et al., 2014).

The opinion of economists is mixed regarding the relationship between economic development and foreign capital, especially FPI. Describing some of FPI benefits for developing countries, previous studies revealed that FPI is helpful in diversifying the sources of external finance, reducing capital cost, and assisting in the development of domestic markets, thus indirectly promoting growth, whereas FDI directly helps promote GDP. The benefits of FPI are more than the costs associated with it. In developing countries, the most important measure to retain and attract capital is competitive growth rate. Further, favorable economic environment is also important to retain and bring back investments. Openness to portfolio flows is conducive to economic growth for both developed and less developed countries. For least developed countries (LDCs), the strongest source of growth is positive net sales observations, which bring cash into a country. For more developed countries, flows in both directions are associated with growth, and volatility in portfolio flows is less likely to depress growth. Despite fluctuations during the last couple of decades, both FPI and FDI are helpful in financing investment and stimulating economic growth in developing countries. Openness to foreign capital has a strong positive impact on the total factor productivity (TFP) growth; and the existing literature shows that FDI and FPI boost TFP growth. Meanwhile, external debts are negatively correlated with TFP growth, and improved institutional qualities can reduce this inverse effect. FPI flows enhance economic growth in Latin America but further measures are required to avoid capital flight and its adverse effects on the economy (Welch, 1996; Errunza, 2001; Hassan, 2003; Hoti, 2004; Kose et al., 2009; Ferreira and Laux, 2009).

On the other hand, various studies have also emphasized the association between short-term capital and economic instability because of its speculative nature arguing that, short-term portfolio capital inflows are unlikely to enhance economic growth at emerging markets due to highly volatile and market rumors. The speculative motive behind short-term inflows relies on information prevailing at the market rather than on economic fundamentals. So, a sharp reversal of speculative capital can lead to a collapse of economic growth and therefore to a crisis. At present, capital markets are interdependent and capital flows across borders have enhanced economic development of developing and developed countries. But this is not necessarily a blessing during the times of macroeconomic imbalances. Both FPI and FDI have disruptive effects on economic growth especially during economic turmoil. The unconstrained FDI and portfolio equity flows do not essentially boost growth. FDI and FPI do not always have a positive impact, but the effects are dependent on a host country's absorptive capacity. Studies on foreign capital and GDP growth for African countries suggest that FDI, private debt and FPI all have a significant negative impact on GDP. But improved markets can turn the negative impact into a positive one. Capital market liberalization has started a consensus on the relationship between capital flows, market development and growth. However, the risks associated with short-term capi-

tal flows are greater than benefits, especially after the financial crisis (Singh and Weisse, 1998; Stiglitz, 2000; Durham, 2004; Agbloyor et al., 2014; Carp, 2014).

Foreign capital flows play a significant role in the growth and development of Asian economies. But not all the components of capital flows have the same impact. B. Ghosh (2003), A.Z. Baharumshah and M.A.M. Thanoon (2006), C.K. Choong et al. (2010), P. Buracom (2014), J. Chen and T. Quang (2014) have discussed that long-term capital and FDI include many beneficial aspects for the economy, whereas hot money has various growth-destabilizing effects. Economic, financial and institutional development is necessary to reap the benefits of integration. Furthermore, the effect of long- and short-term capital flows varies; FDI has a significant impact on growth in comparison with FPI equity liabilities. Large short-term inflows lead to market booms and increase the fragility of financial systems in Asia. Composition of capital inflows matters, as FDI is highly influential for economic growth and has positive impact on GDP. FPI hinders growth in Asian countries and has a negative impact on both short- and long-term growth because of its sudden reversals.

Domestic economic performance is essential to attract foreign capital flows, especially FDI. Many ASEAN economies are reliant on these flows for capital requirements because of small domestic markets. One important aspect of increasing the flow, performance and impact of private capital flows on growth is stock market performance. FDI has a positive relationship with the growth of stock markets and FPI has a negative one for both developed and LDCs. The findings of (Duasa and Kassim, 2009; Anwar and Sun, 2011; Raimi and Ogunjirin, 2012) support the view that there exists a negative relationship between GDP and inflation rate, as well as between GDP and net inflows, whereas there is a positive relationship between GDP, foreign private investment and external reserves. Increases in foreign investment in Malaysia lifted the level of domestic capital and financial development, which contributed to financial growth within the country. Furthermore, economic growth causes FPI but FPI does not cause economic growth.

Although earlier studies have found both benefits and detriments of foreign capital flows, the causal relationship between FPI and GDP of various regions has still not been thoroughly studied. Most of the literature centers on pros and cons of foreign capital and discusses its dynamics under economic turmoil. There are fewer studies focusing particularly on ASEAN5 and the causal relation between speculative capitals. To address these gaps, our work is aimed at studying the causal relationship between FPI and GDP of the selected ASEAN countries.

While most of the previous studies on causal relationship between foreign capital and economic growth in Asia are focused only on Malaysia, our study is unique in terms of ASEAN5 analyses. Moreover, while FDI was the main variable in most studies, the present study includes FDI as a control variable while FPI and GDP are the core elements for the period of more than a decade. We have applied Granger causality test to investigate the causal relationship between FPI and economic growth of the ASEAN5 countries and then compared the results with our previous work on China and India.

Theoretical framework. The findings of various scholars about the relationship between GDP and capital flows vary: some studies highlight the positives while other emphasize the negative aspects. Many studies also came to the conclusion that

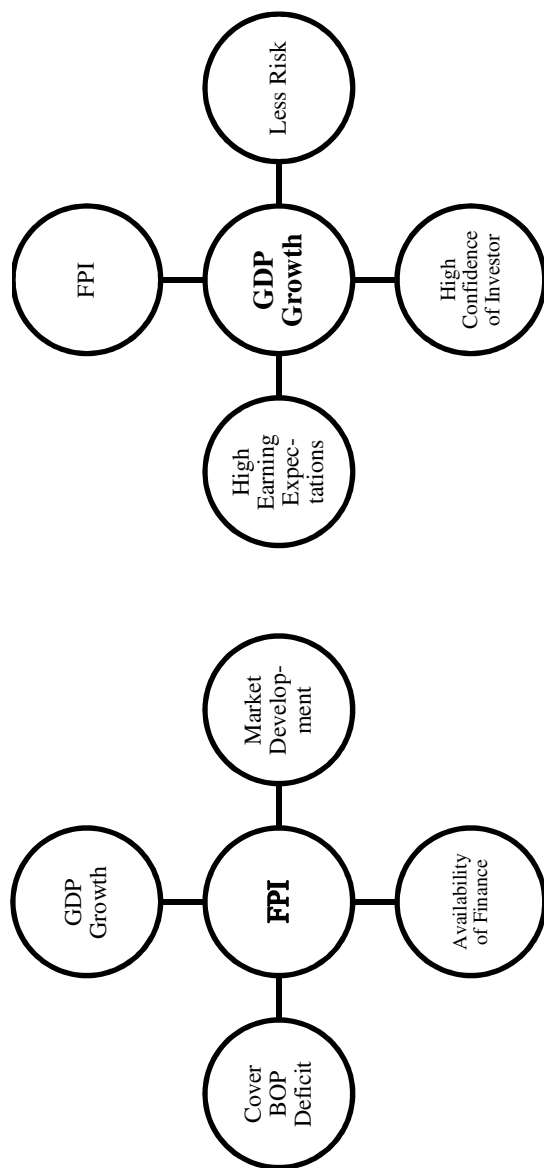


Figure 2. Theoretic framework, authors'

various components of foreign capital affect GDP. V. Errunza (2001), S. Hoti (2004), A.M. Ferreira and A.P. Laux (2009) are of the view that competitive GDP growth is strongly influential in terms of attracting and retaining FPI inflows. Despite their reversal effects, FPI inflows are beneficial for the economy and promote GDP growth in both developed and developing countries.

A. Singh and A.B. Weisse (1998), E.J. Stiglitz (2000) and E.K. Agbloyor et al. (2014) asserted that short-term capital flows may be contingent on rumors and are highly volatile, especially during crisis. Both FDI and FPI have negative impact on GDP growth and their sudden outflows destabilize the economy and can lead to financial system collapse. Improvements in financial institutions are helpful in reducing the inverse impact of reversal. Last but not least, B. Ghosh (2003), A.Z. Baharumshah and M.A.M. Thanoon (2006), C.K. Choong et al. (2010) found that capital flows are crucial for the development and growth of various regions, but not all the components of capital flows have the same effect. FDI is comparatively more stable and valuable especially during economically difficult times. FDI is significantly connected to higher GDP growth and financial stability, while FPI is less significant and sometimes negative to GDP growth.

This study is based on the previous work done by F. Ahmad et al. (2015), in which we argued that GDP is an essential factor in attracting FPI for several reasons: investors can expect higher returns, there are fewer chances of turmoil, and there are more diversification opportunities. Meanwhile, FPI is helpful in improving the quality of domestic markets, providing capital to newly established firms and helping to finance BOP deficit. Our previous results supported an indirect relationship between GDP and FPI for China and India that is similar with the conclusions of J. Duasa and S.H. Kassim (2009) for Malaysia.

Data and methodology. The data used in this study is the annual data from 2001 to 2013. The data on GDP and FDI was taken from the World Bank website; FDI includes net FDI inflows. FPI data was gathered from the International Monetary Fund (IMF) website; FPI consists of total FPI inflows. 5 developing countries of South East Asia, namely Indonesia, Malaysia, Singapore, the Philippines and Thailand were examined. These countries are the main recipients of foreign capital among other ASEAN countries and are often called ASEAN5 in literature. ADF and PP tests were used to deal with the Unit Root problem. Using our variables, general equations for ADF tests with p lagged terms can be described as follows:

$$\Delta GDP_t = \alpha GDP_{t-1} + \beta_1 \Delta GDP_{t-1} + \beta_2 \Delta GDP_{t-2} + \beta_p \Delta GDP_{t-p}; \quad (1)$$

$$\Delta FDI_t = \alpha FDI_{t-1} + \beta_1 \Delta FDI_{t-1} + \beta_2 \Delta FDI_{t-2} + \beta_p \Delta FDI_{t-p}; \quad (2)$$

$$\Delta FPI_t = \alpha FPI_{t-1} + \beta_1 \Delta FPI_{t-1} + \beta_2 \Delta FPI_{t-2} + \beta_p \Delta FPI_{t-p}, \quad (3)$$

ΔGDP , ΔFDI and ΔFPI indicate the 1st difference of GDP, FDI and FPI, where as GDP_{t-1} , FDI_{t-1} and FPI_{t-1} represent lagged values and α is an independent number of 1st difference lags included in the equation. We applied conventional tests and the more recent Wald Granger causality test to investigate a possible causal relationship between FPI and GDP and vice versa. The rough concept of the Granger causality test is that the past can be used to forecast the future. If past values of one variable significantly influence future values of another variable then it is said that one variable

Granger causes the other. Explaining the directions of relationships, Gujarati (2004) elaborated that if the estimated coefficients of one variable are statistically different from zero then unidirectional causality exists between the two variables. In the case of bidirectional causality, the coefficients of both variables are statistically different from zero. Finally, independence is suggested when the coefficients of both variables in both regressions are not statistically different from zero. We can produce the simple mathematical form of the Granger causality test with a supposition that disturbances are uncorrelated in both equations.

$$Y_t = \sum_{i=1}^n \alpha_i X_{t-i} + \sum_{j=1}^n \beta_j Y_{t-j} + \mu_{1t}; \quad (4)$$

$$X_t = \sum_{i=1}^n \alpha_i Y_{t-i} + \sum_{j=1}^n \beta_j X_{t-j} + \mu_{2t}. \quad (5)$$

We can derive the mathematical form of our model using the variables of interest for each country as follows:

$$FPI_t = \sum_{i=1}^n \alpha_i GDP_{t-i} + \sum_{j=1}^n \beta_j FPI_{t-j} + \mu_{1t}; \quad (6)$$

$$GDP_t = \sum_{i=1}^n \alpha_i FPI_{t-i} + \sum_{j=1}^n \beta_j GDP_{t-j} + \mu_{2t}. \quad (7)$$

We have also applied the relatively new M Wald no causality model proposed in (Toda and Yamamoto, 1995), which argues that with usual procedure of lag selection we can determine the maximal lag order k and then estimate a $k + d_{\max}$, where d_{\max} is the maximal order of integration, and the coefficient matrices of the last d_{\max} lagged vectors in the model are ignored. Using the standard asymptotic theory these are regarded zero. This test can be applied irrespective of the presence or absence of integration properties in the data. However, these are the complements of the Granger causality test. In VAR, X is said to Granger cause Y if all the coefficients of X are greater than zero in the equation. The null hypothesis of VAR is that all the coefficients are zero for both cases. The simple mathematical form of the M Wald test using our variables of interest can be produced as follows:

$$FPI_t = \lambda_0 + \sum_{i=1}^{i+r} \alpha_{1i} FPI_{t-i} + \sum_{i=1}^{i+r} \beta_{1i} GDP_{t-i} + e_{1t}; \quad (8)$$

$$GDP_t = \lambda_0 + \sum_{i=1}^{i+r} \alpha_{2i} GDP_{t-i} + \sum_{i=1}^{i+r} \beta_{2i} FPI_{t-i} + e_{2t}, \quad (9)$$

where $i + r$ are the optimum lag order, and the order of integration respectively. Also, α and β are the coefficients of variables and e is the white noise error term.

Empirical results. To achieve our objective, which is to analyze the causal relationship between FPI and economic growth of ASEAN5, the variables were examined for stationary properties. Augmented Dickey-Fuller (ADF) and Phillips Perron (PP) are used and the results are presented in Table 1. The results of both ADF and PP tests indicated that some variables are stationary at level 1(0) and the rest of the variables are stationary at first difference 1(1). Stationary at first difference also implies that the maximum order of integration between variables is order one, $r(1)$.

Table 1. Unit root test, authors'

Variables	Augmented Dickey-Fuller (ADF)		Phillips-Perron (PP)	
	ADF test statistic	Critical value	PP test statistics	Critical value
IDN				
FDI	-3.649536	-3.212696	-7.198668	-3.175352
FPI	-4.023788	-3.175352	-4.464847	-3.175352
GDP	-3.430963	-3.212696	-3.691032	-3.144920
MYS				
FDI	-4.484476	-3.212696	-7.213269	-3.175352
FPI	-4.219666	-3.175352	-4.580930	-3.175352
GDP	-4.462808	-3.144920	-5.755666	-3.144920
SGP				
FDI	-4.431064	-3.212696	-7.094356	-3.175352
FPI	-3.708933	-3.212696	-7.423545	-3.175352
GDP	-3.392942	-3.175352	-5.862428	-3.144920
PHL				
FDI	-3.857287	-3.175352	-3.824037	-3.175352
FPI	-3.901369	-3.175352	-4.661784	-3.175352
GDP	-3.808282	-3.144920	-4.145150	-3.144920
THA				
FDI	-4.852058	-3.175352	-4.852058	-3.175352
FPI	-5.157676	-3.175352	-5.232570	-3.175352
GDP	-4.732890	-3.144920	-4.573325	-3.144920

After examining the stationary properties, we selected the optimal lag using AIC, SC and HQ information criteria. Table 2 reflects that the maximum lag for FPI, GDP and FDI selected all three criterions is 1.

Table 2. Optimal lags, authors'

		AIC	SC	HQ
IDN	0	99.62367	99.74489	99.57878
	1	97.70845*	98.19336*	97.52892*
MYS	0	102.5367	102.6579	102.4918
	1	101.8909*	102.3758*	101.7113*
PHL	0	98.03268	98.15391*	97.98780
	1	97.71668*	98.20158	97.53715*
SGP	0	105.4348	105.5560*	105.3899
	1	105.2590*	105.7439	105.0795*
THA	0	102.3947	102.5160	102.3498
	1	99.39337*	99.87828*	99.21384*

The next step is to check the cointegration between the variables examined. Since the variables are integrated at order one, we estimated the existence of long-run relationship between variables. The Johansen cointegration test was used to establish the relationship. Table 3 demonstrate a long-run relationship between FDI, GDP and FPI because both Max-Eigen statistics and trace statistics are higher than the corresponding critical values for all the countries.

With the null hypothesis that coefficients of both GDP and FPI are not different from zero, the results of Granger causality test are presented in Table 4. There exists a unidirectional causality between FPI and GDP for all the countries except

Singapore. FDI is more significant than FPI for SGP. We conducted Granger no-causality test in VAR with order of integration, $r(1)$ and optimal lag $l = 1$, with null hypothesis that FPI does not cause GDP or vice versa, which elaborates that all the coefficients of FPI are zero in equation for GDP, or vice versa. The results in Table 5 are against the null hypothesis, which supports the causal relation of FPI and GDP. For Thailand, causality is bidirectional and for GDP the results are the same in both methods. Empirical results reveal that FPI Granger causes both FDI and GDP, which indicates a significant unidirectional relationship between FPI, FDI and GDP of Indonesia. The relationship between FDI and GDP is not very strong but the impact of FDI on GDP is comparatively significant. There exists a unidirectional causality between FPI and GDP of Malaysia; the opposite is less influential although not ignorable.

Table 3. Cointegration test, authors'

Johansen test				
	Max-Eigen statistics	critical value	Trace statistics	critical value
IND	44.34336	21.13162	52.60779	29.79707
MYS	33.45573	21.13162	56.25559	29.79707
At most 1	20.26202	14.26460	22.79986	15.49471
PHL	25.43122	21.13162	35.90336	29.79707
SGP	49.33164	21.13162	54.93814	29.79707
THA	6.864090	3.841466	37.69552	29.79707

Table 4. Granger causality test, authors'

		F-Statistics	Probability
IDN	FPI → GDP	4.86951	0.05540
	FPI → FDI	7.61662	0.02256
MYS	FPI → GDP	9.33416	0.01439
	FPI → FDI	8.96882	0.01575
SGP	FDI → GDP	15.8901	0.00401
PHL	FPI → GDP	10.6172	0.01069
THA	GDP → FPI	6.88122	0.02767
	FDI → FPI	7.05463	0.02621

Table 5. Chi-square test, authors'

		CHI-sq	Probability
IDN	FPI → GDP	4.561287	0.0327
	FPI → FDI	14.46261	0.0001
MYS	FPI → GDP	6.981744	0.0082
	FPI → FDI	24.43216	0.0000
SGP	FDI → GDP	10.30955	0.0058
PHL	FPI → GDP	8.180911	0.0042
THA	GDP → FPI	3.827587	0.0504
	FPI → GDP	3.885038	0.0487

FPI also significantly impacts FDI but the inverse relationship is not true. Although at the 5% level of significance the impact is not significant, the impact of GDP on FDI is nevertheless stronger than vice versa. The FDI of Singapore impacts significantly on GDP, which is an indication of unidirectional causality between FDI

and GDP. Meanwhile, FPI and FDI do not have a significant effect on each other. A strong unidirectional causality subsists between FPI and GDP, but this second direction is less strong for the Philippines. Bidirectional relationships between FPI and FDI as well as GDP and FDI of the Philippines are not much stronger but obviously not ignorable. There is independence between GDP and FPI, which indicates no causality between both variables for Singapore, although FDI is influential in this case. On the other hand, both FPI and GDP of Thailand influence each other, which demonstrates a direct bidirectional causality. Causality between GDP and FDI is also comparatively significant.

The Granger causality results of ASEAN5 certify that FPI brings economic growth in all the countries included in the study during the analysed period with the exception of Singapore. The causality is unidirectional which explains that a one-way relationship is significant. It is also important to consider the other direction because the relationship still exists even though it is not as strong as in the first case. The results support the point of view that FPI, with the help of development at domestic markets, provides finance to newly established firms and balances the BOP to enhance economic growth. In the case of Singapore, FDI is very influential on GDP growth and there is a unidirectional (one-way causality) between economic growth and FDI. FDI of Singapore is growth enhancing but not vice versa. Among the Philippines, Indonesia and Malaysia, the FDI of the Philippines is comparatively more influential on GDP and the overall impact of these countries' FDI on growth is not stronger. One interesting finding about Indonesia and Malaysia is that both countries' FPI also attract FDI inflows thus promoting economic growth.

Conclusion. The main purpose of this study was to investigate the relationship between GDP growth and FPI for the period of more than a decade. We used ADF and PP tests to deal with the unit root among the variables and to achieve our ultimate objective we applied the Granger causality and Granger no-causality tests. The selected countries from the Southeast Asia chosen for analysis were Indonesia, Malaysia, Singapore, the Philippines and Thailand. Our empirical analysis indicates there is a significant unidirectional (one-way) causal relationship between FPI and GDP of the ASEAN5 except Singapore. This means that FPI significantly contributes to economic growth of these nations. Also, FPI helps attract FDI for Malaysia and Indonesia. While it can be established that FDI also strongly contributed to economic growth for Singapore and Thailand, the evidence is comparatively weak for the rest of the countries. FDI inflows are also helpful in increasing FPI for Indonesia and Malaysia. Overall, both FPI and FDI directly or indirectly have a positive impact on economic development of the ASEAN5.

These findings are different from our previous study on India and China, which concluded there is no direct relationship between FPI and GDP for these two countries. The present study supported the findings of H.J. Welch (1996), V. Errunza (2001), M.K. Hassan (2003) and S. Hoti (2004), which concluded that openness to FPI inflows leads to economic development for both developing and advanced countries in different regions. Policy makers can easily seek guidelines about the behaviour, impact and direction of the relationship between variables in different countries. This work is a valuable indicator in identifying and addressing bottle-necks to sustain a balance between FPI inflows and economic growth of the countries concerned.

References:

- Agbloyor, E.K., Abor, J.Y., Adjasi, C.K., Yawson, A.* (2014). Private Capital Flows And Economic Growth in Africa: The Role of Domestic Financial Markets. *Journal of International Financial Markets, Institutions & Money*, 137–152.
- Ahmad, F., Yang, S.C., Draz, M.U.* (2015). Causality between Foreign Portfolio Inflows and Economic Growth: Evidence from China and India. *International Journal of Economics and Finance*, 163–172.
- Ahmed, S., Zlate, A.* (2014). Capital Flows to Emerging Market Economies: A Brave new World? *Journal of International Money and Finance*, 1–28.
- Aizenman, J., Jinjark, Y., Park, D.* (2011). Capital Flows And Economic Growth in The Era of Financial Integration And Crisis, 1990–2010. NBER Working Paper No. 17502.
- Anwar, S., Sun, S.* (2011). Financial Development, Foreign Investment And Economic Growth in Malaysia. *Journal of Asian Economics*, 335–342.
- Baek, I.M.* (2006). Portfolio Investment Flows to Asia And Latin America: Pull, Push or Market Sentiment? *Journal of Asian Economics*, 363–373.
- Baharumshah, A.Z., Thanoon, M.A.M.* (2006). Foreign capital flows and economic growth in East Asian countries. *China Economic Review*, 70–83.
- Balakrishnan, R., Nowak, S., Panth, S., Wu, Y.* (2012). Surging Capital Flows to Emerging Asia: Facts, Impacts, And Responses. Washington, DC: International Monetary Fund.
- Buracom, P.* (2014). ASEAN Economic Performance, Institutional Effectiveness, and Foreign Direct Investment. *Asian Affairs: An American Review*, 108–126.
- Carp, L.* (2014). Financial Globalization And Capital Flows Volatility Effects on Economic Growth. *Procedia Economics and Finance*, 350–356.
- Chakraborty, C., Rawlins, G.* (2004). Financial Resource Flows, Macro Policy Response, And The Socio-Economic Environment: The Experience of Latin America And East Asia. *Journal of Socio-Economics*, 469–489.
- Chen, J., Quang, T.* (2014). The Impact of International Financial Integration on Economic Growth: New Evidence on Threshold Effects. *Economic Modelling*, 475–489.
- Chia, S.Y.* (2013). *The ASEAN Economic Community: Progress, Challenges, And Prospects*. Tokyo: Asian Development Bank Institute.
- Cho, D., Rhee, C.* (2013). *Effects of Quantitative Easing on Asia: Capital Flows And Financial Markets*. Tokyo: Asian Development Bank.
- Choong, C.K., Baharumshah, A.Z., Yusop, Z., Habibullah, M.S.* (2010). Private Capital Flows, Stock Market And Economic Growth in Developed And Developing Countries: A Comparative Analysis. *Japan and the World Economy*, 107–117.
- De Vita, G., Kyaw, K.S.* (2008). Determinants of Capital Flows to Developing Countries: a Structural VAR Analysis. *Journal of Economic Studies*, 304–322.
- Duasa, J., Kassim, S.H.* (2009). Foreign Portfolio Investment And Economic Growth in Malaysia. *The Pakistan Development Review*, 109–123.
- Durham, J.B.* (2004). Absorptive Capacity And The Effects of Foreign Direct Investment And Equity Foreign Portfolio Investment on Economic Growth. *European Economic Review*, 285–306.
- Errunza, V.* (2001). Foreign Portfolio Equity Investments, Financial Liberalization, and Economic Development. *Review of International Economics*, 703–726.
- Ferreira, A.M., Laux, A.P.* (2009). Portfolio Flows, Volatility And Growth. *Journal of International Money and Finance*, 271–292.
- Forster, M., Jorra, M., Tillmann, P.* (2014). The Dynamics of International Capital Flows: Results From a Dynamic Hierarchical Factor Model. *Journal of International Money and Finance*, 101–124.
- Ghosh, B.* (2003). Capital Inflow, Growth Sustainability And Financial Debacles. *Managerial Finance*, 73–97.
- Gujarati* (2004). *Dynamic Econometric Models: Autoregressive and Distributed-Lag Models*. In: *Gujarati. Basic Econometrics* (pp. 696–700). New York: The McGrawHill Companies.
- Hassan, M.K.* (2003). Portfolio Investment of The OIC Countries And Their Implications on Trade. *Managerial Finance*, 122–157.
- Hoti, S.* (2004). An Empirical Evaluation of International Capital Flows For Developing Countries. *Mathematics and Computers in Simulation*, 143–160.
- Kose, M.A.S., Prasad, E.E., Terrones, M.* (2009). Does Openness to International Financial Flows Raise Productivity Growth? *Journal of International Money and Finance*, 554–580.

Mercado, R., Park, C.Y. (2011). What Drives Different Types of Capital Flows And Their Volatilities in Developing Asia? Tokyo: Asian Development Bank.

Raimi, L., Ogunjirin, O. (2012). Fast-Tracking Sustainable Economic Growth And Development in Nigeria Through International Migration And Remittances. *Humanomics*, 209–219.

Singh, A., Weisse, A.B. (1998). Emerging Stock Markets, Portfolio Capital Flows and Long-term Economic Growth: Micro and Macroeconomic Perspectives. *World Development*, 607–622.

Stiglitz, E.J. (2000). Capital Market Liberalization, Economic Growth, and Instability. *World Development*, 1075–1086.

Toda, H.Y., Yamamoto (1995). Statistical Inference in Vector Autoregressions With Possibly Integrated Processes. *Journal of Econometrics*, 225–250.

Welch, H.J. (1996). Capital Flows and Economic Growth: Reflections on Latin America in the 1990s. *The Quarterly Review of Economics and Finance*, 101–114.

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