Does export promotion policy benefit for ASEAN economic development?

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Abstract: The main objective of this research is to analyse whether the export promotion policy can benefit ASEAN economic growth. The study applies secondary data from 1993 to 2015 in five countries of ASEAN: Indonesia, Malaysia, Philippines, Thailand and Singapore. 3SLS methods are applied in this study. The results suggest that the import substitution policy implemented in five ASEAN countries tend to accelerate the economic growth through agroindustry advancement. However, for non-agricultural base countries, promotion export would speed up industrialisation toward rapid economic growth.

Keywords: international trade; export promotion; import tariff; industrialisation.


Biographical notes: Dwi Budi Santosa is a Senior Lecturer in Economic Department at Brawijaya University and served as Head of Economic Program in 2013–2017 and currently served as Vice Chairman of PKEPK. Experienced as reviewer in Emerald Emerging Market Publishing Journal and Asia Business and Economics Journal, Thailand University. Member of ISEI and EcoMod Organization. His research interest focus on economic planning, econometrics, and institutional economics. He has published several papers on mentioned research interest above.

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1 Introduction

For the time being, the increase in exports to accelerate economic growth has attracted the attention of governments in many countries. MacEwan (2009) suggested that an increase in the export leads to increase foreign exchange reserves and the expansion of market share. Therefore, they would accelerate the economic growth. Up to this point, government interventions in international trade becomes vital. In general, there are two types of government interventions in international trade:

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import substitution policy, the policy of import restrictions to protect domestic industry

Export promotion policy, the provision of incentives for domestic producers having the potentials to export.

Import tariffs index reflects trade policies rather than investment policies. High import tariffs index indicates a high degree of import substitution policy and export promotion policy conversely. Figure 1 shows that Singapore has the lowest index of import tariffs compared to those of Indonesia, Malaysia, Thailand and the Philippines. Thus, since 1993, Singapore government has used export promotion policy. In contrary, four ASEAN countries employed import substitution as a policy of intervention in international trade.

However, progressively, ASEAN government intervention policy has focused more on the promotion of exports, even after 2009, the index of import tariff ranged in the amount of 5%, of which the export promotion policy was increasingly favoured by the five ASEAN countries. Abdul-Aziz and Zulkifli (2017) support this statement, in which they found that in 2000–2010 ASEAN countries gradually become exporting nations, especially in electronical industries. Fakher (2016) also states that international trade has a significant positive impact on FDI in Egypt during 1995 to 2013. Therefore, the main purpose of this study is to explore whether an export promotion policies in ASEAN significantly contribute to the economic growth acceleration.

Figure 1 Tariff import index in Five ASEAN countries (see online version for colours)

Source: Databank World Bank (2017)

2 Literature review

The fact that the market failure is often used as a fix justification by economists to determine government intervention in international trade becomes inauspicious. In the theory of international trade, free trade is believed to be more efficient than the protection when the market reaches perfect competition. However, government intervention is required to properly manage any market inefficiencies, where the market price does not truly reflect the degree of scarcity or surplus goods.

The policy of import substitution, basically, is considered as a government intervention to protect domestic industry by limiting imported goods in the domestic market. During the post-World War II, it was common when most developing countries treated import substitution as a policy to protect infant industries (Bruton, 1998). For example in Brazil and Colombia, in the early development of the industry, import
substitution was applied by these countries for more than 23 years, before moving on export promotion to date (Urrutia and Naya, 1989). Slightly different to industrialisation in South Korea, import substitution was applied only in a period of no more than seven years (Sato, 2002).

When referred to the provided experience of countries in Latin America and Asia, export promotion policy provided a significant contribution to the acceleration of economic growth, compared to the policy of import substitution. Keesing (1967) argued that the export promotion policy contributed to an increase in the intensity of competition, so as to encourage employers to keep on innovating, that occurred in South Korea (Sato, 2002) and Latin America (Urrutia and Naya, 1989). Furthermore, it is found that Export promotion has a positive impact towards financial development in several countries in Africa (Wamboye and Mokerjee, 2014), as well as in the Caribbean and Central American countries (Mookerjee and Wamboye, 2014). There are three main reasons why the promotion of exports remained superior to import substitution (Urrutia and Naya, 1989), which are:

- the export promotion policy is not a market control, so unable distorting the market
- the export promotion policy is more measurable; hence, the deviations from the implementation of this policy should be more carefully evaluated than the policy of import substitution
- The export promotion policy provides a greater opportunity for the industry to market expansion, so the industry is forced to ultimately compete in ways that remain efficient and competitive.

Conversely, it contradicts the results of a recent study conducted by Ahmed (2012) precisely stating otherwise. Export promotion policy leading to free trade will ultimately hamper economic growth, particularly for the state-based primary resources, and have the potential of huge domestic markets such as India, China, and Indonesia. Likewise, Pasadilla and Liao (2006) found out that the promotion of exports contributing to food security vulnerability and high labour costs in the industry sector remained to exist. While Zaiem (2012) states that perception of export problems may vary depends on the contexts and environment, as evidenced in May’s (2015) finding that market structure, particularly oligopoly, will amplify export instability. Therefore, the benefits of import substitution policy or the export promotion to economic growth are reported to be very dependent on the specific conditions attached to them.

3 Model analysis

This study can be classified as a quantitative research applying panel data on the five ASEAN countries from 1993 to 2015. Meanwhile, the estimation method used in this study employs 3-stage least squares (3-SLS) with a stationary test. In this case, the specification model developed in this study consists of four equations, which are:

1. The equation specification model of agricultural growth;

\[ G_{Ag}ti = \beta_1 TR_t + \beta_2 (Trti)(Di) + \beta_3 CPI_{ti} + \mu \] (1)
The equation specifications model of industrial growth:

\[ G_{\text{IN}t} = \alpha_0 + \alpha_1 \text{TR}_{t} + \alpha_2 (\text{TR}_{t}) (\text{Dt}) + \alpha_3 G_{\text{AG}t} + \alpha_4 (G_{\text{AG}t}) (\text{Dt}) + \epsilon \]  

(2)

The equation specification model of export growth:

\[ G_{\text{E}t} = \gamma_0 + \gamma_1 \text{TR}_{t} + \gamma_2 (\text{TR}_{t}) (\text{Dt}) + \gamma_3 G_{\text{IN}t} + \gamma_4 (G_{\text{IN}t}) (\text{Dt}) + \gamma_5 \text{CG}_{US} + \gamma_6 \text{CG}_{JP} + \epsilon \]  

(3)

The equation specification model of economic growth:

\[ EG_{t} = \rho_0 + \rho_1 G_{\text{E}t} + \rho_2 S_{\text{IM}t} + \theta \]  

(4)

where

- \( TR \): Import tariff
- \( G_{\text{AG}} \): Agricultural growth
- \( CPI \): Agriculture productivity index
- \( G_{\text{IN}} \): Industry growth
- \( G_{\text{E}} \): Export growth
- \( S_{\text{IM}} \): Share import
- \( EG \): Economic growth
- \( GC_{US} \): Per capita income growth of USA
- \( GC_{JP} \): Per capita income growth of Japan
- \( D \): Dummy variable; \( D_{1} = 1 \) for Indonesia and 0 for other countries
- \( t \): Time series (1993–2013)
- \( i \): Five ASIAN countries

4 Statistic result

Based on the 3-SLS estimation results, it suggested that import tariff index influences ASEAN economic growth in two ways. First, increasing import tariffs index positively provides an increase in economic growth through the acceleration of agricultural sector. Table 1 shows that the growth of the agricultural sector is positively influenced by the import tariff index and the productivity of agricultural land crop production as measured by the index. Therefore, the acceleration of growth in the agricultural sector occurs, when the government applied import substitution policy. To be specific, import substitution policy in Indonesia contributes more to the acceleration of agricultural growth as compared to the other four ASEAN countries, such as the development of the agricultural sector in Indonesia requiring a more rigorous import control, in accordance to the results from studies conducted by Pasadilla and Liao (2006) stating that setting the price of agricultural products remained essential for ensuring food security and preventing agricultural business risk.
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Table 1  Result of agriculture growth estimation

<table>
<thead>
<tr>
<th>Independent variables</th>
<th>Coefficient parameters</th>
<th>Z value</th>
<th>α (Prob.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>4.92</td>
<td>4.33</td>
<td>0.00</td>
</tr>
<tr>
<td>Import tariff index</td>
<td>0.99</td>
<td>4.69</td>
<td>0.00</td>
</tr>
<tr>
<td>Crop production index</td>
<td>1.02</td>
<td>2.06</td>
<td>0.03</td>
</tr>
<tr>
<td>Dummy import tariff index for Indonesia</td>
<td>0.24</td>
<td>1.02</td>
<td>0.03</td>
</tr>
</tbody>
</table>

$R^2 = 0.10$, Chi$^2 = 21.71$, Prob. = 0.00.

Source: Estimation using STATA, 2017

On the other hand, export promotion policies hasten industrialisation in ASEAN countries. Table 2 illustrates the increase in import tariff index demonstrating negative impact on the growth of industry in ASEAN. In other words, the policy makers in ASEAN belief that the export promotion policy remains vital for the development of industry in ASEAN. Based on the cases of industrialisation in Indonesia, the increase in import tariff index in Indonesia brought higher impact on the sluggish growth of the industry, compared to other four ASEAN countries. Consequently, the results point out that the level of Indonesian industry depends on the imported raw materials. This phenomenon has led to the restrictions on imports, especially for the imported raw materials resulting in higher production costs and ultimately worsened competitiveness. The estimation results of the prior data are in accordance with the finding of Belloc and Di Maio (2011) that pointed out that the export promotion policy might encourage the improvement of efficiency, innovation and industrial productivity.

Table 2  Result of industry growth estimation

<table>
<thead>
<tr>
<th>Independent variables</th>
<th>Coefficient parameters</th>
<th>Z value</th>
<th>α (Prob.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>–10.22</td>
<td>–4.1</td>
<td>0.00</td>
</tr>
<tr>
<td>Import tariff index</td>
<td>–1.12</td>
<td>5.72</td>
<td>0.00</td>
</tr>
<tr>
<td>Agriculture growth</td>
<td>5.73</td>
<td>7.53</td>
<td>0.00</td>
</tr>
<tr>
<td>Dummy import tariff index for Indonesia</td>
<td>–0.89</td>
<td>–2.01</td>
<td>0.03</td>
</tr>
<tr>
<td>Dummy agriculture growth for Indonesia</td>
<td>–1.61</td>
<td>–2.41</td>
<td>0.01</td>
</tr>
</tbody>
</table>

$R^2 = 0.16$, Chi$^2 = 65.64$, Prob. = 0.00.

Source: Estimation using STATA, 2017

The research results as estimated in the second equation also indicate a positive impact of agriculture growth on the industry sector. Table 2 shows that the growth of agriculture sector has positively affected on industrialisation in ASEAN countries. The result suggests that the industrialisation in ASEAN, excluding Singapore, was dominated by the importance of agroindustry role. While in the context of Indonesia, agroindustry role in industrialisation is at the lowest level.

Furthermore, industrial sector growth becomes the sole factor affecting positively and significantly towards export growth. Table 3 shows that all explanatory variables of export growth have an error rate (α) above 5%, except for the variable of industry growth. Moreover, both trade policy of import substitution and export promotion do not directly affect the increase in exports, through affecting the growth of industry sector. This role of
export occurs in non-agricultural based countries, such as Singapore. Meanwhile, the role of an increase in export for the agricultural based countries, the trade policy has affected on their exports through the growth of the agricultural sector which speed up the industrialisation.

<table>
<thead>
<tr>
<th>Independent variables</th>
<th>Coefficient parameters</th>
<th>Z value</th>
<th>α (Prob.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>0.00</td>
<td>0.000</td>
<td>0.98</td>
</tr>
<tr>
<td>Import tariff index</td>
<td>0.02</td>
<td>0.27</td>
<td>0.72</td>
</tr>
<tr>
<td>Industry growth</td>
<td>1.23</td>
<td>2.52</td>
<td>0.02</td>
</tr>
<tr>
<td>GDP Japan</td>
<td>0.11</td>
<td>0.92</td>
<td>0.44</td>
</tr>
<tr>
<td>GDP US</td>
<td>0.82</td>
<td>0.57</td>
<td>0.65</td>
</tr>
<tr>
<td>Dummy import tariff index for Indonesia</td>
<td>0.03</td>
<td>0.1</td>
<td>0.87</td>
</tr>
<tr>
<td>Dummy industry growth for Indonesia</td>
<td>-0.23</td>
<td>-0.51</td>
<td>0.69</td>
</tr>
</tbody>
</table>

$R^2 = 0.26, \text{Chi}^2 = 95.20, \text{Prob.} = 0.00.$

*Source:* Estimation using STATA, 2017

Finally, based on the developed model, the increasing trend in exports showed a positive impact on economic growth. Table 4 shows significant growth in exports, affecting economic growth. So that, export growth contributes significantly towards the economic growth. The estimation results support the findings of a study conducted by Bond et al. (2005), Clarke and Williams (2010) as well as Lim and Ho (2013) stating the increase in exports in ASEAN had a significant role in accelerating the economic growth.

<table>
<thead>
<tr>
<th>Independent variables</th>
<th>Coefficient parameters</th>
<th>Z value</th>
<th>α (Prob.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>3.21</td>
<td>5.02</td>
<td>0.00</td>
</tr>
<tr>
<td>Export growth</td>
<td>0.33</td>
<td>5.29</td>
<td>0.00</td>
</tr>
<tr>
<td>Import share</td>
<td>-0.04</td>
<td>-1.48</td>
<td>0.15</td>
</tr>
</tbody>
</table>

$R^2 = 0.14, \text{Chi}^2 = 27.35, \text{Prob.} = 0.00.$

*Source:* Estimation using STATA, 2017

5 Discussion

Based on the statistical results, Figure 2 illustrates the impact of import tariff index to the economic growth in ASEAN countries. In this stage, an increase in the import tariff index reflects the tendency towards the import substitution policy, as well as for the export promotion. In agriculture-based countries, import substitution contributed to the acceleration of economic growth, through the acceleration of growth in the agricultural sector. Afterwards, it sped up the growth of agroindustry, ultimately hastened the increase in commodity exports of agroindustry.
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Figure 2  The impact of tariff import index on economic growth in five ASEAN countries (see online version for colours)

In this case, using the result from Pasadilla and Liao (2006), there are two reasons emphasising the importance of import substitution policies in the economic development in the agriculture-based countries:

- The price of agricultural products is volatile depending on natural conditions; therefore, the risks of farmers tend to be higher than the non-farm economic activities.
- In Indonesian case, most population working in agricultural sector may bring impact on welfare. Therefore, if the growth of the agricultural sector is very slow or even negative, then the poverty rate in rural areas inclines, and ultimately threatens the success of economic development. On the contrary, the potential of the domestic agricultural market remains enormous, considering the high population of Indonesia. Hence, the control or restrictions on agricultural commodity markets is absolutely required, which would maintain the welfare of farmers and farm workers.

Meanwhile, for countries that are not based on agricultural sector, export promotion policy contributes significantly to economic growth. Mitra and Trindade (2005) pointed out that the success of industrialisation in South Korea, a country with no agricultural base, was to accelerate the use of export promotion as a policy intervention. There are two factors in the success of export promotion of industrialisation in South Korea, which are:

- The establishment of low import tariffs on food results in controlled food inflation rate. In turns, low wages may occur, accommodating the competitiveness of the South Korean industry.
- The establishment of non-food low import tariffs results in a more open international trade, attracting investors to increasingly undertake foreign direct investment, leading to the growth of industries that produce at optimum scale (economics of scale).

6 Conclusion

By the weakening of the role of industrialisation in the agroindustry in ASEAN countries, export promotion policy contributes significantly to the acceleration of economic growth.
This study suggests that the development of the agricultural sector is no longer designated as a provider of raw materials for industrial development in ASEAN, but rather aimed at improving food security in each ASEAN country. Hence, the export promotion policy is expected to speed up the emergence of new industries having high competitiveness, through enhancing efficiency, innovation and productivity. In contrast, if agroindustry is the dominant type of industry, the import substitution becomes suitable policy to accelerate economic growth.

In Indonesia, the policy of import substitution is especially still required for the development of the agricultural sector, providing the fact that most poor people settle in rural areas with agriculture as the basis of economic activities. Therefore, the selective trade policy is required in controlling the strategic agricultural commodity prices. Meanwhile, export promotion policies are also vital to accelerate the improvement of the industry competitiveness in Indonesia, especially industry with a high level of dependence on imported raw materials. Thus, the establishment of import tariff index in Indonesia should not be lower than Singapore and Malaysia; or at least should be equal to those of Philippine or Thailand.

References


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Note

1Cale et al. (2017) found Lucas Paradox do happens in ASEAN, that capital does not flow from developed countries to developing countries despite the lower level of capital per worker. This results suggest that decision of import tariffs level is not directly aimed to attract capital inflow.