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Influence Of Human Development Index, Foreign Investment, Labor Force And Money Supply On GDP In Selected ASEAN Countries

Dimas Bagus Wiranatakusuma [1*], Imamudin Yuliadi [2], Natania Syafiqur Rahma [3]
[1,2,3)] Universitas Muhammadiyah Yogyakarta, Indonesia
Email: dimas_kusuma@umy.ac.id

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ABSTRACT

Gross Domestic Product (GDP) is a crucial metric for assessing economic progress within a nation. GDP indicates the capacity of economic activity to produce supplementary money for society over a specified timeframe. This study seeks to examine the determinants affecting the GDP of several selected ASEAN nations from 2012 to 2021. The dependent variable is GDP, while the independent variables include the Human Development Index, Foreign Investment, Labor Force, and Money Supply. The data included in this research is sourced from credible secondary sources, specifically the official World Bank website. This research employs multiple linear regression analysis utilizing EViews 7 software. The research findings indicate that the Human Development Index exerts a favourable yet minor influence on GDP. Foreign investment exerts a favourable and considerable influence on the GDP of selected ASEAN countries. The total number of workers exerts a positive and considerable influence on GDP. The Money Supply exerts a negative and severe impact on several ASEAN nations. Consequently, the government ought to augment human growth by advancing education and healthcare services, infrastructure, innovation, and research. To enhance GDP, ASEAN nations ought to attract international investment and elevate human resource quality via education, training, and experience. The government should regulate and stabilize the money supply to avert excessive inflation and recession in ASEAN nations.

INTRODUCTION

Gross Domestic Product (GDP) is defined as the growth of economic activities that leads to an increase in both the number and quality of goods and services produced in society, as well as in individual wealth. GDP evaluates the advancement of an economy from one period to another. The ability of a nation to produce goods and services will increase. This enhanced capacity results from increased production factors in both quantity and quality. Investment will augment capital goods, and technology is concurrently advancing. Furthermore, the enhancement of individuals' education and skill levels, attributed to population increase, has resulted in an expanded labour force. GDP is often described as an enhancement in an economy's capacity to generate goods and services. Gross Domestic Product (GDP) is a crucial metric for assessing a nation's economic development. The GDP indicates the

The economic activity will yield supplementary income for the community within a specified timeframe. Economic activity involves utilizing factors of production to generate output, resulting in a flow of recompense for the community's owned factors of production. As activities progress, the income of society, as a determinant of production owners, will likewise rise. The economic activities can have a greater impact inside broader communities, such as in specific regional economies. The Association of Southeast Asian Nations (ASEAN) is an increasingly solid entity in both economic and political dimensions. Certain factors suggest that ASEAN significantly contributes to the stimulation of economic activities within the regional framework. The economic cooperation among ASEAN member states has substantially enhanced economic and financial development. Initiatives to enhance trade, investment, and service collaboration across member nations have created new opportunities and bolstered economic interconnection. ASEAN's GDP has emerged as a notable success in global economic development. Economic integration, industrial advancement, infrastructure investment, and technological innovation have been significant catalysts for this accomplishment. Considering these facts, ASEAN possesses the capacity to persist in its growth and enhance economic development in the Southeast Asian region.

Table 1 GDP Of Eight Selected ASEAN Countries In 2012-2021 (Billion USD)

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Philippines	261	283	297	306	318	328	346	376	361	394
Vietnam	195	213	233	239	257	281	310	334	346	366
Malaysia	314	323	338	301	301	319	358	365	337	372
Singapore	295	307	314	308	318	343	376	375	345	396
Thailand	397	420	407	401	413	456	506	544	499	505
Cambodia	14	15	16	18	20	22	24	27	25	26
Indonesia	917	912	890	860	931	1.015	1.042	1.119	1.058	1.186
Brunei	19	18	17	12	11	12	13	13	12	14

Source: World Bank 2012-2021

Table 1 explain GDP of the selected ASEAN country. Indonesia achieved the highest score in 2021 with a GDP value of US$1 trillion per year and in the same year Brunei experienced the lowest GDP with a figure of US $14 billion. In 2020, the GDP of Selected ASEAN countries experienced a significant decline. The cause was due to the Covid-19 pandemic which occurred in all countries in the world, especially ASEAN countries. Overall, GDP data from ASEAN countries in the period 2012 to 2021 tends to fluctuate, but there is an upward trend in GDP. The Covid-19 pandemic has hampered the economy and daily lives of people in the Southeast Asia region from 2020 until 2021. GDP in 2020 experienced a decline due to some factors, including restrictions on economic activity to control the spread of the virus, in Southeast Asia.

Aside of pandemic related shocks, several factors affect largely on GDP in selected ASEAN countries. One of the factors that influence GDP is the human development index. One of the main benefits of the human development index is to show that a country can actually commit far better crimes even though its income level is low. Conversely, a high level of income is not always followed by high human development achievements. The human development index shows that differences in income are larger than differences in other income indicators, at least in the areas of health and education. In addition, the human development index reminds us that real development means human development in a broad sense, not just higher incomes. According to Rahmawati (2019), health and education are components of human capital and inputs to the national production function. Thus, the Human Development Index (IPM) is a comparative measure of life expectancy, literacy, education and standard of living for all countries around the world.

Table 2 Human Development Index Selected ASEAN Countries 2012-2021

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Philippines	0.69	0.69	0.70	0.70	0.70	0.71	0.71	0.72	0.54	0.70
Vietnam	0.67	0.68	0.68	0.68	0.69	0.70	0.70	0.70	0.71	0.70
Malaysia	0.78	0.79	0.79	0.80	0.80	0.81	0.81	0.81	0.81	0.80
Singapore	0.92	0.92	0.93	0.93	0.93	0.93	0.94	0.94	0.94	0.94
Thailand	0.75	0.75	0.78	0.78	0.79	0.77	0.77	0.77	0.78	0.80
Cambodia	0.56	0.56	0.57	0.57	0.58	0.58	0.59	0.58	0.59	0.59
Indonesia	0.68	0.68	0.69	0.70	0.70	0.71	0.71	0.71	0.72	0.73
Brunei	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.83	0.83

Source: World Bank 2012-2021

According to table 2, Singapore possesses the greatest human development index value, recorded at 0.94 from 2018 to 2021. Since 2012, Singapore has attained a high human development index value over 0.92, which continues to rise year. Indonesia has experienced an annual growth since 2012, beginning with a value of 0.68, then to 0.70, then to 0.71, and culminating in a peak of 0.73 in 2021. The second determinant influencing GDP is investment. Hardinata (2022) defines investment as the allocation of financial resources or other assets at present, with the objective of securing future advantages. In economic terms, investment refers to the expenditure on capital goods and equipment that will subsequently serve as replacements for and augment existing capital goods to facilitate the production of products and services in the future. Investment plays a crucial role in the economy. The three objectives of investment include enhancing production capacity, augmenting employment opportunities through overall expenditure, and fostering following technological breakthroughs inside a nation. Foreign Investment (PMA) contributes to a nation's GDP. Initial foreign capital can serve as a catalyst for enhancing investment and GDP. Increased GDP must be accompanied by the structure of production and trade inside the nation (Sustari, 2022). Ultimately, foreign capital, as a means of fund mobilization, plays a significant role. Foreign direct investment occurs when the capital owner possesses the authority to oversee assets through direct investment by acquiring a majority stake. This foreign direct investment may manifest as the establishment of a branch office or the creation of a firm with a majority capital owner (Pratiwi, 2022).

Table 3 Foreign Investment (Billion Usd) Selected Asean Countries 2012-2021

Country	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Philippines	0,95	0,09	1	0,09	5	6	5	5	3	8
Vietnam	7	6	8	10	11	13	14	15	15	15
Malaysia	8	2	5	0,06	3	3	2	1	0,67	7
Singapore	34	19	16.	24	28	36	59	55	42	58
Thailand	1	3	0,07	3	9	5	4	5	23	5
Cambodia	1	2	1	1	2	2	3	3	3	3
Indonesia	13	12	14	10	16	18	12	20	14	17
Brunei	0,85	0,77	0,57	0,17	0,15	0,47	0,51	0,37	0,56	0,20

Source: World Bank 2012-2021

Table 3 elucidates that Singapore, Thailand, Indonesia, Vietnam, Malaysia, Cambodia, the Philippines, and Brunei have experienced considerable variations in foreign investment. Singapore recorded its peak value of $59 billion in 2018, followed by Thailand at $23 billion in 2016, Indonesia at $20 billion in 2019, Vietnam at $15 billion in 2019, Malaysia at $8 billion in 2012, Cambodia at $3 billion from 2018 to 2021, the Philippines at $8 billion in 2021, and Brunei at $0.85 billion in 2017. The minimum valuation was $16 billion in both 2014 and 2013.

The magnitude of the labour force constitutes the third determinant influencing GDP. The economic progress of a nation is contingent upon the productivity of its labour force. An appropriate allocation of investment and human resources is implemented to enhance production and increase productivity. Alongside elevated productivity, a nation's economy needs the backing of efficient manufacturing methodologies to enhance its output capabilities. (Hilal, 2022) .

Table 4 Labor Force (Million) Selected Asean Countries 2012-2021

Country	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Philippines	40	40	42	42	43	42	43	44	41	43
Vietnam	52	53	54	55	55	55	55	55	55	56
Malaysia	13	13	14	14	14	15	15	15	16	16
Singapore	3	3	3	3	3	3	3	3	3	3
Thailand	40	39	39	39	38	38	39	38	39	39
Cambodia	8	8	8	8	8	8	9	9	9	9
Indonesia	120	120	122	124	126	129	133	136	136	139
Brunei	0,19	0,19	0,19	0,20	0,20	0,20	0,21	0,21	0,21	0,21

Source: World bank 2012-2021

Table 4 elucidates that Indonesia had the biggest workforce in 2019, totalling 136 million, followed by Vietnam with 56 million in 2021, Malaysia with 16 million, Singapore with 3 million, Thailand with 40 million, Cambodia with 8 million, Indonesia again with 139 million, and Brunei with 0.19 million. The labour force in these countries from 2012 to 2021 includes Indonesia with 139 million workers, Vietnam with 56 million, the Philippines with 43 million, Malaysia with 16 million, Singapore with 3 million, Thailand with 40 million, Cambodia with 8 million, and Brunei with 0.21 million in 2021. The fourth element influencing GDP is the money supply. Currency is an entity with a specific unit of measurement that serves as legal money in various transactions and is recognized in certain regions. The money supply equals the basic money multiplied by the money multiplier. The circulation of money within society can be characterized as a market process.

Table 5 Money Supply Growth (current %) Selected ASEAN Countries 2012-2021

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Philippines	7	29	12	9	13	11	9	10	9	8
Vietnam	25	21	20	15	18	14	13	14	14	11
Malaysia	9	7	6	3	3	5	8	3	5	5
Singapore	7	4	3	2	8	3	4	5	13	10
Thailand	10	7	5	4	4	5	5	4	10	5
Cambodia	39	22	31	17	21	23	27	18	15	12
Indonesia	15	13	12	9	10	8	6	7	13	14
Brunei	1	1	3	2	2	0	3	4	4	4

Sources: World bank 2012-2021

Table 5 indicates that in 2013, the Philippines possessed the largest money supply at 29%, followed by Vietnam at 25% and Malaysia at 9%. In 2020, Singapore had the highest percentage at 13%, followed by Thailand at 10% in 2012, Cambodia at 39% in 2012, Indonesia at 15% in 2012, and Brunei at 4% from 2019 to 2021. Empirical research has investigated the influence of variables such as the Human Development Index, Foreign Investment, Total Workforce, and Total Money Supply on GDP in Indonesia and other nations. Research conducted by Rahmawati (2019) and Akbar (2019) indicates that the Human Development Index has a beneficial impact on short-term GDP in Indonesia. Furthermore, Akbar (2019) demonstrates, utilizing data from 2008 to 2017, that foreign investment has a favourable impact on ASEAN's GDP. Afifah's (2019) research demonstrated that the size of the labour force favourably influences ASEAN's GDP. Aryanto (2022) discovered that the circulation of money adversely and significantly impacts GDP.

LITERATURE REVIEW

Economic growth

Economic growth, defined as the periodic increase in output, serves as a crucial metric for assessing a nation's developmental progress (Todaro, 2005). The fundamental idea of Neoclassical economic growth posited by Solow (1956) asserts that government intervention through spending or taxation does not influence growth (Kneller et al., 1999). Economic growth is solely determined by exogenous factors such as capital stock, labour, and technology.

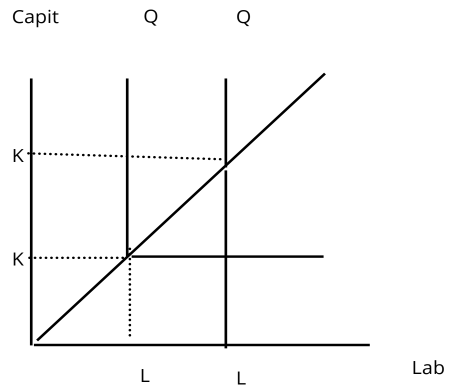
Todaro posits that a nation's economic growth is contingent upon three primary components: (i) capital accumulation, encompassing all forms of new investments in land, physical equipment, and human resources; (ii) population growth, which augments the labour force in subsequent years; and (iii) technological advancement. Regional development is conducted to attain three critical objectives: growth, equity, and sustainability.

1. Growth is defined as the amount to which the scarcity of resources, including human resources, equipment, and natural resources, can be optimally allocated and utilized to enhance productive activities.
2. In this context, equality influences the attainment of the third objective; resources must be sustainable and not concentrated in a single location, ensuring that the advantages of growth are equitably distributed among all stakeholders.
3. Sustainable (sustainability) implies that the objective of sustainable regional development must ensure that resource utilization, both within and outside the market system, does not surpass production capability.

Kuznets defines economic growth as the long-term enhancement of a nation's ability to supply diverse economic commodities to its populace. The enhancement of capacity arises from advancements or modifications in technology, institutions, and ideologies in response to the diverse demands of prevailing conditions. Economic growth theory is often categorized into two types: classical economic growth theory and modern economic growth theory. Classical economic growth theory posits that free-market systems are effective for analysis. Classical economic theory is a concept developed by economists from the 18th to early 20th centuries. The classical economists comprise Adam Smith, David Ricardo, and W.A. Lewis.

Harrod-Domar's Theory of Economic Growth is a contemporary growth theory. Harrod-Domar represents a direct evolution from short-term Keynesian macroeconomic theory to long-term macroeconomic theory. These two economists assert that investment spending (I) affects both aggregate demand (AD) and aggregate supply (AS) by impacting production capacity. From this broader viewpoint, investment contributes to the capital stock (K). The Harrod-Domar model posits that each increment to the community's capital stock enhances its capacity to generate production. Economic growth is a primary metric that every nation must evaluate. Consequently, it is essential to examine economic growth, since each nation endeavours to enhance its economic objectives as an indicator of its long-term prosperity. A country that can sustain and even enhance its operating system necessitates meticulous preparation and attentiveness in executing its economic activities. Nonetheless, not all nations can attain the anticipated economic growth. This predicament arises from multiple sources, one being a country's inability to satisfy its domestic demands. According to these principles, the Harrod-Domar model posits that labour and investment are prerequisites for economic growth. Where labour and investment can augment production capacity. The Harrod-Domar economic growth model is based on the experiences of developed nations. All these largely focus on advanced capitalist economies and seek to analyse the factors for sustained growth within these economies (Zhang, 1992; Lestari 2023). The subsequent representation is the production function curve:

Figure 1 production function



Source: Arsyad (1999)

Figure 1 illustrates the L-shaped production function curve. To generate Q1 output, L1 labour and K1 capital are required. To generate Q2 output, L2 labour and K2 capital are required. If the mixture alters, the output level likewise alters. The Harrod-Domar model posits a direct economic correlation between capital stock (K) and national production (Y). The basic growth can be utilized to forecast and strategize economic development in emerging nations.

Human Development Index

Human development serves as a measure of developmental progress that might stimulate economic growth. The United Nations Development Program (UNDP) created the notion of mutual human capital, known as the Human Development Index (HDI), to assess the quality of human capital. The Human Development Index (HDI) offers a composite assessment of three dimensions of human development: the health dimension, indicated by life expectancy; the education dimension, assessed through adult literacy rates and average years of schooling; and the standard of living dimension, evaluated via purchasing power parity (UNDP, 2004). The extent of human development significantly influences the population's capacity to assimilate and govern economic growth sources, encompassing both technological and institutional factors as crucial mechanisms for attaining economic advancement (Brata, 2004).

The fundamental concept behind the establishment of this index is the significance of prioritizing the quality of human resources. The Human Development Index (HDI) has served two primary functions in the realm of economic development: 1) as a mechanism to promote human development as a novel perspective on well-being, and 2) as a substitute for GDP per capita in assessing development levels for cross-country and temporal comparisons (Stanton, 2007).

The United Nations has created the Human Development Index (HDI) as a standard metric to assess the quality of life and wellbeing of individuals. This index is formed based on four indicators, namely.

1. life expectancy,
2. literacy rate,
3. average length of school
4. purchasing power ability.

The measures of life expectancy signify the aspects of longevity and health (the health dimension), whilst the indicators of literacy rates and average duration of schooling denote the results of the knowledge dimension (the education dimension). The purchasing power indicator (income) is utilized to assess the parameters of a dignified existence (UNDP, 2004).

The extent of human development significantly influences the population's capacity to assimilate and govern economic growth sources, including both technological advancements and institutional frameworks as crucial mechanisms for attaining economic growth (Ramirez, 1998; Anggarini, 2021). Human development represents the long-term objectives of a society, prioritizing human needs over developmental processes (Yunita, 2012). The welfare of the community will be directly proportionate to its need for quality education, hence enhancing the literacy rate. Greater educational attainment correlates with enhanced production, thereby elevating income on both individual and national levels. Rising individual income will enhance consumption capacity, hence stimulating economic growth (Soejoto et al., 2016).

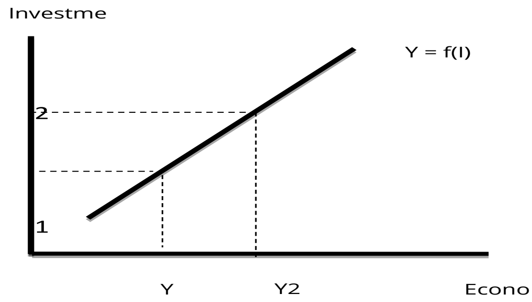
Foreign Investment

Tambunan (2005) asserts that investment is a vital component for the resurgence of economic development (sustainable development) or prolonged economic growth. Production operations generate job chances and elevate individual incomes, thereby creating or amplifying market demand. An augmentation in income will enhance public savings, and an elevation in public savings will stimulate an increase in investment, owing to the relatively cheap bank interest rates, prompting numerous entrepreneurs to allocate their capital in the economic sector. The presence of capital from both domestic and foreign private sectors is anticipated to stimulate the economy and provide a multiplier impact. Investment constitutes the initial step towards development. Investment generated domestically is referred to as Domestic Investment (PMDN), whereas investment sourced from overseas is termed Foreign Investment (PMA). Both are equally significant and influence a nation's economic development (Dumary, 1996). Foreign Direct Investment (FDI) refers to a series of long-term investments made by a corporation in another country, including export credit (Sukirno S., 2011). Foreign investment comprises three components:

1. Portfolios are international financial assets intended to yield financial rewards. The investment is executed through investors purchasing debt instruments or securities from the corporation.
2. Foreign Direct Investment (FDI) refers to a series of long-term investments made by a corporation in another nation.

Alongside the lucrative influx of cash into the country, there are apprehensions regarding the potential for substantial withdrawals of funds within a brief period, attributable to several external and domestic reasons, which could destabilize the already compromised economic fundamentals. formulated (Yuliadi, 2007). Foreign Direct Investment (FDI) plays a crucial role in economic development by generating employment, enhancing value addition, increasing the production of products and services, and improving societal conditions (Wahyudin & Yuliadi, 2012). This aligns with neoclassical economic theory, which posits that the influx of investment positively affects the host country and embraces foreign investment, as it is deemed very advantageous for the domestic economy. This indicates that foreign cash provided to beneficiaries will stimulate domestic capital, which is likely to be utilized for diverse enterprises.

Figure 2 Theory Based On Neoclassical Economics



Source: Goodland & Ledec (1987)

According to the image 2, an increase in beneficial foreign investment from I1 to I2 leads to an enhancement in economic growth from Y1 to Y2.

Total Work Force

Manpower comprises two categories: the labour force and the non-working population. The labour force comprises individuals of working age who are either employed, temporarily absent from their jobs, or actively seeking employment. The non-labour force comprises individuals of working age who are neither employed nor seeking employment, including students, homemakers, and those receiving income not directly tied to their labour services (Dumairy, 1996: 74-75). The Central Bureau of Statistics (BPS) defines labour as any individual capable of performing work to generate commodities and services, fulfilling both personal and communal requirements. Indonesia has established a minimum working age of 10 years, with no upper age limit, thereby categorizing all individuals aged 10 and above as workers.

The workforce size reflects the state of available employment opportunities. An increase in the number of available employments correlates with a rise in total productivity within a country. Todaro and Smith (2003) assert that population growth, followed by workforce expansion, has historically been viewed as a favourable catalyst for economic growth. An increased workforce enhances the productive labour force, while higher population growth expands the domestic market size. Labor is a determinant that influences the productivity of a region. A substantial labour force will emerge from a sizable population. Nonetheless, population increase is anticipated to adversely impact economic growth. Todaro (2000) asserts that swift population increase exacerbates underdevelopment and renders development prospects increasingly distant. Moreover, population issues emerge not from the sheer quantity of family members, but from their concentration in metropolitan regions due to the swift migration from rural to urban locales.

Money Supply

The money supply refers to the total quantity of money held by the public and circulating throughout a nation's economy at a specific point in time (Tambunan 2011: 257). In macroeconomic analysis, the money supply significantly influences both the level of economic output and price levels. Theoretically, the money supply can influence the value of money at the pricing and product levels. If the money supply is inferior to the production of goods and services, it will lead to a reduction in the price level. This will influence the volume of money circulating within society (Budhi et al., 2003). Boediono (2014: 86) states that "the initial comprehension of money in circulation encompasses all currency and demand deposits accessible for public utilization." Currency is cash, issued by the government or central bank, that is directly accessible for public usage. Demand deposits represent the total value of checking account balances held by the public at commercial banks. This balance constitutes part of the circulating money, as the owner might utilize it for requirements at any moment. In the literature of monetary economics, this definition is referred to as money supply in a restricted sense or narrow money.

Changes in the money supply indicate fluctuations in the economy. The economy expands and evolves, resulting in an increase in the money supply. As the economy advances, the utilization of cash (both paper and coin) diminishes, supplanted by demand deposits. (Rahardja & Manurung, 2008, p. 324). In trading, money serves as a medium of exchange. Currency is generated inside the economy to facilitate commerce and exchange activities. A country's modernity correlates positively with the significance of currency in commerce.

METHODS

Measurement Of Variables

The variable analysed in this study is nominal Gross Domestic Product (GDP). Gross Domestic Product (GDP) represents the total monetary worth of goods and services generated by a nation's economy over a defined period, quantified in billions of United States dollars annually. The Human Development Index (HDI) is quantified in index units annually. Net foreign direct investment (FDI) inflows from other countries into ASEAN nations represent the total value of direct investments by non-resident investors in the reporting economy, encompassing reinvested income and intercompany loans, while excluding capital repatriation and loan repayments. Foreign investment statistics is expressed in billions of USD. Labor (LF) encompasses individuals aged 15 to 64 who are capable of employment contingent upon demand for goods or services, measured in millions across various ASEAN nations. The money supply (MS), measured by M2, is expressed as a percentage rise per annum.

$GDPit = \alpha0 + \alpha1LFIt + \alpha2MSit + \alpha3LFit + \alpha7HDIit + \mu it$ ....(Equation 1)

Data Analysis

The authors employed panel data analysis as the analytical method for their investigation, with Eview 7 as the data processing tool. Panel regression analysis was employed to assess the impact of the independent variable on GDP in ASEAN nations.

RESULTS

Table 6 Chow Test

Effect Test	Statistics	Df	Prob.
cross section F	42.013959	(7,68)	0.0000

Source: Results processed in Eviews

Table 6 indicates that the likelihood ratio for this model is less than 0.05, and the F-Test probability value is 0.0000; therefore, H0 is rejected and H1 is accepted, signifying that the model is suitable. The Fixed Effect model is one of these outcomes.

Table 7 Hausman Test

Test Summary	Chi-Sq. Statistics	Chi-Sq. df	Prob.
Random cross-section	43.847615	4	0.0000

Source: Results processed in eviews

In table 7, the probability value is 0.0000 (significance < 0.05), leading to the acceptance of H1 and the rejection of H0; hence, it can be concluded that the fixed effect model is superior to the random effect model.

Table 8 Heteroscedasticity Test

Variables	coefficient	std. Error	t-stats	Prob.
C	164.5031	106.0502	1.551181	0.1255
HDI?	-1.237673	12.37620	-0.100004	0.9206
LOG(FDI?)	0.458269	0.311033	1.473377	0.1453
LOG(LF?)	-10.97000	6.623642	-1.656189	0.1023
MS?	0.057028	0.059806	0.953552	0.3437

Source: Results processed in Eviews

According to Table 8, no factors exhibit correlation with the residuals. The Human Development Index, Foreign Investment, Total Workforce, and Total Money Supply exhibit no correlation, with respective values of 0.9206, 0.1453, 0.1023, and 0.3437, all exceeding 5%. Thus, it can be inferred that the model in this study mitigates the presence of heteroscedasticity.

Table 9 Multicollinearity Test

Country	PhilippineS	Vietnam	Malaysia	Singapore	Thailand	Cambodia	Indonesia	Brunei
_PHILIPPINES	1	-0.23	-0.36	-0.25	-0.08	-0.14	-0.06	0.38
_VIETNAM	-0.23	1	-0.37	0.13	0.55	0.52	0.18	-0.40
_MALAYSIA	-0.36	-0.37	1	-0.39	-0.17	0.01	-0.27	0.46
_SINGAPORE	-0.25	0.13	-0.39	1	0.13	-0.11	0.70	-0.74
_THAILAND	-0.08	0.55	-0.17	0.13	1	0.52	0.19	-0.43
_CAMBODIA	-0.14	0.52	0.01	-0.11	0.52	1	-0.15	-0.30
_INDONESIA	-0.06	0.18	-0.27	0.70	0.19	-0.15	1	-0.64
_BRUNEI	0.38	-0.40	0.46	-0.74	-0.43	-0.30	-0.64	1

Source: Results processed in Eviews

According to the data in table 9, no correlation coefficient among the independent variables exceeds 0.9. Thus, it can be inferred that the model in this study mitigates multicollinearity.

Table 10 T-test

Variable	Regression Coefficient	t-stats	Prob.	Hypothesis
Human Development Index	0.762960	1.087.549	0.2806	HDI positive and insignificant on GDP
Foreign Direct Investments	0.066116	3.750.035	0.0004	FDI positive and significant on GDP
Labor Force	1.119040	2.980.458	0.0040	Labor Force positive and significant on GDP
Money Supply	-0.009070	-2.675.331	0.0093	Money Supply negative and significant on GDP

Source: Results processed in EViews

Table 10 elucidates that each independent variable exerts a distinct influence on the dependent variable.

Impact Of Human Development Index On Gross Domestic Product

The regression results indicate that the Human Development Index possesses a coefficient of 0.762960 and a probability value of 0.2806, signifying that the Human Development Index variable exerts a positive although negligible influence on GDP. The regression results lack significance at the 5% significance level (0.2806 > 0.05).

Impact Of Foreign Investment On Gross Domestic Product

The regression results indicate that foreign investment possesses a coefficient of 0.066116 and a probability value of 0.0004, signifying a positive and significant impact on GDP. The foreign investment variable is significant at the 5% significance level (0.0004 < 0.05).

The Impact Of The Labor Force On GDP

The regression findings indicate that the Total Labor Force has a coefficient of 1.119040 and a probability value of 0.0040, signifying a strong positive impact of the Labor Force variable on GDP. The variable number of the labour force is significant at the 5% significance level (0.0040/1 < 0.05).

The Impact Of The Overall Money Supply On GDP

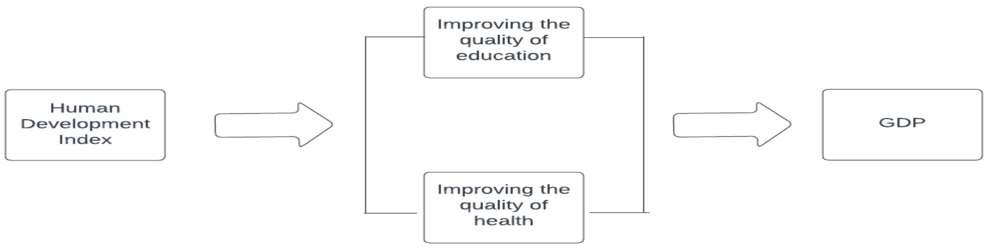
The regression results indicate that the money supply has a coefficient of -0.009070 and a probability value of 0.0093, signifying a negative and substantial impact on GDP. It is significant at a 5% significance level (0.0093 < 0.05).

DISCUSSION

Impact Of The Human Development Index On Gross Domestic Product

The analysis of the human development index variable (X1) hypothesis indicates that, from 2012 to 2021, the GDP of ASEAN members is favourably but insignificantly affected by the HDI. Each 1-unit gain in the Human Development Index can elevate GDP by $0.762960 billion USD.

Figure 3 Transmission Of Human Development Index To GDP



Source: Author (2023)

According to figure 3, GDP serves as an indicator of a nation's economic advancement, impacting the quality of life and social development. It is impacted by the Human Development Index (HDI), which encompasses health, education, and adequate living standards. The UNDP's Human Development Reports underscore the significance of comprehending development in relation to society. Nonetheless, the Human Development Index, an indicator of individual well-being, exerts a positive influence on GDP, albeit it lacks statistical significance. The research indicates that factors other than the Human Development Index exert a more substantial impact on ASEAN GDP, suggesting that its effect is not statistically significant.

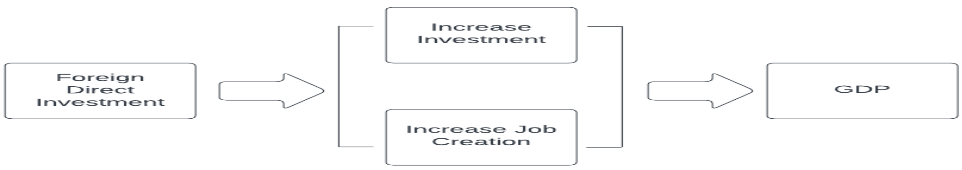
ASEAN nations have enhanced educational quality, resulting in elevated GDP. Indonesia has initiated programs such as the Smart Indonesia Program, whereas Singapore boasts a robust economy attributed to its elevated purchasing power. Malaysia's Family Planning Program has resulted in reduced birth rates and increased life expectancy, alongside a decrease in maternal and child death rates.

Effect Of Foreign Investment On GDP

The analysis of the hypothesis variable Foreign Investment (PMA) reveals a regression coefficient of 0.066116. This indicates that a 1% increase in Foreign Investment is associated with an increase in GDP of $0.066116 billion US. The probability value of the Foreign Investment variable reaching X1 is 0.0004, which is less than 0.05, indicating significance at a 5% significance level. Foreign direct investment (FDI) represents capital allocated for the maintenance or expansion of capital goods, thereby enhancing a nation's GDP. It has a more significant impact on guaranteeing the sustainability of development compared to aid or capital assets. A coefficient value of 0.066116 indicates that each instance of FDI entering the ASEAN region correlates with an increase in GDP of $0.066116 billion US. Heightened investment enhances the production process, subsequently leading to an uptick in household consumption. To promote elevated GDP in developing countries, it is essential for governments to persist in exploring new financing avenues, both within their borders and internationally. Capital plays a significant role in the determination of GDP.

The achievement of a nation's developmental capital can be sourced from investments, originating both domestically and internationally (Alvaro, R. 2021). The quality of capital goods plays a crucial role in economic development, highlighting the importance of foreign direct investments (FDI) for growth. Foreign Direct Investment has the potential to enhance productivity and increase national income, thereby positioning ASEAN nations as appealing destinations for global investors. Macroeconomic theory indicates that domestic savings have the potential to finance investments, which can lead to positive effects on GDP and capital formation. Foreign direct investment (FDI) plays a crucial role in facilitating international commerce, advancing infrastructure development, fostering growth in the financial sector, and enhancing GDP. The primary rationale behind FDI is the pursuit of profit maximization in foreign markets.

Figure 4 Transmission Foreign Direct Investment To GDP



Source: Author (2023)

Figure 4 illustrates the significance of FDI in economic development, as it stimulates domestic capital and enhances labour productivity, which in turn contributes to GDP growth. The determinants of incoming foreign investment encompass macroeconomic conditions, perceptions of corruption, global competition, human resources, and investment performance. Stability in macroeconomic variables is crucial for attracting investment. In Indonesia, the necessity for foreign investment arises during periods of stagnation in government and domestic investment. Short-term factors encompass macroeconomic stability, global GDP growth, and educational attainment, whereas long-term factors involve perceptions of corruption and the performance of investments (Ningrum, V. 2008). A robust GDP encourages investors to channel funds into developing countries, as these nations demonstrate potential for enhancing economic capacity and boosting production levels. Nevertheless, these countries frequently encounter a substantial labour force characterized by low productivity levels and insufficient technological and equipment skills.

Addressing these challenges requires enhancing human resources and enacting targeted policies, such as those aimed at developing the industrial sector, to effectively tackle unemployment. Investing in sufficient capacity can facilitate the effective utilization of human resources and transform the economic framework. Furthermore, a rise in foreign direct investment (FDI) within the ASEAN region has the potential to enhance labour utilization and draw in additional foreign capital, consequently strengthening the economy (Najih, M. W. F. (2019).

Effect Of Labor Force On GDP

The Labor Force variable has a notable effect on the GDP of ASEAN countries, as evidenced by a regression coefficient at the 5% level, which shows that a 1% increase in the labour force corresponds to an increase of $1.119040 billion US in GDP. The labour force encompasses the working-age population that includes individuals who are currently employed, those who are temporarily absent from their jobs, and those actively seeking employment opportunities. The working population consists of individuals engaged in the production of goods or services. This includes those who, in the week preceding the census, performed work or had the intention to work for at least one hour, without any interruptions. Job seekers represent a segment of the labour force that is currently unemployed and engaged in the active pursuit of employment opportunities (Marini, L., & Putri, N. T. 2020). The labour force, categorized into working and responsive groups, may experience effects from an increase in productive workers, leading to enhancements in economic productivity, GDP, and employment opportunities, thereby influencing the economy.

The growth of GDP is positively affected by an increase in population and a higher workforce participation rate. The increased utilization of employees in the production process indicates that a larger labour force results in a more extensive pool of productive workers, thereby enhancing production outcomes. Therefore, the role of the labour force in the economy is significant. According to the research conducted by Anfasa (2021), the size of the labour force significantly influences and positively correlates with various outcomes. The growth in the labour force, serving as a measure of human resources within a region, significantly influences production activities. A larger pool of available labour enhances the capacity for contribution to the production process. In development, labour plays a crucial role both as an actor and as a goal of development.

Figure 5 Transmission Of Labor Force To GDP

Source: Author (2023)

According to figure 5, the labour force encompasses the working-age population within a country, categorized into workers and non-workers. Indonesia, as a participant in the ASEAN Economic Community, is prioritizing the development of human resources to ensure a balanced economic interaction among the ten ASEAN nations. The nation possesses a substantial and productive labour force within the 15-55 age range, which is being enhanced through the Master Plan for the Acceleration and Expansion of Economic Development Indonesia (MP3EI) for the period of 2011-2025. An investment of 21 trillion rupiah will be directed towards enhancing the quality of human resources in Vocational High Schools, Academies, Polytechnics, Colleges, Institutes, Universities, and various other programs (Utomo, P. 2020). Developing competitive human resources is essential for organizations. Eight strategies encompass recruitment, selection, performance appraisal, competency enhancement, education, training, cultural change, salary, and the development of HR Information Systems. The implementation of these strategies necessitates significant effort, a strong commitment, and collaborative engagement from multiple sectors, such as business, academia, society, and corporate leadership (Sihite, M. 2018).

The Effect Of The Money Supply On GDP

The analysis indicates that the money supply has a notable adverse impact on the GDP of ASEAN nations during the period from 2012 to 2021, evidenced by a regression coefficient of -0.009070 and a probability value of 0.0093, which is less than 0.05. The rise in money circulation results in enhanced purchasing power, elevated consumption levels, and an uptick in prices, which collectively suggest an expanding GDP. The state of the financial system has a favourable impact on national income. Intermediate institutions and markets are essential for strengthening the influence of the financial sector. The circulation of money significantly influences economic activity, and substantial increases can adversely affect long-term GDP growth. A limited supply can lead to economic downturns and a deterioration in social wellbeing. The effective management of money circulation is essential (Manuela, et.al. (2014).

Figure 6 Transmission Of Money Supply To GDP

Source: Author (2023)

Figure 6 indicates that an uncontrolled money supply has the potential to adversely affect GDP through the mechanisms of high inflation and diminished investment levels. Increasing domestic prices diminish the appeal for investors, resulting in a decline in GDP. Increases in the money supply that are excessive can lead to rising prices and potentially disrupt GDP over the long term. Inflation represents an ongoing trend of rising prices, shaped by market dynamics and a range of contributing factors. Increased inflation rates result in enhanced living costs, which in turn influence credit risk and reinvestment strategies. It influences asset prices, impacts equity, investment projects, and GDP. Inflation rate fluctuations have the potential to influence credit and investment risks (Syafi'i, et.al. (2021).

CONCLUSION

The research examined the correlation among GDP, human development index, foreign investment, total labour force, and money supply in ASEAN nations over the period from 2012 to 2021. The findings indicate that enhancements in education quality and health sector policies have the potential to elevate GDP. Foreign investment has had a favourable effect on GDP through the enhancement of investor interest and the generation of employment opportunities. Competent workers have the potential to enhance productivity and strengthen competitiveness within the global market. Nonetheless, the money supply exerted a detrimental effect on GDP by inducing high inflation, which has the potential to diminish consumer purchasing power and destabilize the economy. The study indicates that enhancements in education, foreign investment, and a skilled workforce may play a significant role in driving GDP growth in certain ASEAN countries.

LIMITATION

The government ought to focus on advancing human development through the enhancement of education and health services, as well as by investing in infrastructure, innovation, and research initiatives. To enhance GDP, ASEAN nations ought to focus on attracting foreign investment while simultaneously elevating the quality of human resources through targeted education, training, and experiential learning. The government must regulate and stabilize the money supply to mitigate the risks of excessive inflation and recession in ASEAN countries.

REFERENCES

Afifah, I., Djoemadi, F., & Ariani, M. (2019). Pengaruh Keterbukaan Perdagangan, Investasi, Inflasi, dan Angkatan Kerja terhadap Pertumbuhan Ekonomi pada Delapan Negara ASEAN Periode 2008-2015. Ilmiah Mahasiswa Universitas Surabaya , Vol.7.

Akbar, M. (2019). Analisis Pengaruh Penanaman Modal Asing Terhadap Pertumbuhan Ekonomi di ASEAN (Studi Pada Negara Indonesia, Malaysia, Singapura, Thailand dan Filipina dalam Periode 2008 – 2017) .

Alvaro, R. (2021). Pengaruh Investasi, Tenaga Kerja, Serta Ekspor Terhadap Pertumbuhan Ekonomi. Jurnal Budget, 6(1), 114–131.

Anggarini, D. R. (2021). Kontribusi Umkm Sektor Pariwisata Pada Pertumbuhan Ekonomi Provinsi Lampung 2020. EKOMBIS REVIEW: Jurnal Ilmiah Ekonomi Dan Bisnis, 9(2), 345-355.

Arsyad, L. (1999). Pengantar perencanaan dan pembangunan ekonomi daerah. Badan Penerbitan Fakultas Ekonomi (BPFE)

Anfasa, M. A. (2021). Pengaruh Indeks Pembangunan Manusia Dan Angkatan Kerja Terhadap Produk Domestik Regional Bruto Kabupaten Dan Kota Di Kalimantan Barat Tahun 2013-2019. Jurnal Ilmiah Mahasiswa Fakultas Ekonomi Dan Bisnis Universitas Brawijaya, 10(2), 1–16.

Aryanto, & Amaliyah, F. (2022). Pengaruh Jumlah Uang Beredar dan Suku Bunga Terhadap Inflasi di Indonesia. Riset & Jurnal Akuntansi, 6.

Boediono (2014). Ekonomi Internasional – Pengantar Ilmu Ekonomi. Yogyakarta:BPFE-Yogyakarta.

Budhi, A., Hiyama, K., Isobe, T., Oshima, Y., Hara, H., Maeda, H., & Kohno, N. (2003). Genetic susceptibility for emphysematous changes of the lung in Japanese. International journal of molecular medicine, 11(3), 321-329.

Brata, A. G. (2004). Analisis Hubungan Imbal Balik Antara Pembangunan Manusia dan Kinerja Ekonomi Daerah Tingkat II di Indonesia. Yogyakarta: Lembaga Penelitian–Universitas Atma Jaya.

Dumairy. 1996.Perekonomian Indonesia.Jakarta: Erlangga

Goodland, R., & Ledec, G. (1987). Neoclassical economics and principles of sustainable development. Ecological modelling, 38(1-2), 19-46.

Hardinata, C. (2022). Upaya Peningkatan Kemampuan Investasi Bagi Tenaga Kerja Indonesia. Jurnal BUDIMAS, Vol. 04.

Hilal. Mahmud, A. U. M. (2022). The Impact of Labor, Education Level and Poverty on GDP in West Sulawesi Province. Bulletin of Economic Studies, 2.

Kneller, R., Bleaney, M. F., & Gemmell, N. (1999). Fiscal policy and growth: evidence from OECD countries. Journal of public economics, 74(2), 171-190.

Lestari, P. I., Robiani, B., & Sukanto, S. (2023). Kemiskinan Ekstrem, Ketimpangan Dan Pertumbuhan Ekonomi Di Indonesia. EKOMBIS REVIEW: Jurnal Ilmiah Ekonomi Dan Bisnis, 11(2), 1739-1752.

Manuela Langi Theodores ,Masinambow Vecky, S. H. (2014). Analisis Pengaruh Suku Bunga Jml Uang Beredar Kurs Thdp Inflasi Indonesia. 14(2).

Marini, L., & Putri, N. T. (2020). Peluang Terjadinya Pengangguran Di Provinsi Bengkulu : Seberapa Besar? Convergence: The Journal of Economic Development, 1(2), 70–83. https://doi.org/10.33369/convergence-jep.v1i2.10900

Najih, M. W. F. (2019). Hubungan Foreign Direct Investmen (FDI) dan Ekspor: Studi Kasus Peran Indeks Ease of Doing Business (EODB) di ASEAN-5. Jurnal Ekonomi Dan Bisnis Universitas Brawijaya, 1(1), 1–19.

Ningrum, V. (2008). Penanaman Modal Asing Dan Penyerapan. Kependudukan Indonesia, 3(2), 1–19.

Pratiwi, D. (2020). Analysis of Foreign Direct Investment (FDI) Determinant in ASEAN. Journal Budget, Vol 05.

Rahardja Prathama, Manurung Mandala, 2008, Pengantar Ilmu Ekonomi (Mikroekonomi dan Makroekonomi) Edisi Ketiga, Lembaga Penerbit Fakultas Ekonomi Universitas Indonesia.

Rahmawati, Y. (2019). Analisis Pengaruh Indeks Pembangunan Manusia (Ipm), Tingkat Partisipasi. Journal Ilmiah.

Ramirez, M. D. (1998). Does public investment enhance productivity growth in Mexico? A cointegration analysis. Eastern Economic Journal, 24(1), 63-82.

Sihite, M. (2018). Strategi Membangun Sumber Daya Manusia Yang Berdaya Saing Tinggi. Seminar Nasional Royal, 9986(September), 407–412.

Soejoto, A., Subroto, W. T., Rachmawati, L., & Sholikah, N. M. (2016). Education inequality effect on poverty and economic growth: Empirical study in province of East Java. International Journal of Applied Business and Economic Research, 14(6), 4087-4103.

Solow RM (1956) A contribution to the theory of economic growth. Q J Econ 70:65–94

Stanton, E. A. (2007). Inequality and the Human Development Index. University of Massachusetts Amherst.

Sukirno Sadono, 2011, Makroekonomi Teori Pengantar Edisi tiga, Raja grafindo Persada

Sustari, N. S. M. (2022). Analisis Efesiensi Penggunaan Investansi Terhadap (Pdrb) Produk Domestik Regional Bruto Di Provinsi Nusa Tenggara Barat Tahun 2015-2019. Jurnal Kompetitif : Media Informasi Ekonomi Pembangunan, Manajemen Dan Akuntansi, Vol. 8.

Syafi'i, I., Syakur, F. A., & Wibowo, M. G. (2021). Pengaruh Utang Luar Negeri, Inflasi, dan Pendapatan Negara terhadap Pertumbuhan Ekonomi: Studi di 6 Negara Asean. WELFARE Jurnal Ilmu Ekonomi, 2(1), 36–43. https://doi.org/10.37058/wlfr.v2i1.2672

Tambunan, T. (2005, May). The impact of Foreign Direct Investment on poverty reduction: A survey of literature and a temporary finding from Indonesia. In consultative meeting on "Foreign Direct Investment and Policy Changes: Areas for New Research", United Nations Conference Centre, Bangkok, Thailand (pp. 12-13).

Tambunan Tulus, 2011, Perekonomian Indonesia Kajian Teoritis dan Analisis Empiris, Ghalia Indonesia IKAPI.

Todaro, Michael P and Stephen CS 2000 Economic Development in the Third World Seventh Edition Jakarta: Erlangga

Todaro M.P.& Smith S.C. (2003), "Economic Development", Business & Economics ,829; Addison Wesley

Todaro, M, 2005. Economic Development, 9th Edition, Addison-Wesley Publishers

UNDP (2004). Human development report 2004: Cultural liberty in today's diverse world. New York: Oxford University Press

Utomo, P. (2020). Kesiapan Sumber Daya Manusia (Tenaga Kerja) Bidang Konstruksi di Indonesia Menghadapi Masyarakat Ekonomi Asean. Jurnal Ilmiah Ilmu Hukum Qistie, 57(November), 85–97. https://publikasiilmiah.unwahas.ac.id/index.php/QISTIE/article/view/1066

Wahyudin, D., & Yuliadi, I. (2013). Determinan Pertumbuhan Ekonomi Di Daerah Istimewa Yogyakarta, Indonesia. Jurnal Ekonomi & Studi Pembangunan, 14(2), 120-126.

Yuliadi, I. (2007). Analisis Hutang Luar Negeri Indonesia Pendekatan Keseimbangan Makroekonomi. EKUITAS (Jurnal Ekonomi dan Keuangan), 11(4), 535-551.

Yunita Mahrany. 2012. Pengaruh Indikator Komposit Indeks Pembangunan Manusia terhadap Pertumbuhan Ekonomi di Sulawesi Selatan. Skripsi: Sarjana Fakultas Ekonomi dan Bisnis Universitas Hassanudin, Makassar.

Zhang, L., Jhingan, A., & Castellino, F. J. (1992). Role of individual gamma-carboxyglutamic acid residues of activated human protein C in defining its in vitro anticoagulant activity.