Asian Economic Community with Selected Macroeconomic Variables for Exports Sustainability

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ABSTRACT: ASEAN Economic Community is active in Blueprint on 20 November 2007. One activity is exports with free movement of goods and services, investment, skill labors and free flow of capital. It implies that number of outputs will be crated relating to use more workers. Once country produces many outputs, it will affect to change in GDP. Purpose is to search which selected macroeconomic variable including AEC are mostly affected to Thailand exports and to check relationship between GDP and unemployment. Two models are used. One is to identify variables on exports' movements. Other is to explain relationship between GDP and unemployment. Outcome shows significance AEC has positive effect on exports. Furthermore, raising GDP has an effect on unemployment rate according to Okun's law in economic theory. It is important for consumers, investors, foreigners and government to understand how effective factors improve for Thailand exports to make benefit in long run.

Keywords: Asian Economic Community; exports; GDP; unemployment rate; macroeconomics
JEL Classifications: E00; E20; F62

1. Introduction

The Association of Southeast Asian Nations (ASEAN) was founded on August 8, 1967 by Indonesia, Malaysia, the Philippines, Singapore and Thailand (National Statistical Office, 2004). Latter on Brunei, Cambodia, Laos, Myanmar and Vietnam joined the group. ASEAN activities are coordinated by the ASEAN Secretariat, which is based in Jakarta, Indonesia. It has made most progress in economic integration and focus to create an ASEAN Economic Community or AEC in 2015 (Charumanee, 2012). The AEC would combine population of over 566 million people and a gross domestic product of over $1.173 trillion (Sim, 2008). The foundation of the AEC is the ASEAN Free Trade Area (AFTA), a common external preferential tariff scheme to promote the free flow of goods within ASEAN. Other elements of economic integration, such as the free flow of investment and services and the elimination of non-tariff barriers, have been added by the ASEAN leaders (ASEAN Annual Report 2008-2009, 2009). However, AEC agreements signed in November 2007, ASEAN's leaders are trying to build a single market, but without either a strong central executive or a well-developed body of laws. Nevertheless, failure to integrate ASEAN's diverse markets means a loss of investment and economic opportunities to regional competitors, such as China and India. As the impact from AEC formation has improved the exports, which is the most important factor that contributed to GDP, and then linked it together with the other macroeconomic variables such as unemployment rate, real exchange rate.

The unemployment rate is one of the economic indicator and measurement of population's welfare in the same time (Anielski, 2001). It has been one of the major issues in most of the countries including Thailand. Moreover, unemployment rate also acts as one factor affecting business cycle which it affects to GDP of country. Through the relationship of net export, GDP, and unemployment rate, paper can formulate by using the econometrics model and economic model in analyzing.

Then, purpose of this paper is to search on which selected macroeconomic variables and ASEAN Economic Community are mostly affects to Thailand exports and to find the relationship between GDP and unemployment rated to Thailand exports.

The benefit receives from the research as economic perspective, the list of factors can help the businesses considering when investing abroad. Furthermore, the fact can guide the policymakers and encourage more outward investment, capable companies to take on the lower specific business risks.

2. Literature Review

For the reviews from the experiences of the current AEC implication of King, Ismail, Hook (2010) by uses the dummies ASEAN, concludes that there is trade creation among the 5 ASEAN members enhanced subsequent to the AEC formation, proven from the measurement of ASEAN dummies of intra trade. In general, the formation of AEC will facilitate the region to participate competently in developing an international trading that is more approachable to its requirements. The paper then concludes that AEC plays important roles towards attracting trade among ASEAN member countries. Moreover, from Petri, Plummer, Zhai (2010) by comparing with those of European Union, AEC would yield similar benefits, which is surprising, as ASEAN economies are not as integrated today, and are less complementary than the EU at the initiative of European's integration. However, by given the relatively early stage of development of some ASEAN members, existing barriers to trade are greater and their elimination could yield larger productivity gains relative to current trade. These benefits appear to outweigh the effect of lower initial 26 integrations. In the future as the ASEAN economies continue to develop and work more closely together, the benefits from AEC should grow higher.

Neoclassical theory predicts that increased economic integration and the removal of impediments to the free flow of production factors will lead to a convergence in factor returns and, subsequently, in living standards. This is also true for employment which should converge across the union and, conversely, unemployment should converge. Trung and Hashimoto (2005) find that export-oriented strategies have been an engine of economic growth including characteristics of production and consumption in all member countries may have led them to persistently aim for non-members as their export destinations. Furthermore, results by Tajoli and Benedictis (2006) show that growth of trade patterns close to growth of other economic indicators.

3. Methodology

To identify the variables those seem to have significant effect on exports movements. Some variables are noticed to have an impact on exports. Those are the world demand or total world imports, real exchange, lagged term of exports, and of course the ASEAN Economic Community which is treated to be dummy variable. Therefore, the equation can be conducted as in Model 1 below:
Model 1:

$$\ln X = \alpha + \beta[\ln(TWIm)] + \Omega[\ln(RER)] + \S AEC + \varsigma[\ln(X_{t-1})]$$

Where;
- X is amount of exports (million baht)
- TWIm is the world demand or total world imports (million baht)
- RER is real exchange rate
- AEC is ASEAN Economic Community (dummy variable)

Another model is used to explain the relationship between the GDP and unemployment rate
Model 2:

[Past GDP – Actual Output] / Actual Output = ∞ [Actual Unemployment Rate – Natural Rate of Unemployment]

Where :
- ∞ is the factor relating changes in unemployment to changes in output

4. Discussion

This paper estimates an impact of Thailand exports and unemployment rate by using the selected macroeconomic variables including the ASEAN Economic Community (AEC). As paper selects AEC as one factor even though it is not counted as macroeconomic variables as usual but it is important to know how AEC impacts on the total exports of Thailand. After that, paper searches on the relationship between Thailand exports and Gross Domestic Product (GDP) by using the concept of basic macroeconomics theory explained. Finally, it connects to the unemployment rate change with respect to a change in GDP that could be explained by the Okun's law in macroeconomic aspect.

When AEC is activated, King et al. (2010) has proved that it creates more trade between Thailand and other ASEAN members which should also increase a level of Thailand exports since the formation of AEC makes the ASEAN market become single and production base also comprise five elements: free flow of goods, free flow of capital, free flow of investment, free flow of service and free flow of skilled labor. With these benefits, it increases the level of production in Thailand because of lower production cost and no tariff. Therefore, Thailand can export more products to the ASEAN market. This information supports the outcome of this paper as shown in Table 1:

Table 1. Selected Components Affect Thailand Exports

Variables	Coefficient	t-Statistic	Prob.
ln(TWIm)	6.10E-06	1.826272	0.0778
ln(RER)	-0.115743	-0.073083	0.9422
AEC	22.91806	2.088190*	0.0454
ln(X t-1)	0.690175	5.533737*	0.0000
R-squared	0.740287	F-statistic	21.37807

Note: * is shown as 5% significant level.

From Table1, at 5% significant level, two selected variables are significance excepting the total world imports and exchange rate. Meaning that, AEC and past period of Thailand exports have positive effect on the exports. Furthermore, once AEC was implemented, Thailand exports rise immediately.

Now extending to relationship between Gross Domestic Product (GDP) and Unemployment rate can connect to the idea on macroeconomic for GDP expenditure approach. Started from concept of Gross Domestic Products, GDP is a market value of all final goods and services produced within a country in a given year. It is considered as an indicator of a country's standard of living in macroeconomic picture. Because it can be used to link the relationship between exports and GDP called "expenditure approach". The components of the method shown as:

$$Y = C + I + (X - M) + G$$

where

Y is denoted as a Gross Domestic Product;

C is denoted as consumption;

I is denoted as investment;

G is denoted as government spending; and

X-M is denoted as a net export where X is exports and M is imports.

According to the expenditure approach, it is obvious that export has a positive relationship with GDP by holding other variables constant. The more products country produces and exports, the more GDP will be created.

Regarding to the above analysis, it is shown that ASEAN Economics Community has affected on increased Thailand exports. In the mean time, this content also points that an increased in export will raise GDP as well. Thus, paper can clarify that once AEC is activated, GDP will increase as exports increase.

Up to this point, paper explores that there is the relationship between an implementation of AEC and movement trend of unemployment rate because AEC shows a positive effect on both exports and connects to GDP when holding other variables constant. Therefore, the increase in GDP will be analyzed with unemployment rate by using the Okun's Law theory. The Okun's law (Neely, 2010) is an observation that represents a relationship between GDP and unemployment rate. Arthur Okun developed his idea by concluded that the unemployment rate drops by 1 percent for every 3 percent point increase in GDP. It implies a negative relationship between GDP and unemployment rate. It is meaning that an increase in GDP will decrease an unemployment rate. Since AEC has raised both exports and GDP of Thailand by the previous discussion. It can be concluded that the increased in GDP declines the unemployment rate of Thailand in both short run and long run.

5. Conclusion

When AEC is activated, Thailand and other ASEAN members will face big changes in both advantages and disadvantages. However, as Thailand is one of the most exporting countries in the world. Exports tend to be the determinant used to consider affected to the change in GDP of Thailand. It is proven by both empirical studies and regression model that ASEAN Economic Community (AEC) has affected Thailand exports when it was implemented. From Table1, it has shown the significance of the AEC variable have positive effect on the exports. Therefore, once AEC was activated, exports would be raised. After that the macroeconomics theory of GDP can also explain the increase in GDP due to increased exports (other things being equal). AEC is significant towards GDP and it is clear that GDP and export are moving in the same direction as AEC was implemented.

Furthermore, rising in GDP have an effect on unemployment rate as it is said by Okun's law. Besides that meaning the Okun's law also focuses on the relationship between unemployment and GDP, as a percentage increase in unemployment by 1% for every 2% decrease in GDP.

Finally, it can conclude that there are links between exports, AEC, previous period of exports, GDP and unemployment rate. AEC implementation will raise exports and then exports push the GDP of Thailand up. The most important is lower the unemployment rate created the higher GDP of Thailand via by Okun's law pointed out. From here, paper can conclude that AEC has a negative effect on unemployment in which the AEC implementation will decrease the unemployment rate.

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