ECONOMIC RELATIONSHIP BETWEEN ASIA AND EUROPE: CASE STUDIES OF SINGAPORE'S EXPORTS TO CHINA AND THE EU

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Abstract

[1]Inter-regional trade negotiations between the EU and ASEAN have not met with much success since they were first tabled in the Asia-Europe Meeting (ASEM) in 1996. This has led to separate discussions between the EU and individual ASEAN member countries to establish bilateral free trade agreements (FTAs). Singapore was the first ASEAN country to formalise a bilateral FTA with the EU, initialled in 2014 as the EU-Singapore Free Trade Agreement (EUSFTA). At the same time, Singapore has also developed a close trade relationship with China by establishing a China-Singapore Free Trade Agreement (CSFTA) in 2008. Despite the obvious significance of the EUSFTA and CSFTA, there has been little systematic research on the export-growth nexus in Singapore. Thus, this paper examines whether Singapore's exports to China and the EU are beneficial for its economic development. Empirical findings indicate that there is unidirectional causality between exports to China and economic development, consistent with the export-led economic development hypothesis. Nevertheless the findings also show that, in line with the neutrality hypothesis, there is an independent relationship between exports to the EU and economic development. These findings have considerable implications on Singapore's international trade policy and practices.

Keywords: export, economic development, free trade agreement (FTA), Singapore

Introduction

In January 2017, US President Donald Trump intentionally weakened inter-regional linkages between Asia and North America by signing the Presidential Memorandum to withdraw officially from the Trans-Pacific Partnership (TPP). Prior to that, the TPP was considered as the "biggest" trade deal in the history of inter-regionalism, containing an ambitious plan to create a rule-based economic integration and strengthen cooperation within the Asia-Pacific region. Under these circumstances, inter-regional economic ties between Asia and Europe,

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initiated by the Asia-Europe Meeting (ASEM) in 1996, could become more important than ever.

The ASEM cooperation mechanism consists of 51 partner countries and two institutional partners, i.e. the EU and the ASEAN Secretariat. More specifically, the promotion of trade and investment is entrusted to three closely-connected organizations: first, the Asia-Europe Business Forum (AEBF), a meeting of ASEM business leaders aiming to promote inter-regional business partnerships; second, the Senior Official's Meeting on Trade and Investment (SOMTI), a meeting of senior trade officers to strengthen economic partnerships, including FTAs; and thirdly, the Finance Ministers' Meeting (FinMM), where the objective is to coordinate inter-regional monetary and financial policies.

However, numerous trade negotiations in the ASEM have yet to produce any concrete results in creating a comprehensive regional free trade agreement (FTA) between ASEAN and the EU. In fact, no formal discussions on the ASEM-FTA have taken place since 2006 (Ministry of Foreign Affairs, Thailand, 2015). This failure to develop a collective FTA has led to separate discussions between the EU and individual ASEAN member countries to establish bilateral FTAs. In this regard, Singapore was the first ASEAN country to formalise a bilateral FTA with the EU, initialled in 2014 under the name of the EU-Singapore Free Trade Agreement or EUSFTA (Sanderson, 2015). The country has been a very active advocate of trade liberalisation and played a crucial role as a trade hub in the ASEAN region. On the other hand, it has also established a close trade relationship with China by establishing a China-Singapore Free Trade Agreement (CSFTA) in 2008. In spite of this, there has been little systematic empirical analysis on the export-growth nexus in the country, particularly with respect to its international trade with the EU and China.

Against this background, the current study examines the effects of Singapore's export on its economic growth, given the present state of ASEAN-EU trade relationship and its own bilateral ties with the EU and China. The justification for studying Singapore is that it is the first ASEAN member to establish a bilateral FTA with the EU. This move could be seen as Singapore's individual effort to re-activate its trade relationship with Europe, due to a lack of progress achieved through ASEM. Hence the first research question is: Does Singapore's "first mover advantage" with the EU bring positive effects on its economic growth? At the same time, China has been a dominant trade partner for Singapore since the late 2000s. Thus the second research question is: Have Singapore's exports to China been beneficial for its economic growth?

The paper consists of six sections. Following this brief introduction, the second and third sections will discuss related literature in international trade and investment between ASEAN and the EU, as well as trends in Singapore's exports to the EU and China. The fourth section will explain the data collection and data analysis procedures adopted in the current study, while the fifth presents its empirical findings. The paper concludes with some policy implications and recommendations for future research.

ASEAN-EU International Trade and Investment

ASEAN as a group represents the EU's third largest trading partner, after the US and China (European Commission, 2017). More than €246 billion of goods and services were traded between ASEAN and the EU in 2014. On the other hand, the EU is ASEAN's second largest trading partner after China, accounting for around 13% of ASEAN's trade (European Commission, 2017). The EU's main exports to ASEAN are chemical products, machinery and

transport equipment. The main exports from ASEAN to the EU are machinery and transport equipment, agricultural products as well as textiles and clothing. Besides that, the EU plays an important role in financing regional trade-related projects such as the ASEAN Regional Integration Support from the EU (ARISE PLUS); COMPASS (Statistics and Integration Monitoring); ASEAN Project on the Protection of Intellectual Property Rights (ECAP III); ASEAN Air Transport Integration Project (AATIP) and the Enhanced Regional EU-ASEAN Dialogue Instrument (e-READI).

The EU is also by far the largest investor in ASEAN, accounting for 22% of total foreign direct investment (FDI) inflows to the region. From 2012 to 2014, European companies had invested an average of €19 billion annually in ASEAN (European Commission, 2017). Three quarters of the EU's FDI of US$19.6 billion into the region were concentrated in the services sector (UNCTAD & ASEAN, 2016), where Australia, the EU and Japan were the largest investors in wholesale and retail trade activities. FDI into ASEAN extractive industries also had a strong EU presence. Japan, ASEAN, the Republic of Korea and the EU, in that order, accounted for 64 per cent of total FDI inflows into the manufacturing industry (UNCTAD & ASEAN, 2016). This high level of European investment in ASEAN is evident through the regional expansion of European multinational corporations (MNCs) such as BASF, Continental, Infineon, Nestlé, L'Oreal and GN ReSound (UNCTAD & ASEAN, 2016).

Although FDI flows from the EU to ASEAN declined by 20 per cent from $25 billion in 2014 to $20 billion in 2015 (UNCTAD & ASEAN, 2016), the European share out of the top ten investors in ASEAN rose from 71 per cent to 75 per cent in the same period. In the 2014 list, Luxembourg was ranked fourth, followed by the United Kingdom (previously EU member country) at fifth place. Meanwhile, France and the Netherlands were positioned at number nine and ten. In 2015, the Netherlands, United Kingdom and Denmark were ranked fifth, sixth and ninth, respectively, while Luxembourg and France dropped out of the ranking (UNCTAD & ASEAN, 2016).

In the early years of ASEM, inter-regional trade negotiations between ASEAN and the EU were considered an important agenda. Following the establishment of a single European market in 1992, a number of Asian countries expressed their concern that the EU was increasingly becoming an "economic fortress" with protective barriers for non-member countries. To overcome the shortcomings of "closed regionalism", ASEM has the potential to serve as a multi-faceted platform for "open regionalism" to promote balanced economic and business activities between Asia and Europe. For Europe, Asia can be an important market for their products. For Asia, Europe provides alternative sources of investment and advanced technology. To this end, the Asia-Europe Vision Group (AEVG) had proposed to set up a comprehensive ASEM free trade area by 2025 (Park, 2004).

There have been numerous suggestions and policy dialogues on a long-term economic objective to establish an ASEM-FTA. However, a comprehensive FTA has not been discussed in ASEM meetings for more than ten years. Despite their mutual interest in trade liberalisation, initial EU-ASEAN negotiations were not successful due to challenges in setting common standards among ASEAN's ten-member countries, as a result of their diverse political systems and the size of their economies and populations (Morales, 2017). On its part, ASEAN is trying to build an integrated economic market under the name of ASEAN Economic Community (AEC). Yet again, there are many challenges to be overcome in the implementation of this ambitious plan. For example, violence and human rights conditions have been a serious problem in some ASEAN states such as Myanmar and Laos. In other countries, such as

Malaysia and Indonesia, ensuring fair wealth distribution is a major concern. These issues have created an obstacle in ASEAN-EU negotiations, given the EU's emphasis on human rights and economic equitability in its trade policies (Morales 2017). Due to the lack of progress in ASEM, some ASEAN countries have individually attempted to form bilateral FTAs with the EU. Leading this initiative is Singapore, resulting in a Singapore-EU FTA agreed text in 2014, followed closely by Vietnam in 2016.

Other ongoing trade issues between ASEAN and the EU include strict conditions imposed by EU on certain export goods from ASEAN, such as palm oil from Malaysia and Indonesia. On 4 April 2017, the European Parliament adopted the Resolution on Palm Oil and Deforestation of Rainforests, which aims to reduce the negative impact of deforestation due to unsustainable or illegal palm oil production. There are two controversial proposals in the Resolution which involves: first, the development of a new, single certification scheme for palm oil and palm oil products by 2020; and second, the phasing out and replacement of palm oil used in biofuels with EU-grown vegetable oils by 2020 (Singapore Institute of International Affairs, 2017). If enforced, ASEAN palm oil producers, particularly Malaysia and Indonesia, will be significantly affected. The EU palm oil market accounts for 17 percent (4.37 million tonnes) of Indonesia's and 13 percent (2.09 million tonnes) of Malaysia's palm oil exports, respectively, and affects the livelihood of various communities within ASEAN that depend on palm oil production. These include migrant workers from Myanmar who work on palm oil plantations, as well as Indonesian and Malaysian smallholders who contribute about 40 percent of global palm oil production (Singapore Institute of International Affairs, 2017). In response, Malaysia has sent a delegate to the European Parliament to negotiate its position with respect to the Resolution and affirmed its commitment to sustainable practices in palm oil production. The Malaysian government's decision to make it mandatory for local palm oil producers and processors to adopt the Malaysia Sustainable Palm Oil (MSPO) certification was welcomed by the European Parliament (Mah, 2017).

Singapore's Exports to China and the EU

Figure 1 depicts trends in Singapore's exports to China and the EU from 1975 to 2017. As the figure clearly indicates, its exports to China were relatively low in the 1970s. The total value amounted to only US$4 million in 1975, gradually increasing to US$54 million in 1979. By contrast, Singapore's exports to the EU amounted to US$199 million in 1975 and increased to US$652 million in 1979.

Figure 1: Singapore's exports to China and the EU (1975-2017)
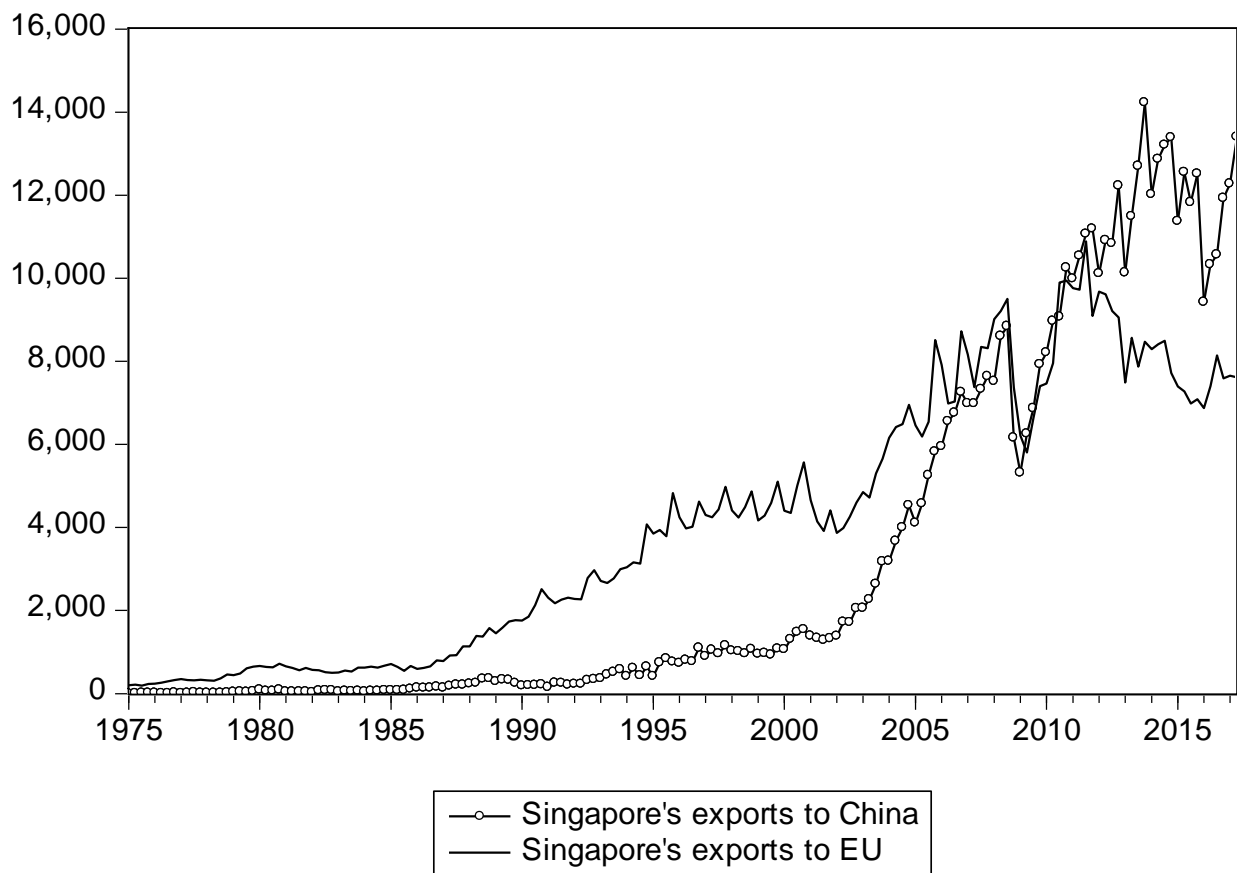
Source: International Monetary Fund (2017)

Despite some minor fluctuations, Singapore's exports to China and the EU grew steadily in the 1980s. Its total exports to China amounted to US$93 million in 1980, decreased to US$72 million in 1985, but rebounded back to US$285 million 1989. Exports to the EU increased from US$664 million in 1980 to US$709 million in 1985, and advanced further to US$1,452 million in 1989. This upward trend in Singapore's exports to China and the EU continued in the 1990s. The total value of Singapore's exports to China increased from US$182 million in 1990 to US$414 million in 1995, to US$950 million in 1999. Concurrently, the EU continued to be a major trade partner of Singapore. The total value of Singapore's exports to EU increased from US$1,758 million in 1990 to US$3,850 million in 1995, to US$9,168 million in 1999.

However, by the late 2000s, China had overtaken the EU as a leading trade partner of Singapore. The total amount of Singapore's exports to China grew rapidly from US$1,061 million in 2000 to US$4,106 million in 2005, to US$7,518 million in 2008. During the same period, Singapore's exports to the EU rose slowly from US$4,465 million in 2000 to US$6,456 million in 2005, to US$9,016 million in 2008. In the third quarter of 2009, the total value of Singapore's exports to China (US$6,969 million) exceeded its exports to the EU (US$6,638 million) for the first time. China's dominant position in Singapore's international trade relationship was further reinforced in the 2010s. The total amount of Singapore's exports to China increased from US$8,206 million in 2010 to US$11,368 million in 2015, to US$12,276

million in 2017. By contrast, its exports to the EU dropped from US\$7,464 million in 2010 to US\$7,397 million in 2015, and only slightly rebounded back to US\$7,654 million in 2017 (International Monetary Fund, 2017).

The shifting trends in Singapore's exports to China and the EU, as elaborated above, have raised the question of whether the country's current export practices have a positive effect on its economic development. In this study, focus is given on the relationship between the amount of exports and Gross Domestic Product (GDP). Details of the data collection and data analysis procedures adopted in the study are described in the following section.

Data and Methods

This paper has selected Singapore as a case study to examine the country's exports to China and EU and its contribution to economic growth in Singapore for the period of 1975Q1-2017Q3. Statistics on Singapore's exports to China and the EU were obtained from the database on the Direction of Trade (International Monetary Fund, 2017). On the other hand, GDP figures were sourced from Statistics Singapore (2017). All data on exports and income were transformed into natural logarithms.

For the purpose of empirical analysis, three econometric methods were employed, namely the Phillips-Perron (PP) unit root test, the Johansen cointegration test and the Granger causality test. In the first stage of empirical analysis, the Phillips-Perron unit root test was based on the following equation (Phillips and Perron, 1988):

$$\Delta y_t = \beta_0 + \alpha y_{t-1} + \varepsilon_t \tag{1}$$

where y_t is variable of interest, β_0 is intercept, α is slope coefficient for the lagged dependent variable, ε_t is disturbance term. The PP statistic was calculated as follows (Phillips and Perron, 1988):

$$pp = t_\alpha (\frac{\gamma_0}{f_0})^{1/2} - \frac{T(f_0 - \gamma_0)(se(\alpha))}{2f_0^{1/2}s} \tag{2}$$

where t_α is t-statistic of α in Equation (1), γ_0 is residual variance, f_0 is the long-run residual variance, T is number of observation, s is standard error of regression and $se(\alpha)$ is standard error of α in Equation (1). The PP test is a nonparametric unit root test which modifies the ADF statistics (Dickey and Fuller, 1979). In this PP statistic, the presence of serial correlation does not affect the asymptotic distribution of t-statistic (Phillips and Perron, 1988). The bandwidth length is determined by the Newey-West method.

In the second stage of empirical analysis, this study relied on the Johansen cointegration test to examine the long-run relationship between variables. Johansen (1991) proposed a Vector Autoregression (VAR) for the analysis of cointegration. The Johansen test is based on the following VAR:

$$y_t = \mu + \sum_{i=1}^{p} \beta_i y_{t-i} + \varepsilon_t \tag{3}$$

where y_t is k-vector of variables, p is lag order, μ is intercept, β_i are slope coefficients and ε_t is error term. Equation (3) can be transformed into:

$$\Delta y_t = \mu + \Pi y_{t-1} + \sum_{i=1}^{p} \Gamma_i \Delta y_{t-i} + \varepsilon_t \qquad (4)$$

where Π is coefficient matrix for the lagged dependent variables and Γ is the coefficient matrix for the lagged differenced dependent variables. Furthermore, the coefficient matrix Π can be written as:

$$\Pi = \alpha \beta' \qquad (5)$$

where α is the vector of adjustment parameter and β is the vector of cointegrating equation. In this study, the maximum eigenvalue method was used to estimate the Johansen test statistic. Due to the limited number of observations, the lag order was set up as one in the current study.

In the third stage of empirical analysis, the Granger causality test was employed to analyse the causal relationship between variables. The Granger causality test could be based on the following equations (Granger, 1969):

$$GDP_t = \mu_1 + \sum_{i=1}^{p} \beta_{1i} EXP_{t-i} + \sum_{i=1}^{p} \beta_{2i} GDP_{t-i} + \varepsilon_{1t}$$

$$EXP_t = \mu_2 + \sum_{i=1}^{p} \beta_{3i} GDP_{t-i} + \sum_{i=1}^{p} \beta_{4i} EXP_{t-i} + \varepsilon_{2t} \qquad (6)$$

There were two null hypotheses in the current study. The first null hypothesis of no causality from exports to economic development can be formulated as:

$$\beta_{11} = \beta_{12} = \ldots\ldots\ldots = \beta_{1p} = 0 \qquad (7)$$

The second null hypothesis of no causality from economic development to exports can be formulated as:

$$\beta_{21} = \beta_{22} = \ldots\ldots\ldots = \beta_{2p} = 0 \qquad (8)$$

The Granger causality test was used to test four alternative hypotheses that would explain causal relations between variables. The first hypothesis is on export-led economic development (ELED). According to this hypothesis, exports can be considered as a source of economic development. The ELED hypothesis would be substantiated if the empirical findings could point to the presence of a unidirectional causality from exports to economic development. The rejection of the first null hypothesis (Equation 8) and non-rejection of the second hypothesis (Equation 9) would provide empirical evidence to support this hypothesis.

The second hypothesis concerns development-led export expansion (DLEE). In other words, economic development will lead to export expansion. The DLEE hypothesis would be substantiated if the empirical findings could identify the presence of a unidirectional causality from economic development to export expansion. The rejection of the second hypothesis

(Equation 9) and non-rejection of the first hypothesis (Equation 8) would provide the empirical evidence for this hypothesis.

Next, the third hypothesis is related to the feedback effect between exports and economic development (FEED), whereby there is a mutually reinforcing relationship between exports and economic development. The FEED hypothesis would be substantiated if the empirical findings showed a bidirectional causality between exports and economic development. The rejection of both the first hypothesis (Equation 8) and the second hypothesis (Equation 9) would provide empirical evidence to support this hypothesis.

Finally, the fourth hypothesis is on the neutrality between exports and economic development (NEED). According to this hypothesis, there is a neutral relationship between exports and economic development. The NEED would be substantiated if there were no causal relationship between exports and economic development. The non-rejection of the first hypothesis (Equation 8) and the second hypothesis (Equation 9) would provide empirical evidence for this hypothesis.

Findings and Discussion

The current study employed three different econometric methods, namely the Phillips-Perron (PP) test, the Johansen test together with the error correction model (ECM), and the Granger causality test to examine the impact of Singapore's exports to China and the EU on its economic development. In the first stage of empirical analysis, the PP test was used to examine the unit root process of the time-series data on exports and income. The empirical findings from the PP test are reported in Table 1.

Table 1: Results of PP unit root test

Variables	Intercept	Intercept and trend
GDP	-2.456[10]	-1.475[10]
ΔGDP	-13.895[9]***	-14.412[9]***
EXPC	0.347[1]	-5.066[7]***
ΔEXPC	-17.020[1]***	-16.798[0]***
EXPEU	-2.444[8]	-1.320[8]
ΔEXPEU	-14.143[8]***	-14.592[8]***

Notes: *** indicates the significant level at the 1 percent
Numbers in bracket indicate the optimal bandwidth which is determined by Newey-West method

As the results clearly indicate, the PP test failed to reject the null hypothesis of unit root for economic development (*GDP*) at level. On the other hand, the PP test rejected the null hypothesis for the same variable at first difference. The PP test also failed to reject the null hypothesis of unit root for the exports to China (*EXPC*) but rejected the null hypothesis for the same variable at first difference. Similarly, the PP test failed to reject the null hypothesis of unit root for the exports to EU (*EXPEU*) but rejected the null hypothesis for the same variable at first difference. Despite some minor differences, empirical findings from the PP test indicated that exports to China, exports to the EU and economic development at level could be considered as the unit root process. Furthermore, findings also indicated that these three

variables at first difference could be considered as nonstationary process. This means that these variables are integrated of order one, *I(1)*, implying that standard statistical methods, such as linear regression, can be used efficiently to examine the relationship among these variables.

In the second stage of empirical analysis, the Johansen cointegration test was used to examine the long-run relationship between exports and economic development in Singapore. Empirical findings from the Johansen cointegration test for the analysis of exports to China (*EXPC*) and economic development (*GDP*) are reported in Table 2. As shown in the table, the maximum eigenvalue statistic for the first null hypothesis of no cointegrating equation is greater than the five percent critical value. This means that the Johansen test rejected the first null hypothesis and indicated the presence of one cointegrating equation. Furthermore, the maximum eigenvalue statistic for the second null hypothesis of one cointegrating equation is also more than the five percent critical values. This indicates that the Johansen test failed to reject the second null hypothesis and confirm the presence of two cointegrating equations. In other words, the results of the Johansen cointegration analysis suggested that there would be no significant cointegrating relationship between exports to China and economic development in Singapore.

Table 2: Results of Johansen test (*EXPC* and *GDP*)

Number of cointegrating equation	Eigenvalue	Maximum Eigenvalue	5 percent critical value
None	0.097	17.146*	14.264
At most 1	0.021	4.239*	3.841

Notes: ** indicates the significant level at the 5 percent

The results of the Johansen cointegration test for the analysis of exports to EU (*EXPEU*) and economic development (*GDP*) are reported in Table 3. The maximum eigenvalue statistic for the first null hypothesis of no cointegrating equation is smaller than the five percent critical value. This means that the Johansen test rejected the first null hypothesis and indicated the non-existence of one cointegrating equation. Furthermore, the maximum eigenvalue statistic for the second null hypothesis of one cointegrating equation is also more than the five percent critical values. This indicates that the Johansen test failed to reject the second null hypothesis and show the presence of two cointegrating equations. In other words, the results of the Johansen cointegration analysis indicated that there would be no significant cointegrating relationship between exports to EU and economic development in Singapore.

Table 3: Results of Johansen test (*EXPEU* and *GDP*)

Number of cointegrating equation	Eigenvalue	Maximum Eigenvalue	5 percent critical value
None	0.044	7.654	14.264
At most 1	0.025	4.409*	3.841

Notes: ** indicates the significant level at the 5 percent

In the final stage of empirical analysis, the Granger causality test was used to examine the causal relationship between exports to China (*EXPC*) and economic development (*GDP*). The empirical findings from the Granger causality test are reported in Table 4. The results of the test rejected the null hypothesis of no causality between exports to China (*EXPC*) and economic

development (*GDP*). Furthermore, the Granger causality test failed to reject the null hypothesis of no causality from economic development to exports to China. This suggests a unidirectional causality between exports to China and economic development in Singapore.

Table 4: Results of Granger causality test (*EXPC* and *GDP*)

Exports to China (*EXPC*) would cause economic development (*GDP*)	Economic development (*GDP*) would cause expansion of exports to China (*EXPC*)
19.812***	0.205

Notes: *** indicates the significant level at the 1 percent

The Granger causality test was also used to examine the causal relationship between exports to the EU (*EXPEU*) and economic development (*GDP*). The empirical findings from the Granger causality test are reported in Table 5. The Granger causality test failed to reject the null hypothesis of no causality between exports to the EU (*EXPEU*) and economic development (*GDP*). Furthermore, the Granger causality test also failed to reject null hypothesis of no causality between economic development and exports to the EU. These findings indicate an independent relationship between exports to the EU and economic development in Singapore.

Table 5: Results of Granger causality test (*EXPEU* and *GDP*)

Exports to EU (*EXPEU*) would cause economic development (*GDP*)	Economic development (*GDP*) would cause expansion of exports to EU (*EXPEU*)
0.204	0.771

Conclusion

In 2015, Singapore became the first ASEAN country to have successfully established a bilateral free trade agreement with the EU, following failed ASEM negotiations for a comprehensive ASEAN-EU FTA. Singapore has also formed a strong bilateral trade relationship with China over the past two decades. Hence the current study was concerned with the effects of Singapore's exports to the EU and China on the country's economic development.

To examine the relationship between Singapore's exports to the EU and China, and its GDP, the current study employed three econometric methods, namely the PP test, the Johansen test and the Granger causality test, for its empirical analysis. In the first stage of the analysis, the PP test was used to examine the unit root process of time-series data. The unit root test indicated that time-series on exports and income can be considered as a nonstationary process. In the second stage of analysis, the Johansen test was used to examine long-run relationships between the two variables. The cointegration test suggested that no such relationship exists between them. In the final stage of analysis, the Granger causality test was used to examine causal relationship between the variables. The causality test identified the presence of a unidirectional causality between exports to China and economic development in Singapore, in line with the export-led economic development hypothesis. However, the causality test showed no causal relationship between exports to the EU and economic development in the country. In other words, there is an independent relationship between exports to the EU and economic development, in line with the neutrality hypothesis. These findings can be interpreted such that

Singapore's exports to China are positively related to its economic development, while its exports to the EU are not.

The above findings are consistent with Singapore's export practices since 2005, whereby a stagnation of its exports to the EU was concurrently replaced by its exports to China. As demonstrated earlier in Figure 1, Singapore's exports to the EU did not substantially increase after the EU economic crisis in the mid-2000s. On the other hand, Singapore's exports to China increased sharply during the same period.

The current study has two main policy implications. First, due attention should be given to the Chinese market to maximise the economic effects of exports to China on Singapore. Meeting the needs of Chinese consumers is a significant factor which can stimulate Singapore's economic growth. Traditionally also, the country has played the role of regional hub for Chinese products in ASEAN. Thus it may heighten its efforts to strengthen this regional position and increase further its total exports to China in the future. One such effort could be the setting up of a special free trade zone through the CSFTA to attract more foreign investments from China. Second, Singapore should also take account of the fact that there is a neutral relationship between exports to the EU and its economic development. Although the EU was a dominant trading partner for Singapore for two decades (1970s to 1990s), exports to the EU have not contributed significantly to its economic growth. This has been worsened by a stagnation of its exports to the EU since the 1990s. However, this situation may be a temporary, short-term trend since some EU countries, such as Germany, have recorded very high growth in the 2010s. With the signing of the EUSFTA in 2015, strategies should be developed by Singapore to ensure that future exports to the EU could produce more positive effects on its economic development.

This study has two main limitations and recommendations for future research. First, there is a lack of sufficiently long dataset on ASEAN exports and GDP. Further research in this area will benefit from a longer set of data. Second, econometrics as a method for data analysis is still undergoing improvements. With some advancement in recent years, more sophisticated methods such as unit root test with structural break or Fourier approximation could be employed in latter studies. This may offer a better insight on the relationship between exports and economic development, both for ASEAN and beyond.

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