

The Effect of Human Development Index (HDI), Population, and Labor Force Participation on Economic Growth in ASEAN

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Abstract. This study plans to decide the impact of the Human Development Index (HDI), Population and Labor Force Participation on monetary development in ASEAN, the impact of the Human Development Index on financial development in ASEAN, the impact of populace on development in ASEAN nations and the impact of workforce support in ASEAN nations. ASEAN The technique utilized is relapse balance relapse examination. This study utilizes auxiliary information, specifically information from an authority foundation, in particular Bank Indonesia through the site. This information utilizes a mix strategy between time series information and cross segment information got from the World Bank's yearly report. The consequences of this study show that the human improvement record significantly affects monetary development in ASEAN nations. populace meaningfully affects monetary development in ASEAN nations. negative critical effect on monetary development in ASEAN nations.

Keywords: Human Development Index; Total populace; Labor Force Participation; Economic development

1 Introduction

Economy of a nation is interrelated and influences each between different nations, just like the case in the economy in ASEAN. An expansion in the economy in one nation is a trigger for other ASEAN nations to create and work on their nation's economy. In like manner, in the event that a nation encounters a monetary decay, it will likewise affect different nations that have relations between nations. Linkage here can be deciphered as the advancement of a nation can help different nations, and on the other hand the monetary downfall of a nation will adversely affect nations that have connections.

Gross Domestic Product (GDP) is one indicator of knowing the economic condition of a country in analyzing a macroeconomic problem as a basis for policy making. The use of Gross Domestic Product, among others, is to determine the rate of economic growth and economic structure. In contrast to the concept of economic development which is defined by the creation of economic growth joined by changes in the financial design. Financial advancement can't be isolated from monetary development, implying that monetary improvement empowers financial development as well as the other way around, monetary development works with the course of financial turn of events. The high monetary development of a country can indicate a

very good level of economic performance. Although the level of economic performance has not looked further into the level of welfare that is evenly distributed among its citizens. However, with economic growth data, we can see how the country's economy develops over time and can make more accurate policies in its economic development.

The way in to the objective of macroeconomics is that financial development is the way a nation can meet a portion of the driving and hindering elements of a nation in accomplishing its monetary development. a few reasons. In the first place, the populace is continuously expanding so that with monetary development giving jobs will be capable. Second, human needs and needs are dependably limitless so that with financial development they will actually want to create more labor and products to satisfy these needs and needs. Third, endeavors to make monetary value are simpler to accomplish in high financial development

2 Research Method

This exploration is named elucidating and cooperative examination on the grounds that the creator will depict and break down the cozy connection between the impact of one analisis Vektoriale on another analisis Vektoriale. Wellbeing (Y1) is determined from future, information acquired from the world bank in 2010-2018. The unit of estimation utilized is percent (%).

Workforce support (Y2) is made out of individuals matured 15 years or over who supply work for the making of work and items during a particular period. This consolidates people who are as of now used and people who are jobless yet looking for fill in as well as first-time work searchers. In any case, only one out of every odd individual what works' character is consolidated. Ignored workers, family workers, and students are often prohibited, and a couple of countries don't count people from the military. The size of the labor force will in general shift all through the year as part time employees enter and leave.

Data obtained from the World Bank in 1999-2017 with the unit of measurement used is people. Education (Y3) is calculated from the literacy rate, data obtained from the world bank in 2008-2018 with the unit of measurement used is percent (%) Economic Growth (Y4) is calculated from gross domestic product (GDP) which is the total GDP that occurs in ASEAN Countries. Data is obtained from the World Bank in 2010-2018 with the unit of measurement used is the 2010 constant US dollar.

The examination model utilizing the standard ANALISYS VEKTOR model is as per the following:

$$Health_t = \sum_{i=0}^n \alpha_i Health_{t-i} + \sum_{i=0}^n \alpha_i Lab_{t-i} + \sum_{i=0}^n \alpha_i Edu_{t-i} + U1_t \dots \dots \dots (3.1)$$

$$Lab_t = \sum_{i=0}^n \alpha_i EG_{t-i} + \sum_{i=0}^n \alpha_i PEND_{t-i} + \sum_{i=0}^n \alpha_i Health_{t-i} + U2_t \dots \dots \dots (3.2)$$

$$Edu_t = \sum_{i=0}^n \alpha_i Lab_{t-i} + \sum_{i=0}^n \alpha_i Health_{t-i} + \sum_{i=0}^n \alpha_i Eg_{t-i} + U3_t \dots \dots \dots (3.3)$$

$$EG_t = \sum_{i=0}^n \alpha_i Lab_{t-i} + \sum_{i=0}^n \alpha_i EG_{t-i} + \sum_{i=0}^n \alpha_i Health_{t-i} + U1_t \dots \dots \dots (3.4)$$

Where :

Health = Health

Lab = Labor Force Participation

Edu= Education

EG= Economic Growth

The ANALISYS VEKTOR structure above is a limit free standard ANALISYS VEKTOR structure used if the data is fixed at the level. Analisis Vektoreties as ANALISYS VEKTOR normally happen because of contrasts in the level of information combination of the factors, known as ANALISYS VEKTOR in level and ANALISYS VEKTOR in qualification.

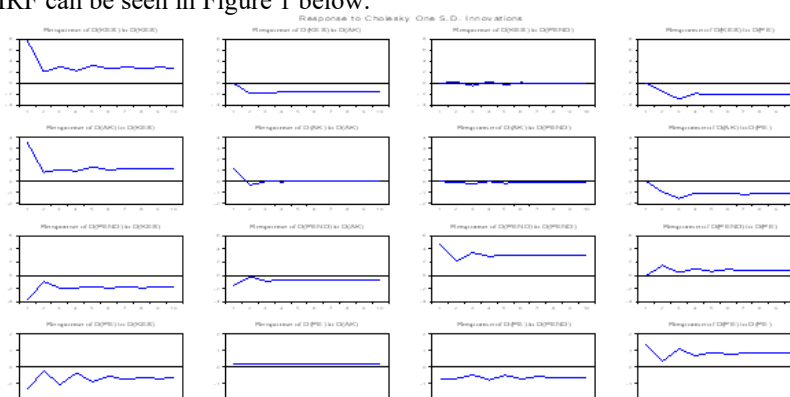
ANALISYS VEKTOR level is used if the investigation data has a decent construction in the level. In the event that the information isn't fixed (Unit Root) in level, yet doesn't have a cointegration relationship, then the ANALISYS VEKTOR assessment is finished as distinction.

3 Results and Analysis

3.1 Results

Impulse response function analysis is used to see the contemporary influence of the standard deviation of an innovation on the values of endogenous analysis Vektoriales at present and in the future. A shock to the endogenous analysis Vektoriale will affect the analysis Vektoriale itself and spread to other endogenous analysis Vektoriales through the dynamic structure of the VECM model. Impulse response function provides information on the direction of the relationship between endogenous analysis Vektoriales.

Fundamentally, in this analysis, it will be known the positive or negative response of a analysis Vektoriale to other analysis Vektoriales. The response in the short term is usually quite significant and tends to change. In the long term, the response tends to be consistent and continues to shrink. The result of the impulse test depends on the ordering of the series of analysis Vektoriales used in the calculation. In this study, the ordering analysis Vektoriales used are Education, Health, Labor Force Participation and Economic Growth. The results seen from the IRF can be seen in Figure 1 below.



3.2. Discussion

Wellbeing Causality and Labor Force Participation, in light of the Granger Causality test, it tends to be seen that wellbeing has no relationship with workforce support. This is proven by the likelihood esteem among wellbeing and workforce cooperation of 0.84384 or more noteworthy than $= 0.05$. Workforce support has no relationship with wellbeing as confirmed by the likelihood esteem between workforce investment and strength of 0.3282. more noteworthy than $= 0.05$. So it tends to be presumed that there is no connection among wellbeing and workforce investment. The consequences of the Response Function (IRF) examination show that changes (shock) that happen in wellbeing are not generally negative yet analysis Vektory in a positive reaction (all over).

In the third year the fluctuation began to decrease and the following year began to stabilize at the same number. The analysis of analysis Vektoriale decomposition used to determine which analysis Vektoriales are the most important in explaining changes in a analysis Vektoriale can be said that the analysis Vektoriale in health analysis Vektoriales is

determined by the analysis of variables themselves, both in the short and long term. The contribution of health changes in general is dominated by health shocks themselves with a composition of analysis of variance of 100% explained by the health analysis variable itself, which means that the probability level of health is also high by itself compared to the shocks that occur in workforce support, schooling and monetary development.

Wellbeing and instruction causality Based on the consequences of the Granger Causality test; it tends to be seen that wellbeing has no relationship with schooling. This is confirmed by the likelihood estimate among wellbeing and instruction of 0.1297 or more prominent than $= 0.05$. Schooling has no relationship with wellbeing as proven by the likelihood estimate among training and wellbeing is 0.4889. more noteworthy than $= 0.05$. Thus, it very well may be presumed that there is no connection among wellbeing and schooling.

The results of the Response Function (IRF) analysis show that changes (shock) that occur in health are not always negative but fluctuate in a positive response (up and down). In the seventh year, the fluctuations began to decrease and stabilized in the following year. Analysis of analysis of variance decomposition which is used to determine which analysis variables are most important in explaining changes in an analysis variable can be concluded that the analysis of variance in health analysis variables is determined by the analysis variables themselves, both in the short and long term. The contribution of health change in general is dominated by the health shock itself with a composition of analysis of variance of 100% explained by the health analysis variable itself, which means that the probability level of health is also highly influenced by itself compared to shocks that occur in workforce interest, instruction and financial development.

Wellbeing Causality and Economic Growth, in view of the consequences of the Granger Causality test, it tends to be seen that wellbeing has no relationship with monetary development. This is proven by the likelihood estimate among wellbeing and monetary development of 0.6138 or more prominent than $= 0.05$. Financial development has no relationship with wellbeing as confirmed by the likelihood estimate between monetary development and wellbeing is 0.4944. more prominent than $= 0.05$. In this way, it very well may be reasoned that there is no connection among wellbeing and financial development.

The results of the Response Function (IRF) analysis show that changes (shock) that occur in health are responded positively and negatively and fluctuates every year. In the fifth year, the fluctuations began to decrease. Economically, it can be concluded that there were positive and negative changes that fluctuated from year to year. Analysis of analysis of variance decomposition which is used to determine which analysis variables are most important in explaining changes in an analysis variable can be concluded that the analysis of variance in health analysis variables is determined by the analysis variables themselves, both in the short and long term.

The contribution of health change in general is dominated by the health shock itself with a composition of analysis of variance of 100% explained by the health analysis variable itself, which means that the probability level of health is also highly influenced by itself compared to shocks that occur in workforce support, instruction and financial development. **Causality of Labor Force Participation and Education** Based on the consequences of the Granger Causality test, it tends to be seen that Labor Force Cooperation has no relationship with instruction.

This is demonstrated by the likelihood estimate between Labor Force Participation, training 0.1387 or more prominent than $= 0.05$. Training has no relationship with workforce interest as confirmed by the likelihood estimate between workforce support and schooling of 0.1055,

greater than $= 0.05$. So, it can be concluded that there is no relationship between labor force participation and education.

4 Conclusion

In light of the examination utilized in this review is the estimation of ANALISYS VEKTOR with the quantity of factors Health, workforce support, schooling and financial development in ASEAN can be finished up: Based on the aftereffects of the Granger Causality test, it very well may be seen that wellbeing has no relationship with workforce cooperation. This is confirmed by the likelihood esteem among wellbeing and workforce interest of $0.84384 > 0.05\%$. Workforce cooperation has no relationship with wellbeing as proven by the likelihood esteem between workforce support and wellbeing is $0.3282. > 0.05\%$.

In light of the consequences of the Granger Causality test, it very well may be seen that wellbeing has no relationship with schooling. This is proven by the likelihood esteem among wellbeing and training of $0.1297 > 0.05\%$. Schooling has no relationship with wellbeing as proven by the likelihood esteem among training and wellbeing is $0.4889. > 0.05\%$. In view of the consequences of the Granger Causality test, it very well may be seen that wellbeing has no relationship with financial development. This is confirmed by the likelihood esteem among wellbeing and monetary development of $0.6138 > 0.05\%$. Monetary development has no relationship with wellbeing as confirmed by the likelihood esteem between financial development and wellbeing is $0.4944. > 0.05\%$.

In light of the consequences of the Granger Causality test, it very well may be seen that Labor Force Cooperation has no relationship with schooling. This is confirmed by the likelihood esteem between Labor Force Participation and training of $0.1387 > 0.05\%$. Schooling has no relationship with workforce interest as confirmed by the likelihood esteem between workforce support and training of $0.1055 > 0.05\%$. In view of the consequences of the Granger Causality test, it very well may be seen that Labor Force Cooperation has no relationship with financial development.

This is proven by the likelihood esteem between Labor Force Participation and monetary development of $0.5777 > 0.05\%$. monetary development has no relationship with workforce interest as confirmed by the likelihood esteem between financial development and workforce cooperation is $0.8590 > 0.05\%$. In view of the consequences of the Granger Causality test, it tends to be seen that schooling has no relationship with financial development. This is proven by the likelihood esteem among schooling and financial development of $0.0846 > 0.05\%$. financial development has no relationship with schooling as proven by the likelihood esteem between monetary development and workforce investment is $0.6856 > 0.05\%$.

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References

- [1] Amir, H., Khan, M., & Bilal, K. (2015). Impact of educated labor force on Economic growth of Pakistan: A human capital perspective. *European Online Journal of Natural and Social Sciences*, 4(4), 814–831. Retrieved from <http://www.european-science.com>
- [2] Arsyad, L. (2010). *Ekonomi Pembangunan* (5th ed.). Yogyakarta: UPP STIM YKPN.
- [3] Bank, W. (2020). *World Bank*. Washington: World Bank.

- [4] Blanchard, O., & Johnson, D. R. (2017). *Makroekonomi* (6th ed.). Jakarta: Erlangga.
- [5] Boediono. (2005). *Ekonomi Mikro*. Yogyakarta: BPFE UGM.
- [6] Borjas, G. J. (2013). *Labor Economics* (7th ed.). New York: The McGraw-Hill Companies, Inc.
- [7] Carbaugh, R. J. (2004). *International Economics*. New York: Thompson.
- [8] Elistia, and Barlia Annis Syahzuni. (2018). "The Correlation of the Human Development Index (HDI) Towards Economic Growth (Gdp Per Capita) in 10 Asean Member Countries." *Jhss (Journal of Humanities and Social Studies)* 2(2): 40–46.
- [9] Eliza, Y. (2015). Pengaruh Investasi, Angkatan Kerja dan Pengeluaran Pemerintah Terhadap Pertumbuhan Ekonomi di Sumatra Barat. *Jurnal Pekbis*, 7(3), 200–210.
- [10] Jhingan, M. L. (2003). *Ekonomi Pembangunan dan Perekonomian*. Jakarta: PT. Raya Grafindo Persada.
- [11] Kargi, B. (2014). Labor Force Participation Rate and Economic Growth: Observations for Turkey. *Universal Journal of Management and Social Sciences*, 4(4), 46–54. <https://doi.org/10.32861/ijeifr.59.209.213>
- [12] Rahman, M. M. (2018). Impact of Labour Force Participation on Economic Growth in South Asian Countries. *Issn*, 5(11), 2222–1700. Retrieved from www.iiste.org