
Global Crisis and Country's Competitiveness: Lessons from Indonesia and Malaysia

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Abstract:

This study examines the impact of 2009 global financial crisis to Indonesia and Malaysia. The framework of this study is Porter Diamond Model of Competitiveness. By using fixed effect panel data regression analysis this study analyze the four dimension of Porter model. In this study, they are four model regressions as a proxy of factor condition, demand condition, related and supporting industries model and Firm strategy, structure, and rivalry model. This study uses data from Asian Development Bank Annual Report from 1999-2008. The result shows global financial crisis gives bigger impact to Malaysia than Indonesia. The global financial crisis also has effect on each country's competitiveness. Indonesia survive from the crisis since this country has a strong private consumption, while Malaysia still have competitive advantage on human resource.

Key Words: *Competitiveness, Factor Conditions, Demand Conditions, Industry Performance*

JEL Classification: *D24*

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1. Introduction

The global financial crisis in 2008-2009 has varying impacts for countries in South East Asia. The crisis began from the failure in the US financial market in the late 2007 and then it has a contagious effect to many countries related to US economy. United States and European economy suffer the worst downturn since the 1930 depression. Their economic policy to overcome the downturn is to give fiscal stimulus in the market, especially the financial market. The result is clear that the US and European economy start to recover, even though there is a debate in the speed of the process.

Indonesia and Malaysia are known as two Southeast Asia countries which have a different characteristic in their economics structure. Economy contracted sharply in Malaysia. Malaysia experienced minus 8 percent of their GDP growth during 2008, and it still continues in the first quarter of 2009. In this country, the private consumption and investment has also fell because of the global financial crisis.

Indonesia has a different experience in the 2008 global financial crisis. Instead of suffering a downturn, Indonesia's GDP grows 5.8 percent in 2008. This country shows a positive growth in private consumption. The domestic market of Indonesia leads the country's economy out from the crisis. Indonesia, along with China and India survived from the crisis and become the savior of Asia economy (Son and San Andreas, 2009).

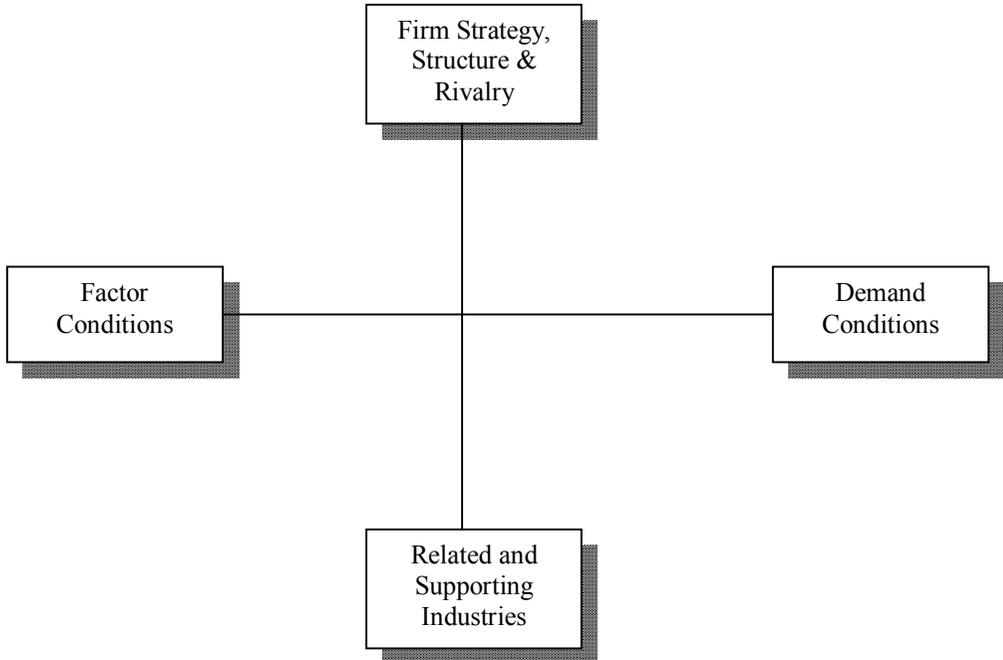
In the academic discussion, the issue of national competitiveness is a very important for economic development. In fact, many economies in the world try to have the most competitive nation to gain superior economic performance. Many studies conducted by strategic management and economics scholar discuss the role of competitiveness of a country to their economic performance. Fahy (2002) suggest that organizations and country have to build their global competitive advantage in order to survive in the age of globalization. He suggests that organizations and country must optimize their resources to gain global competitive advantage. Pillania (2009) studies shift of competitiveness in the world economies from United States and Europe to the new economies called BRIC (Brazil, Russia, India and China). The study concludes that the role of BRIC in world economies becomes more important. Herciu and Ogrea (2008) study the effect of macro economic indicator to national competitiveness in several countries and multinational companies in the world. The result shows that most of macro economic indicators were explain the national competitiveness in those countries. Jasimuddin (2001) studies the competitiveness of Arab Saudi by using Porter Model of Competitiveness. In his work, he adopted all of four factors of competitiveness in the model; they are actor conditions, demand conditions, related and supporting industries, and firm strategy, structure, and rivalry. This study also uses Porter Model of Competitiveness to analyze the effect of global financial crisis to the competitiveness of the country.

World Economic Forum, a leading economic institution in the world has proposed a competitiveness report of 133 countries in the world. It called the Global Competitiveness Index (GCI). The report becomes guidance for many investors to decide which country in the world they would like to invest in. Malaysia is a South East Asia country which have good ranking in the competitiveness report. Malaysia was in 26 positions, while Indonesia was in the 50 position in World Competitiveness Report 2006.

Those two countries are in the same region in South East Asia and their economic sectors are also closely related. The different impact of the global financial crisis to Indonesia and Malaysia is an interesting issue to discuss. Malaysia has better Global Competitiveness Index (GCI) than Indonesia. In the time of 2008 global crisis those two countries were nearly collapsed, while Indonesia economy was survived and still has a positive growth. Are there any lessons for South East Asia economies? This research paper has interesting questions, is the downturn in the macro economic performance have effect on nation competitiveness? This paper analyses the issue by using the competitiveness framework proposed by Porter (1990).

2. Porter Competitiveness Model

Porter (1990) suggested a new model to analyze the competitiveness of a country. The model proposed that there are four determinants of nation's competitiveness; they are factor conditions, demand conditions, the presence and absence of supporting industries, and the firm's strategy and nature of rivalry effects. The factor conditions of a country are infrastructure and the availability of resource. The demand conditions of a country refer to private consumption. The presence and absence of related and supporting industries ensure the competitive advantage of a country, since it minimizes the presence of competition. The firm's strategy and nature of rivalry effects also positively related with the nature of the industry which will effects the entire economy of a nation. Figure 1 shows Porter Diamond Model modified by Jin and Moon (2006).

Figure 1. Porter Diamond Model of Nation Competitiveness

Source: Porter (1998, p 127); Jim and Moon (2006)

Porter (1990) develops the model by gaining many data and information from various industries and countries. The model becomes major reference for many scholars, who interested in analyzing nation's competitiveness. They develop Porter Model by combining or correlated nation's competitiveness with industry performance.

Jasimuddin (2001) analyze the nation competitiveness of Arab Saudi by using Porter Model. He analyzes economic and industry performance of the country to discover competitive advantage and competitive disadvantage. This research uses descriptive statistic to analyze economic and industry indicator of Arab Saudi. The result shows that the competitive advantages of the nation are quality of infrastructure, low level of inflation, strong anti-trust legislation, strong banking sector, rapid growth of domestic demand and productivity and the last is the powerful economic sector. In the other hand, Arab Saudi also has several weaknesses or else competitive disadvantage. They are high domestic debt, undeveloped secondary market; the lagging of several industries, such as steel and consumer electronics, lack of skills in the new kind of industries, such as semiconductor, fiber optics, telecommunication, software and biotechnology and the lasts is high social cost.

Dutta (2007) in his recent work, analyzes the competitiveness of India. His research examines the framework of one of the leading awards of India by testing the relationship between stakeholder results and enabling practices using regression analysis, structural equation model and data envelopment analysis. The results of the study reveal that the framework is used by the organizations to enhance firm level competitiveness but not as a tool to contribute to national competitiveness. This study suggests a framework that not only helps an organization in positioning existing initiatives and identifying gaps in its journey of competitiveness but also links its enabling practices and planned results to the growth process of the country.

Herciu dan Ogrea (2008) analyze the growing of competitiveness at any level may be possible through more responsibility (business ethics) on the one hand and less corruption (as lack of business ethics) on the other. The objective of the paper is to identify the double-way relationships between competitiveness and the responsible (beyond ethics) behavior. In order to do this, the authors used correlation indexes CORREL and R2 and the graphic representation able to illustrate the above-mentioned interrelations. The authors observed that there is a strong and direct correlation between GCI, RCI and CPI – at national level, and six possible situations which reflect the interrelations between NP and FGP.

Jin and Moon (2006) analyze the competitiveness of apparel industry in South Korea and its contribution to nation competitiveness. The purpose of this study is to explore what constitutes a country's competitiveness in the global apparel market after losing its labor competitiveness and how a country effectively achieves it. This study employs two competitiveness models, Porter's diamond model and a generalized double diamond model, as a theoretical framework. Along with two theoretical models, this study employs extensive literature reviews, examples of successful firms, and four interviews with field practitioners in the Korean apparel industry. Beginning with Porter four determinants (factor conditions, demand conditions, related and supporting industries, and firm strategy, structure, and rivalry), new sources of competitive advantage factors are suggested for the evolving industry. The generalized double diamond model incorporates international activities, which may occur either within a country or outside a country. Utilizing generalized double diamond model, the future directions and solutions for the industry with the identified new competitive factors were suggested.

Shafei et al, (2009) examine the Iranian leather value chain and compare it with nine other countries, including China, Pakistan, Turkey, Republic of Korea, Indonesia, Spain, Italy, Brazil and the USA. The paper also uses Porter Diamond of competitive advantage. The purpose of the paper is to provide recommendations to improve the competitive performance of the industry. An economic method, i.e. revealed comparative advantage (RCA), as a well-known approach, is used to investigate the competitive performance of LVC in Iran. The LVC products analyzed in this research include hide, skin, leather manufacture, trunks and cases, and footwear. In addition, in order to investigate the factors which affect the low competitive performance, a questionnaire based on Porter's diamond of competitive

advantages was designed and completed by researchers and practitioners working in the field of leather industry. Finally the reasons for low competitive performance of the industry are discussed. The results reveal that the competitiveness of the Iranian LVC is low. China and Italy have superior comparative advantages in the period studied. The results also indicate that except one product, Iran has no comparative advantage in LVC industry. In addition, Iran has mainly focused on the upstream sector of LVC whereas China and Italy compete more in the downstream sector which offers more value added products. The results also reveal that among the elements studied, specialized factors, availability of capital, quality of demand and stability of macroeconomics highly influence the competitive performance of LVC in Iran. This is followed by subsequent recommendations on how best to improve the competitive performance of the industry.

3. Global Competitiveness Index

Global competitiveness index (GCI) is a competitive index proposed by World Economic Forum to inform the level of competitiveness of every country in the world. The index was developed by Jeffrey Sachs and John McArthur in 2001. The purpose of this GCI report is to provide a guideline for investor to choose the favorable country for their investment. It also gives a direction for government to conduct reformation program for their country.

GCI contains of nine pillars; they are institutions, infrastructure, macroeconomy, health and primary education, higher education and training, market efficiency, technological readiness, business sophistication and innovation. The selection of these pillars as well as the factors that enter each of them is based on the latest theoretical and empirical research. It is important to note that none of these factors alone can ensure competitiveness. The value of increased spending in education will be undermined if rigidities in the labor market and other institutional weaknesses make it difficult for new graduates to gain access to suitable employment opportunities. Attempts to improve the macroeconomic environment-e.g., bringing public finances under control-are more likely to be successful and receive public support in countries where there is reasonable transparency in the management of public resources, as opposed to widespread corruption and abuse.

Innovation or the adoption of new technologies or upgrading management practices will most likely not receive broad-based support in the business community, if protection of the domestic market ensures that the returns to seeking rents are higher than those for new investments. Therefore, the most competitive economies in the world will typically be those where concerted efforts have been made to frame policies in a comprehensive way, that is, those which recognize the importance of a broad array of factors, their interconnection, and the need to address the underlying weaknesses they reveal in a proactive way.

GCI is a practical index which established by using Porter Model. Many scholars use the index as a variable in their assessment of country's competitiveness.

Pillania (2009) in his paper, studies the competitiveness of BRIC (Brazil, Rusia, India and China) countries. He uses competitiveness index measured by World Economic Forum. He analyzes the index by using descriptive statistic. The result shows that all BRIC countries increase their rankings over the years.

Kenny and Meaton (2007) study nation competitiveness from human language technologies (HLT). Competitive success as a nation requires balancing commercial innovativeness and social welfare, which results in a sound basis for socio-economic development. All potential resources – including entrepreneurial activity and innovations -can be utilized as promoters of competitiveness and welfare. Thus, useful lessons for general national competitiveness can be learned from benchmarking individual innovations and perhaps even more so, from those less glamorized technologies such as human language technologies (HLT). Finnish researchers are considered to be at the leading edge of developments in a number of ICT fields. The main responsibility for the utilization of knowledge is seen, necessarily, to rest with the public sector, while the legislative framework is considered to favor entrepreneurship and innovation. Aims to discuss the issue.

National competitiveness and HLT benchmarking pose a number of interesting questions and issues both macro and micro levels. For example: the extent to which benchmark performance in HLT is consistent with national competitiveness; link between robustness of research effort in any particular language community and effectiveness of technology transfer to market; and fostering and funding of entrepreneurial activity in HLT in the successful (benchmarked) countries and the fit with national vision and innovation policy. For the first two areas, relationships between HLT benchmark and comparative national competitiveness of top countries are examined through comparison of their respective primitive dimensions. Data sources include official and quasi-official public documents. The final stage is explored using a case study approach and comparative assessment against extant entrepreneurship literature. There appears to be no direct link between robustness of the HLT research effort in any particular language community and actual effectiveness of technology transfer to market. None the less, success in the Finnish HLT benchmark appears to correlate with the country's international competitiveness standing and "social innovation policy" paradigm. Its knowledge society model has clearly resulted in a sound basis for its socio-economic development, where all potential resources – including its entrepreneurial base – and innovations, can be utilized as promoters of competitiveness and welfare. Within this entrepreneurial base, HLT SMEs tend to seek scale economies through internationalize at the early stages of development.

Fahy (2002) conducted an interesting research on nation competitiveness. He examines the effect of country resources and firm resource to competitiveness of firm. He analyzed the phenomena by using multivariate technique, such as confirmatory factor analyses and binomial regression. The findings of this study demonstrate that some resources are significantly more important than others in terms of gaining a global sustainable competitive advantage. In particular, the

research suggests that the emphasis on country-specific resources may be misplaced. Jones (2000) conducted a research that similar with Fahy's work on competitiveness. He studied the source of competitiveness of transnational company. In his study, he has three conclusions, First, that TNCs are fundamentally sociotechnical systems designed, constructed, and maintained to make money for the parties that own them. These parties will almost certainly have interests which diverge to some extent from the interests of major stakeholders in host country environments. Second, that TNCs exist due to market failures, and that there is substantial reason to believe that their continuing existence extends rather than attenuates those market failures under specific conditions. This seems to be particularly the case in knowledge-, technology- and scale-sensitive industries. Third, that TNCs are not development institutions in the manner of the World Bank. Although they inevitably promote certain forms of economic development, that development is best understood as an externality of TNC activity rather than as an objective in and of itself. There is also the persistent concern that the type of development associated with TNCs may not be appropriate for particular host environments.

4. Methods

4.1 Competitiveness Model

This research modifies Porter's Diamond Model of a nation (1990,1998). The variables in this model were proxy from the competitiveness factor. In this research the proxy of variables refer to the assessment of nation competitiveness proposed by Grant (1991) and Jim and Moon (2006).

In this research, performance of the country was measured by using macro GDP growth, export rate and unemployment rate. It means that the dependence variables in the regression model are GDP growth, export rate and unemployment rate. This study uses GDP growth and export rate as dependent variable, since those two are known as the main economic performance indicator, while unemployment rate is the closest indicator related to poverty. This study analyze the impact of global financial crisis in three countries; Indonesia, Malaysia and Singapore. Verbeek (2003) suggests panel data regression analysis to analyze this kind of situation.

Panel data regression is a regression model which combines time series and cross section data. A researcher uses this method when they facing a dilemma whether to use time series or cross section data. The problem occurs due to lack of observation which effect to degree of freedom when they have to choose between two kinds of data. (Schmidt and Sickles,1984; Verbeek, 2003). Gujarati (2003) classified panel data regression into two kinds of methods; they are fixed effect and random effect method. Fixed effect method recommended when there is less than 10 observations in the model, while random effect usually works for more than 10 observations in the model estimation.

This research uses fixed effect methods since there are only few observations. Assumptions in the panel data regression fixed effect method are similar with regular OLS. The difference with OLS model is that in the fixed effect method there is a dummy variable as a panel data symbol.

4.2 Factor Conditions Model

According to Porter (1998), factor conditions refer to the factors of production that are necessary to compete in a given industry. He grouped the factor endowment into a number of broad categories, such as human resources, physical resources, knowledge resources, capital resources and infrastructure. He further discriminated among these factors: basic factors versus advanced factors, and generalized factors versus specialized factors. A basic factor is passively inherited, such as climate, unskilled and semiskilled labor, while advanced factors include conditions a nation creates, such as highly educated personnel. He suggested that competitive advantage based on basic or generalized factors is unsophisticated and often fleeting, contending that advanced or specialized factors are necessary for more sophisticated forms of competitive advantages. The advanced or specialized factors can be created through factor-creating mechanisms such as public and private educational institutions. The panel data regression equation for factor conditions is:

Model 1

$$\text{Labor Force Participation rate}_{it} = \alpha_1 + \alpha_2 D2i + \beta_2 \text{Export Rate}_{it} + \beta_3 \text{GDP Growth}_{it} + u_{it} \quad (1)$$

4.3 Demand Conditions Model

This determinant refers to the nature of home-market demand for an industry's product or service. Porter (1998) views demand conditions in terms of the size of the home market and sophisticated and demanding buyers. That is, if the size of home demand is large, firms will invest to reap economies of scale. In countries where the domestic buyers (either industrial buyers or consumers) are the world's most sophisticated and demanding, companies are forced to meet high standards, to upgrade, and to respond to tough challenges. The regression panel data equations for demand conditions are:

Model 2

$$\text{GDP Growth}_{it} = \alpha_1 + \alpha_2 D2i + \beta_2 \text{Private Consumption}_{it} + u_{it} \quad (2)$$

Model 3

$$\text{Unemployment rate}_{it} = \alpha_1 + \alpha_2 D2i + \beta_2 \text{Private Consumption}_{it} + u_{it} \quad (3)$$

4.4 Related and supporting industries model

Porter (1998) asserted that the presence of supplier and related industries within a nation that are internationally competitive provides benefits such as innovation, upgrading, information flow, and shared technology development which create advantages in downstream industries. Therefore, national success in an industry is particularly likely if the nation has a competitive advantage in a number of related industries.

4.5 Firm strategy, structure, and rivalry model

The last determinant is firm strategy, structure, and rivalry, referring to “the conditions in the nation governing how companies are created, organized, and managed, as well as the nature of domestic rivalry” (Porter, 1998, p. 107). Porter contended that nations tend to succeed in industries where the management practices and modes of organization favored by the nation are well suited to the industries’ sources of competitive advantage.

The last two factors of nation competitiveness represented by two regression panel data equations.

Model 4

$$\text{Unemployment Rate}_{it} = \alpha_1 + \alpha_2 \text{D2}_{it} + \beta_2 \text{Agriculture Output Growth}_{it} + \beta_3 \text{Service Output Growth}_{it} + \beta_4 \text{Industry Output Growth}_{it} + \text{uit} \quad (4)$$

Model 5

$$\text{Export Rate}_{it} = \alpha_1 + \alpha_2 \text{D2}_{it} + \beta_2 \text{Agriculture Output Growth}_{it} + \beta_3 \text{Service Output Growth}_{it} + \beta_4 \text{Industry Output Growth}_{it} + \text{uit} \quad (5)$$

5. Data

This study uses data from Asian Development Bank annual report. In this study, export rate, unemployment rate, GDP growth, labor participation rate, private consumption, agriculture output growth, service output growth and industry output growth of Indonesia and Malaysia were collected from the report. The periods of analysis were annual from 1999 to 2008.

unemployment rate in Indonesia occurs due to structural problem, while in Malaysia, it appears due to impact of global financial crisis.

5.2.2 Demand Conditions Model

Model 2

$$\text{GDP Growth}_{it} = \alpha_1 + 0,745 \text{Private Consumption}_{it} \\ (4,293)$$

Fixed Effects

α_1 Indonesia 1,709	F stat 4,293 Prob F 0.000
α_1 Malaysia -0,497	R ² = 0,520

Model 3

$$\text{Unemployment Rate}_{it} = \alpha_1 + 0,011 \text{Private Consumption}_{it} \\ (0,096)$$

Fixed Effects

α_1 Indonesia 8,925	F stat 0.096 Prob F 0.9241
α_1 Malaysia 2,426	R ² = 0,840

Model 2 shows that private consumption has positive effect to GDP growth. In this model the intercept for Indonesia is 1,709, while Malaysia reached -0,497. The panel data regression equation of demand condition model shows that both countries still rely their economic growth from private consumption. Model 3 shows that private consumption do not have effect on unemployment rate, which explain that in both countries there's a possibility that domestic demand do not directly effect on economy to achieve full capacity.

There is an interesting finding in the demand condition model. The intercept of the regression equations shows that Malaysia has lower private consumption than Indonesia. It means that Indonesia has more potential domestic market than Malaysia, since this country is one of the countries with biggest population in the world. Figure 3 shows the growth of private consumption in Indonesia and Malaysia.

Figure 3. Growth of Private Consumption Indonesia and Malaysia

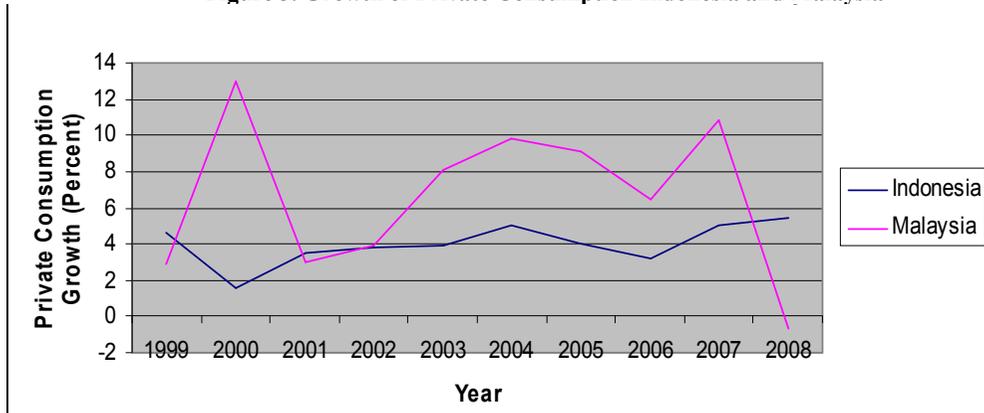


Figure 3 show that global financial crisis has a serious impact on Malaysia. This country suffers a deep downturn in private consumption. It almost impossible for Malaysia to shift their industries from export oriented to focus on domestic market, since the domestic demand is weak. It is acceptable that Malaysia decide to gives a stimulus to their domestic market in order to recover from the crisis.

Indonesia has a different story. Private consumption in this country is still rising even there is a global financial crisis. The domestic market is very strong so it is not a problem for industries in Indonesia to shift their market from export to domestic market.

The demand condition of Indonesia is better than Malaysia, and it become one of the competitiveness of this country. The global financial crisis has effect on Malaysia's competitiveness. The demand condition of Malaysia could be the weakness of this country's competitiveness.

5.2.3 Related and supporting industries model; Firm strategy, structure, and rivalry model

Model 4

$$\text{Unemployment Rate}_{it} = \alpha_1 + \alpha_2 D2i + 0,0953 \text{ Agriculture Output Growth}_{it} + (1,154) \\ + 0,182 \text{ Service Output Growth}_{it} - 0,058 \text{ Industry Output Growth}_{it} \\ (-0,620) \quad (0,369)$$

Fixed Effects

α_1 Indonesia 7,8399
 α_1 Malaysia 1,414

F stat 44,663 Prob F 0.000
R2= 0,856

Model 5

$$\text{Export Rate}_{it} = \alpha_1 + \alpha_2 \text{D2}_{it} - 0,579 \text{ Agriculture Output Growth}_{it} + (-0,425) \\ + 1,057 \text{ Service Output Growth}_{it} + 1,353 \text{ Industry Output Growth}_{it} \\ (1,268) \qquad \qquad \qquad (2,737)$$

Fixed Effects α_1 Indonesia 0,953

F stat 10,51 Prob F 0.0013

 α_1 Malaysia -2,43R² = 0,583

Model 4 gives us information that the growth of agriculture, service and industry do not have a positive effect on unemployment. It has the same conclusion with model 1 that in both countries there's a phenomenon of increasing technology/capital oriented industries; while agriculture sector could not be rely on.

Model 5 shows an interesting finding. The growth of output in industry gives a meaningful contribution for export rate both in Indonesia and Malaysia. However, Indonesia shows better condition than Malaysia in the industry sector. This could be seen from the intercept of regression equation for model 5. Indonesia has a positive intercept, while Malaysia has to deal with negative intercept.

The assessment of model 4 and 5 as a proxy of the related and supporting industries; firm strategy, structure, and rivalry model gives a preliminary information that in both countries there still a problem in the industry. By using Porter Diamond Model, this research decide that even without the crisis, industry development in Indonesia and Malaysia still become major problem. In both countries, the industry development cannot be rely on to conclude unemployment problem. Malaysia easiest problem, since this country is not dealing with high rate of unemployment. The case will be different for Indonesia, where high rate of unemployment is a major economic and social problem year after year.

6. Conclusions, Implications and Limitations

This study has several interesting conclusions. First, global financial crisis have impact on both countries. However, Malaysia has serious impact on several economic sectors. The downturn of private consumption in Malaysia gives an impact on their industry since there is the domestic demand is low, while global market is also weak. Indonesia still can rely on domestic market and it becomes one of the key survivals of this country from global financial crisis.

Second, by using Porter Diamond Model, Indonesia has two better conditions than Malaysia. Indonesia has better demand condition and industry performance compare to Malaysia. However, Malaysia has better factor conditions model than Indonesia, because the country has lower unemployment rate. In the Porter Diamond Model, Malaysia uses their resource efficiently.

Theoretical implication of this study is it contributes to the development of competitiveness measurement by using macro economy indicator. Grant (1991) suggests more assessment of Porter Diamond Model on competitive advantage. He agree that even analyzing competitiveness by primary data brings richness in the competitive advantage dimension, analyses with macro economic data will bridging the issue with the economic policy study. Practical implication of the study is similar with Jin (2004) that concludes research of competitiveness should gives guidance for industry player or manager how to manage their resource. This study gives practical implication for manager to pay attention on domestic demand and unemployment rate, since both information could give advantage or disadvantage for their company.

Lack of data is still become the limitation of the model estimation in this study. Factor conditions should be estimate by a regression analysis between government expenditure on education and health with labor participation rate. The equation will give richer information in how country managing their resource. Unfortunately the absence of such data, especially in Indonesia makes the estimation could not be accomplished.

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