

INTERACTION BETWEEN THE LABOUR MARKET EFFICIENCY WITH BUSINESS SOPHISTICATION IN THE DYNAMIC GLOBAL COMPETITIVENESS IN SOUTHEAST ASIA

Donna Wibiananda Suryaman
Faculty of Economics
State University of Jakarta, Indonesia
Email: donnawsuryaman@yahoo.co.id

Haryo Kuncoro
Faculty of Economics
State University of Jakarta, Indonesia
Email: har_kun@feunj.ac.id

K. Dianta Sebayang
Faculty of Economics
State University of Jakarta, Indonesia
Email: dianta.sebayang@feunj.ac.id

ABSTRACT

The concept of competitiveness was issued in World Economic Forum (WEF) and published in Global Competitiveness Report. It can be seen from point of view from of Institution, Infrastructure, Macroeconomic Environment, Health and Primary Education, Higher Education and Training, Goods Market efficiency, Labour Market Efficiency, Financial Market Development, Technological Readiness, Market Size, Business Sophistication, R and D Innovation. This paper describes the competitiveness in economic especially in Labour Market Efficiency and Business Sophistication. The function of this research is to know about interaction between labour market efficiency and business sophistication from World Economic Forum (WEF) data and focusing on the country in Southeast Asia such as Malaysia, Singapore, Indonesia, Thailand, Filipina, Vietnam and Cambodia in 2008 until 2014. These figures show there are differences between countries from year to year. In this research uses descriptive analysis and Multivariate Analysis of Variance (MANOVA). MANOVA can be used to investigate a different dimension groups and check all at the same time. From the result of this research there is a relationship between labour market efficiency with business sophistications positive and significant between labour market efficiency with business sophistications in global competitiveness in Southeast Asian countries. It means if labour market efficiency is good automatically business sophistication would be a good, too.

Key words: Global Competitiveness, Labour Market Efficiency, Business Sophistication, MANOVA.

Introduction

Expansions of global markets and increasing communication among different countries have led to many developments in business environment and this is the same concept that is closely associated with economic globalization process. Today's increasingly dynamic business environment is forcing organizations to search for new ways to gain an advantage or an edge over their competitors (Terpstra and Limpaphayom, 2012).

In the globalization, economic competition among countries and economy companies has increased at a level and the government has been able to do many efforts in this field. Probably this is why the concept competitiveness for a country is one of the key is more important in international economy.

Since 1979, World Economic Forum (WEF) has published global competition reports annually. Many reseracher used continuously them to assess economic growth and prosperity in the long term. World Economic Forum (WEF) has transformed to Global Competitiveness Index (GCI) since 2005. Global Competitiveness Index (GCI) is a tool that measure comprehensive economy in microeconomic and macroeconomics concerning national competitive. GCI consists of 12 pillars are counted according to statistic data that is taken from the internationally recognized, mainly by the United Nations Educational, Scientific and Cultural Organization (UNESCO), IMF and World Health Organization (WHO). Then, the funding of some big country was published in the journal Global Competitiveness Report (Wadsworth, 2002).

In the Global Competitiveness Index there are 12 pillars covering institutions, infrastructure, macroeconomic environment, health and primary education, higher education and training, goods market efficiency, labour market efficiency, financial markets development, technological readiness, market size, business sophistication, and innovation. In this research will be focused discuss about the relationship between labour market efficiency with business sophistication, as the two pillars in the Global Competitiveness Index (GCI).

The problems is "labour market efficiency" can help analysing "business sophistication" or otherwise and how "business sophistication" can have any effect on the "labour market efficiency" to raise national competitive between different countries, is the question of this paper. Therefore, we make the formulation to address the following problems: 1) whether there is a correlation between labour market efficiency with the business sophistication? 2) How the characteristics of the relationship between labour market efficiency and business sophistication so for each countries?

Literature review

The ability of companies to flexibly manage their workforce and quickly hire and fire employees is an important factor in general business competitiveness. When human resource is seriously under evaluated, it is harmful for cultivating of core competitiveness of enterprises (Yao and Cui, 2010). Labour markets must therefore have the flexibility to shift workers from one economic activity to another rapidly and at low cost, and to allow for wage fluctuations without much social disruption (Schwab, 2010). The Labour market efficiency sub-indices are: Cooperation in labour-employer relations, Flexibility of wage determination, Rigidity of employment, Hiring and firing practices, Redundancy costs, Pay and productivity, Reliance on professional management, Brain drain, Female participation in labour force (Porter and Schwab, 2008).

Business sophistication leads to higher productivity in the production of goods and services. This, in turn, result in increasing of efficiency, thus enhancing a competitiveness of a nation. Business sophistication is relevant to the quality of a country's overall business networks and the quality of individual companies' operations and strategies (Schwab, 2010). Business sophistication sub-indices are: Local supplier quantity, Local supplier quality, State of cluster development, Nature of competitive advantage, Value chain breadth, Control of international distribution, Production process sophistication, Extent of marketing, Willingness to delegate authority (Porter and Schwab, 2008).

According Vesal (2011), between a Labour Market Efficiency with Business Sophistication have significant relationship correlation with more than 0.84 and the relationship between dependent on professional management and technologically advanced production process, with a correlation coefficient 0.822 that have correlation highest together. Based on the results of research, there is a vital contact between "business sophistication" sub-index and the "labour market efficiency" sub-index and both have directly at the same time. Thus it can be said that the development each two for each pillar was causing our other pillar and the consequences cause increase competitiveness rating position among the nations of the world. Thus both are quite efficient to create significant relationships. It can be said that all sub-index business sophistication participate in labour market efficiency of the governments and produce balanced approach to improve and the promotion business sophistication cause labour market efficiency promotion and this was to improve competitiveness position among the nations of the world.

According to the WEF data from 2008 until 2014, the ASEAN countries which have a good position just singapore, other countries do not have a good position between labour market efficiency with business sophistication. This is due to Singapore into the 5 best country in the world according to WEF. Singapore have good labour market efficiency in having a good sophistication as well. But in 2014 the business sophistication in singapore defeated by Malaysia in business sophistication.

Methodology

Research method used in this paper from the point of view that aims to practical and methods of data collection such as analysis of descriptive correlation. The population of this research are 7 countries in Southeast Asian such as Singapore, Malaysia, Filipina, Indonesia, Thailand, Vietnam, and Cambodia. Data was received by the data of the Global Competitiveness Index from 2008 until 2014 as a secondary data.

MANOVA can be used to investigate the dimensions on which groups differ. There are instances when an investigator wants to examine effects of independent variables (DV) across several dependent measures. MANOVA can be used to examine all of the DVs at the same time. Additionally, MANOVA controls Type 1 error (the probability of rejecting the null hypothesis when it is true) across all of the DVs in the model. The generic model of MANOVA can be written as:

$$X_{ij} = \mu + \tau_i + \varepsilon_{ij} \quad (5)$$

where X is vector of observation, μ is mean, τ is treatment, and ε is error term for $i = 1, 2, 3, \dots, n$ and $j = 1, 2, 3, \dots, m$.

The vector of observation could be re-decomposed as follows:

$$X_{ij} = \bar{X} + (\bar{X}_i - \bar{X}) + (\bar{X}_{ij} - \bar{X}_i) \quad (6)$$

Where the first term in right hand side is grand mean, the second term is effect of treatment, and the last one is residual.

A multivariate analysis of variance tests the null hypothesis against the alternative hypothesis:

$$H_0: \tau_1 = \tau_2 = \tau_3 = \dots = \tau_m = 0 \quad (7a)$$

$$H_a: \tau_1 \neq \tau_2 \neq \tau_3 \neq \dots \neq \tau_m \neq 0 \quad (7b)$$

Instead of a uni-variate F value, we would obtain a multivariate F value (Wilks' λ) based on a comparison of the error variance/covariance matrix and the effect variance/covariance matrix. There are statistics other that may used, including Hotelling's trace, Pillai-Bartlett's criterion, and Roy's largest root.

Unlike conducting multiple anova, MANOVA accounts for the co-variances of the other dependent variables, which might increase statistical power. That is, MANOVA has potential to be a more powerful test than uni-variate anova because it considers both the variances and co-variances of the dependent measures.

The "co-variance" here is included because the two measures are probably correlated and we must consider correlation when performing the significance test. Testing the multiple dependent variables is accomplished by creating new dependent variables that maximize group differences. These artificial dependent variables are linear combinations of the measured dependent variables.

The general assumptions for MANOVA design are (1) independence of subject responses in each between-subjects condition; (2) multivariate normal dependent measures in the population; and (3) equality of population variance-covariance matrices in groups defined by between-subjects factors. In addition, the multivariate approach to repeated measures does not require the sphericity assumption (see Tabachnick and Fidell, 2007 for detail).

Result And Discussion

Table 1 presents economize descriptive of the index labour market with business sophistication for the year 2008-2014 in Southeast Asian countries such as Malaysia, Singapore, Thailand, Indonesia, Filipina, Vietnam and Cambodia. In descriptive, it is seen that was the highest is labour market efficiency (4.6) compared with business sophistication that has an average of (4.3). Table 1 also showed distribution. It was seen that the imbalance courtois value that is big labour market efficiency (3.06) and business sophistication (1.98) shows leptokurtic form of frequency polygons. Then in JB probability it can be seen that labour market efficiency is also normal (0.07) and in business sophistication is not normal.

Table 1: Description Labour Market Efficiency and Business Sophistication

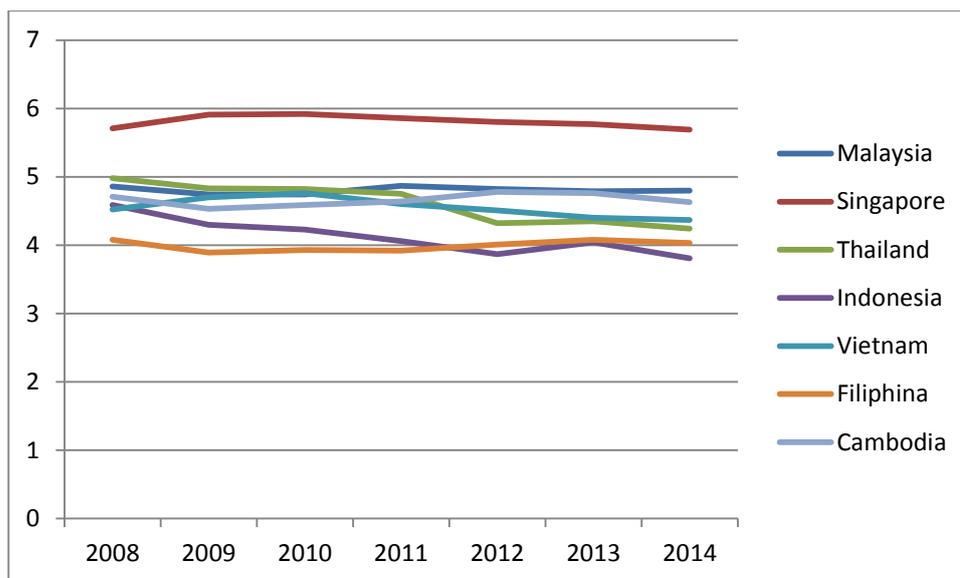
	Labour Market Efficiency	Business Sophistication
Mean	4.65	4.34
Median	4.63	4.30
Maximum	5.92	5.25
Minimum	3.81	3.38
Std. Dev.	0.57	0.55
Skewness	0.80	0.07
Kurtosis	3.06	1.9
CV	0.12	0.12
Jarque-dark red	5.27	2.14
Probability	0.07	0.34
Observations	49	49

From table 1 seen labour market efficiency Southeast Asia countries, that Singapore has a trend that most high compared with other countries. Based rating in International Institute for Management Development (IMD) that is a ranking competitiveness mapping a comprehensive against all elements forming competitive advantage a country that Singapore entered into the 5 big countries well in competitiveness.

Singapore is one of the countries in Asia that adopt policies that are very open to foreign capital inflow and foreign labour. Two main factor is "foreign capital and foreign workers" is a vital role as driving force in the history stuff economic growth in Singapore. Local labour still very low Singapore population considering that small and birth rate that is very low rate that is 1.3 % (2002). A "booming economy" and his rare local labour forced Singapore to continue to import Foreign Workers from abroad to support economic development and physical survival country. Imbalance between needs and availability labour this is what causes quite high "dependency" or Singapore dependence to the Foreign Labour. This condition is very beneficial and to be utilized by the job seekers from neighbouring countries that are in country is not available many job opportunities, as Singapore. The Centre for Labour Market Research even projected Singapore needed against the foreign labour will continue to increase up to 2.78 million workers at the end of 2034 or 54.2 percent of the total work force in Singapore.

Then, in Indonesia visible to be changes that are quite significant in labour market efficiency. Each year in labour market efficiency in Indonesia is lowering. According to the report periodically of World Economic Forum (WEF) in 2012 was also includes obstacles to try to interfere in Indonesia, among others: government bureaucracies that do not efficient, corruption, limited infrastructure, work ethic principles, obstacles rules on labour, and others.

Figure 1: Labour market Efficiency between countries in Southeast Asia



In the trend of business sophistication it was seen that the competitive or competition between Malaysia and Singapore. At the end of 2008 to 2010 Malaysia, decreases in business sophistication, but after a decline in as much as 2 years (2008-2010) Malaysia try to improve progress in business sophistication. This can be seen from increasingly develop and advance in business sophistication even in the year 2014 Malaysia can are superior to Singapore in business sophistication.

Figure 2: Business Sophistication between countries in Southeast Asia

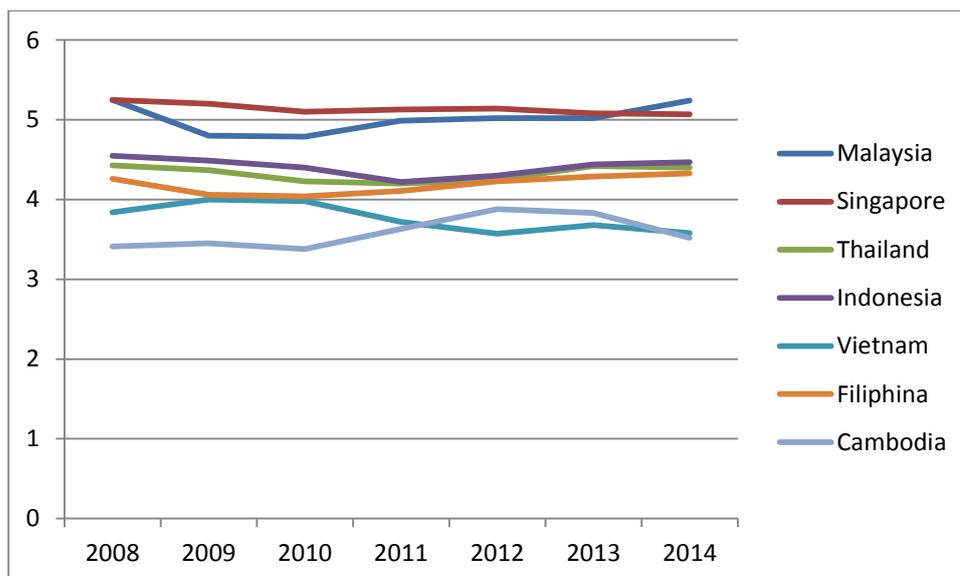


Table 3 presents simple pair wise correlations matrix between labour market efficiency with business sophistication. It can be seen that labour market efficiency have correlation with business sophistication, its meaning that there is a relationship between labour market efficiency with business sophistication. The development each two for each pillar was causing our other pillar and the consequences cause increase competitiveness rating position among the nations of the world. Thus they are quite efficient to create significant relationships, so it can be said that all business sophistication participate in labour market efficiency pillar of the governments and produce balanced approach to improve and the promotion of business sophistication cause labour market efficiency and this is can upsurge the position competitiveness between the nations of the world especially the countries in Southeast Asia.

Table 3: Coefficient a correlation between Labour Market Efficiency and Business Sophistication

	LM	BS
LM	1.00	0.54
BS	0.54	1.00

Table 4
Multivariate Tests

Effect	Value	F	Hypothesis df	Error df	Sig.	
Is Intercept service	Pillai's Trace	.997	6390.412b	2,000	40,000	.000
	Wilks' Lambda	.003	6390.412b	2,000	40,000	.000
	Hotelling's Trace	319,521	6390.412b	2,000	40,000	.000
	Roy's largest Root	319,521	6390.412b	2,000	40,000	.000
K-year	Pillai's Trace	.300	8.556b	2,000	40,000	.001
	Wilks' Lambda	.700	8.556b	2,000	40,000	.001
	Hotelling's Trace	.428	8.556b	2,000	40,000	.001
	Roy's largest Root	.428	8.556b	2,000	40,000	.001
K-countries	Pillai's Trace	1,870	98,355	12,000	82,000	.000
	Wilks' Lambda	.004	97.294b	12,000	80,000	.000
	Hotelling's Trace	29,595	96,183	12,000	78,000	.000
	Roy's largest Root	17,324	118.380c	6,000	41,000	.000

A. Design: is Intercept Service + Kyear + Kcountries

b. Exact statistics

c. The statistic is an upper bound on F that yields a lower bound on the significance levels.

The result of MANOVA test present that there are differences between the labour market efficiency with business sophistication in the variation and the difference in. And then from *test subject of between-effects* below shows that the relationship between K-countries labour market efficiency results F of 93.9 with significant 0.00. This shows that there are differences labour market efficiency with business sophistication with some countries and some year.

Tests of Between-Subjects effects

Source	Dependent variable	Sum of Squares Type III	Df	Mean Square	F	Sig.
Corrected Model	Labour	14.899a	7	2,128	93,904	.000
	Business	14.133b	7	2,019	94,014	.000
Is Intercept service	Labour	227,042	1	227,042	10016,686	.000
	Business	185,058	1	185,058	8617,304	.000
K-year	Labour	.322	1	.322	14,191	.001
	Business	6.173E -005	1	6.173E -005	.003	.958
K-countries	Labour	14,578	6	2,430	107,189	.000
	Business	14,133	6	2,355	109,683	.000
Error	Labour	.929	41	.023		
	Business	.880	41	.021		
Total	Labour	1075,889	49			
	Business	941,259	49			
Corrected Total	Labour	15,829	48			
	Business	15,013	48			

A. R Squared = .941 it said R Squared = .931)

b. R Squared = .941 it said R Squared = .931)

Conclusion

Main purpose of this research is seen as far as relations between the "labour market efficiency " with "business sophistication" that using data from Global Competitiveness Index in 2008 until 2014 for countries in Southeast Asia such as Malaysia, Singapore, Thailand, Indonesia, Filipina, Vietnam and Cambodia. From the result of the research shows that there are differences labour market efficiency with business sophistication some of countries and some of which are different, from The Labour market efficiency both which have an individual value price highest but it have a relationship because they have stock exchange directly together. According to drag coefficient correlation between labour market efficiency with business sophistication, both have correlation of 0.54. Thus it can be said that each one with the development of the two pillars was causing our other pillar and the consequences cause increase competitiveness rating position between the countries in Southeast Asia. From the index, Singapore has the highest of Southeast Asia that the other. This can be seen from the labour market efficiency in Singapore has two main factors namely "foreign capital and foreign workers" it a vital role as driving force in history economic growth Singapore. In business sophistication can be seen increasing competition he between Singapore and Malaysia. This time Malaysia excels in sophistication business.

Based on World Economic Forum data in The Global Competitiveness Report from 2008 until 2014, we shows that labour market efficiency experienced every year. Problems which always emerge will continuously and persistent is the factors that

more related to environment like efficiency in the government's bureaucracy and corruption. Thus it is a must improve competitiveness is seen as agenda that need to be prioritized treatment.

Recommended Policy Implications

Recommendation to issue the policy implications on the labor market efficiency and business sophistication, especially in developing countries to improve labor market efficiency and business sophistication is as follows:

- a. The government should create specific policies on employment and focus on the field of labor.
- b. The economic business processes faster, cheaper and efficient, especially in developing countries
- c. The government should create a bureaucratic permissions that are easy to provide comfort for workers.
- d. The government provides ease in lending and efforts to grow the economy of a country.

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