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Original Article

Analyzing the Impact of Foreign Direct Investment, Money Flow Dynamics, and Inflation on Economic Growth: Evidence from Special Economic Zones

Andriansyah Andriansyah [a,*], Erlina Erlina [a], Amlys Syahputra Silalahi [a], Isfenti Sadalia [b] and Rico Nur Ilham [c]

[a] Doctoral Program of Management, Faculty of Economics and Business, Universitas Sumatera Utara, Medan Baru, 20222 Kota Medan, Sumatera Utara, Indonesia; erlinaroesli@yahoo.co.id (E.E.); amlys.silalahi@gmail.com (A.S.S.)
[b] Faculty of Vocational, Universitas Sumatera Utara, 20155 Medan Baru, Kota Medan, Sumatera Utara, Indonesia; isfenti@usu.ac.id (I.S.)
[c] Department of Management, Faculty of Economics and Business, Universitas Malikussaleh, Blang Pulo, 24353 Muara Satu, Lhokseumawe, Aceh, Indonesia; riconurilham@unimal.ac.id (R.N.I.)
* Correspondence: andri.andriansyah.12@gmail.com (AA.)

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Abstract

Establishing robust Special Economic Zones within the determined territorial boundaries of the Republic of Indonesia is crucial for attracting increased investments, fostering industrial growth, and optimizing economic activities with high value, propelling the nation's economic development forward. This study determines the effects of foreign direct investment, velocity of money, and inflation on economic growth in Indonesian Special Economic Zones. This time series approach involves 35 years of data collected from the Central Bureau of Statistics Indonesia. The result indicates that foreign direct investment and money velocity significantly affect economic growth. Besides that, inflation does not affect economic growth. In conclusion, this study has successfully identified the factors influencing economic growth. Also, this study found that inflation does not significantly affect economic growth in Indonesia's Special Economic Zones.

1. Introduction

Increasing investment to accelerate national economic development is necessary by preparing areas with economic and geostrategic advantages. The area is prepared to maximize industrial activities, exports, imports, and other economic activities with high economic value. Special Economic Zones have certain territorial boundaries and are in the jurisdiction of the Republic of Indonesia, determined by the State. This special zone is prepared to run the wheels of the economy by obtaining privileges with certain facilities. The term Special Economic Zones has recently received much attention. The global economic market demands competition between countries in and from all aspects, including economic aspects, and makes Special Economic Zones prepared for Indonesia to face the single market. Special Economic Zones (SEZ) is one of the Indonesian government's strategies for realizing the vision of national development.

According to Law Number 39 of 2009 on Special Economic Zones (SEZ), Special Economic Zones are certain economic zones where special provisions in customs, taxation, licensing, immigration, and employment apply. The purpose of developing this SEZ is to provide a high enough opportunity to increase investment through preparing areas with advantages and ready to accommodate industrial activities, export-import, and economic activities with high economic value for the community. Indonesia will try to attract investors to invest in SEZ by providing various special facilities, such as granting business licenses, relaxation of environmental permits, customs regulations, taxation, and trade services.

Special Economic Zones (SEZ) can be one of the solutions to boost the national economy, not just an infrastructure program being boosted by the government in power. However, it can be used as a program for national development needs. Thus, the current and future governments will continue to implement and develop the SEZ program and create a multiplier effect for the economy and welfare of the Indonesian people. There are many reasons underlying Indonesia's need for investment. This capital is used to expand employment, develop import substitution, grow exports, transfer technology, build infrastructure and facilities, and develop underdeveloped areas. However, increased economic growth is Indonesia's main reason for inviting foreign investors to invest in Indonesia.

The development of this Special Economic Zone (SEZ) takes advantage of its coastal tourism potential and has another similar potential, i.e., the maritime sector. The local government has supported this for its area development plan to improve the local economy in the fisheries sector. The development of marine sector activities in Pangandaran is a form of government intervention in structuring the area for the marine sector because it still has poor quality management. Pangandaran is also one of the settlements where most of the population is dominated by fishermen. The potential for the tourism and marine sectors can improve the regional economy. Thus, in carrying out development plans, it must be linked to empowering coastal communities. In this case, developing the tourism and marine sectors can be started with an approach to local coastal communities.

Stakeholders or activity actors must be involved in carrying out the development plan for Special Economic Zones. The role of these stakeholders is needed to optimize the implementation of development, one of which is in the tourism sector. One of the stakeholders who play a role in tourism development is the government. However, according to Rachmawati et al. (2021), the government has certain limitations, namely financial limitations, technical limitations, and limited program reach. Therefore, the role of stakeholders outside the government is needed to implement tourism development. Tourism development should be able to bring government elements closer to community elements or can be called a bottom-up approach. The development of tourism activities is inseparable from the role of stakeholders to play an active role in developing tourism activities. Because as the party most affected by regional development, the community must be protected from various development pressures and coercion legitimized by a bureaucracy they do not understand. In the development process, the community is not the object of space utilization. Still, they are the main actors and beneficiaries who should be involved in utilizing space from the beginning to the end.

As a know that binds investment and regional potential, SEZs in operation are expected to impact the regional/national economy significantly. For example, Sei Mangkei SEZ, located in Bosar Maligas District, Simalungun Regency, North Sumatra Province, is expected to be able to increase regional/national economic output by IDR 92.1 trillion. The Bitung SEZ operated in Semester I 2019 to generate an output increase of IDR 124 trillion for the regional economy by 2025.

On the other hand, Bitung SEZ, which is both industrial-based and relies on coconut processing and fisheries, is expected to increase the regional/national economy by IDR 92.1 trillion. Likewise, the Morotai SEZ, projected to operate in the same semester, is expected to increase output by IDR 1,452 trillion to the national economy by 2025. Conditions that are not much different also occur in tourism-based SEZs. As a knot for acceleration, the Tanjung Lesung SEZ, inaugurated in 2012, is expected to have a fantastic impact of IDR 16 trillion on the regional/national economy. It's the same with Mandalika SEZ and Tanjung Kelayang SEZ. Mandalika is in Pujut District, Central Lombok Regency, West Nusa Tenggara Province. This SEZ is expected to contribute IDR 7.5 trillion in foreign exchange annually and increase GDP by IDR 16.96 trillion when fully operational in 2025. Meanwhile, Tanjung Kelayang, in Belitung Regency, Bangka Belitung Islands Province, is expected to increase GDP by IDR 1.3 trillion to the regional economy in 2022.

Table 1. Achievements of Investment Realization and Planning Per Special Economic Zones

Special Economic Zones	Investment Commitment (Billion IDR)	
Sei Mangkei	7,777	4,675
Tanjung Lesung	2,281,5	1,040,9
Mandalika	1,961	233,97
Palu	7,777	4,675
Bitung	6,965	168,85
Morotal	1,143	200
Tanjung Api – Api	13,416	74
MBTK	800	800
Tanjung Kelayang	839	839
Sorong	5,025	91
Arun Lhokseumawe	8,188	12
Galang Batang	36,250	7,148,87
Total	104,546	17,701

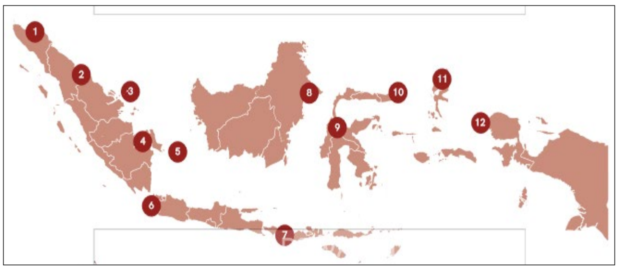

Figure 1. Map of Special Economic Zones in Indonesia

SEZ development targets consist of several things. Firstly, increasing investment through preparing areas that have geo-economics and geostrategic advantages. Secondly, optimizing industrial activities for exports, imports, and other economic activities with high economic value. Third, accelerating regional development by developing new economic growth centers to balance development between regions and, finally, realizing a breakthrough model for regional development for economic growth, including industry, tourism, and trade, to create jobs. The commitment of the Indonesian government is clear because, in recent times, SEZ has experienced rapid development.

Groundbreaking has been carried out in several SEZs, which are still under construction. The Lido SEZ carried out the groundbreaking on 8 September 2021. Then, on 14 October 2021, PT. Freeport Indonesia's groundbreaking was done in Gresik SEZ. In addition, World Superbike at Mandalika SEZ was held on 19-21 November 2021. With the SEZ, Indonesia is expected to save the country's foreign exchange, create jobs, and attract foreign and domestic investment. SEZ development is important to highlight the advantages of each region so that investment in Indonesia can be more evenly distributed.

2. Literature review

2.1. Foreign direct investment

According to the Law of the Republic of Indonesia Number 1 of 1967, it is explained that investment only includes direct foreign investment based on the law and direct capital owners who bear the risk. (Sarwedi, 2002) defines Foreign Direct Investment (FDI) as an international capital flow in which a company from a certain country can establish or only expand its existing company in the investment destination country.

2.2. Velocity of money

According to Irving Fisher's theory (Fisher, 2009), acceleration of money is a concept for calculating money supply transactions (M) associated with the price level (P) and aggregate output (Y). Velocity of money (V) can be interpreted as the average transaction times per year of one unit of currency used to buy or the total goods and services produced in the economy. In other words, the acceleration of money can show how many times the money rotates in a certain period. The usefulness of modern quantity theory depends on the stability and predictability of velocity. Small changes in the unpredictable Velocity of Money can undermine the ability of the exchange equation to predict nominal GDP (McEachern & Triandaru, 2000)

2.3. Inflation

Sukirno (2011) defines inflation as an increase in general and continuous goods prices. Meanwhile, Natsir (2014) defines inflation as a tendency to continuously increase the prices of goods and services.

2.4. Economic growth

Amalia et al. (2022) define economic growth as an increase in GDP/GNP regardless of whether the increase is greater or smaller than population growth or whether there has been a change in the economic structure. A country's economy is said to be experiencing growth if the real remuneration for the use of factors of production each year is greater than in previous years. Thus, economic growth can be interpreted as an increase in the physical production capacity of goods and services within a certain period (Prasetyo, 2009).

3. Materials and Methods

This study is designed using a quantitative approach through time series analysis. According to Fachruddin (2009), the research design is a framework of work procedures that will be carried out when researching. It is expected to provide an overview and direction and an overview of the completed and implemented research. This study uses a quantitative research type, i.e., whose specifications are systematic, planned, and structured from the start to the creation of the research design. Sugiyono (2013) states that quantitative research methods based on positivism are used to examine certain populations or samples, collect data using research instruments, analyze quantitative/statistical data, and aim to test the established hypothesis. The data of this study was collected from the Central Bureau of Statistics Indonesia for 35 years and analyzed using regression techniques.

4. Results and Discussions

4.1. Classical assumptions

The classical assumption tests with the SPSS 25.00 program used in this study include:

4.1.1. Normality test

The Normality Test aims to test whether, in the regression model, the confounding or residual variables have a normal distribution (Ghozali, 2016). Data normality testing can be done using two methods: graphics and statistics.

Table 2. One Sample Kolmogorov Smirnov Test

			Unstandardized Residual
N			34
Normal Parameters[a,b]	Mean		0.000
	Std. Deviation		1.767
Most Extreme Differences	Absolute		0.132
	Positive		0.081
	Negative		-0.132
Test Statistic			0.132
Asymp. Sig. (2-tailed)			0.141[c]
Monte Carlo Sig. (2-tailed)	Sig.		0.549[d]
		Lower Bound	0.536

		Unstandardized Residual
99% Confidence Interval	Upper Bound	0.561

All variables' significance value (Monte Carlo Sig.) is 0.549. The residual value is normal if the significance is more than 0.05. Thus, it can be concluded that all variables are normally distributed.

4.1.2. Multicollinearity test

The multicollinearity test aims to determine whether there is a correlation between the independent variables in the regression model. The multicollinearity test was identified from the tolerance value or variance inflation factor (VIF).

Table 3. Results of the Multicollinearity Test

	Collinearity Statistics	
	Tolerance	VIF
(Constant)		
Foreign Direct Investment	0.815	1.226
Velocity of Money	0.892	1.121
Inflation	0.746	1.341

The tolerance value of the foreign direct investment is 0.815, the velocity of the money is 0.892, and the Inflation variable (X3) is 0.746, where all are greater than 0.10. Meanwhile, the VIF value of the foreign direct investment is 1.226, the velocity of the money is 1.121, and the inflation is 1.341, all of which are less than 10. On the basis of the calculation results above, the tolerance value of all independent variables is greater than 0.10, and the VIF values of all independent variables are also less than 10, so there are no multicollinearity symptoms in the independent variables. Thus, it can be concluded that there are no symptoms of multicollinearity between independent variables in the regression model.

4.1.3. Heteroscedasticity test

The heteroscedasticity test aims to test whether, from the regression model, there is an inequality of variance from the residuals of one observation to another. A good regression model has homoscedasticity or does not have heteroscedasticity.

Table 4. Result of Glejser Test

	Unstandardized Coefficients		t	Sig.
	B	Std. Error		
(Constant)	2.112	2.034	1.038	0.307
Foreign Direct Investment	-0.159	0.132	-1.205	0.238
Velocity of Money	-0.063	0.214	-0.294	0.771
Inflation	0.134	0.206	0.649	0.521

Table 4 captures the results of the Glejser test. The result shows that the sig value of the Direct Investment variable (X1) is 0.238, the velocity of the Money variable (X2) is 0.771, and the Inflation variable (X3) is 0.521, where both are greater than 0.050. Thus, it can be concluded that there are no symptoms of heteroscedasticity.

4.2. Multiple linear regression test

Linear regression testing explains the role of the independent variables on the dependent variable. Data analysis in this study used two linear regression equations using SPSS 25 for Windows.

Table 5. Result of Multiple Linear Regression

	Unstandardized Coefficients		t	Sig.
	B	Std. Error		
(Constant)	8.684	2.008	4.325	0.000
Foreign Direct Investment	0.276	0.070	3.931	0.000
Velocity of Money	0.341	0.083	4.099	0.000
Inflation	0.060	0.081	0.741	0.461

Table 5 displays the result of multiple linear regression. The linear regression equation has the formulation: $Y = b + b_1X_1 + b_2X_2 + b_3X_3 + \varepsilon_1$, so the equation is obtained: $Y = 8{,}684 + 0{,}276X_1 + 0{,}341X_2 + 0{,}060X_3$.

4.2.1. coefficient of determination (R^2)

The coefficient of determination is used to see how much the independent variable contributes to the dependent variable. The greater the coefficient of determination, the better the ability of the independent variable to explain the dependent variable. If the determination (R2) is greater (closer to 1), it can be said that the effect of variable X is large on variable Y.

Table 6. Result of Coefficient of Determination

R	R Square	Adjusted R Square	Std. Error of the Estimate
0.452[a]	0.205	0.125	1.853

a. Predictors: (Constant), Inflation, Foreign direct investment, Velocity of Money
b. Dependent Variable: Economic Growth

The value of the adjusted R square is 0.125 or 12.5%. It shows that the foreign direct investment, velocity of money, and inflation can explain the economic growth of 12.5%. The remaining 87.5% (100% - 12.5%) is explained by other variables.

4.2.2. T-test (Partial)

The t-test is also known as the individual significance test. This test shows how much the effect of the independent variables is partially on the dependent variable. Using Table 5, the hypothesis test of the effect of foreign direct investment on economic growth obtained a t_{table} value of 2.039. From this description, t_{stat} (3.931) > t_{table} (2.039), likewise with a significance value of 0.000<0.05. Thus, it can be concluded that the first hypothesis is accepted, meaning that foreign direct investment affects economic growth.

The hypothesis test of the influence of the velocity of money on economic growth obtained a t_{table} value of 2.039. Also, t_{stat} (4.099) > t_{table} (2.039), as well as a significance value of 0.000 > 0.05. Thus, it can be concluded that the second hypothesis is accepted, meaning that the Work Commitment variable (X2) affects the Economic Growth variable (Y). The Hypothesis Test of Inflation Variable Effect (X3) on Economic Growth Variable (Y) obtained a t_{table} value of 2.039. Moreover, t_{stat} (0.741) < t_{table} (2.039), likewise with a significance value of 0.461 > 0.05. Thus, it can be concluded that the third hypothesis is rejected, meaning that inflation does not affect economic growth.

4.2.3. F-test (Simultaneous)

This test shows whether all the independent variables included in this model have a joint effect on the dependent variable.

Table 7. Results of Simultaneous Test (ANOVA[a])

	Sum of Squares	df	Mean Square	F	Sig.
Regression	78.996	3	26.332	12.912	.000[b]
Residual	103,052	30	3,435		
Total	129,559	33			

Table 7 shows the result of the simultaneous test. The F-table value obtained was 2.92. This study found that F-stat (12.912) > F-table (2.92) and a significance value of 0.000 < 0.05. Thus, it can be concluded that the fourth hypothesis is accepted, meaning that foreign direct investment, money velocity, and inflation significantly affect economic growth.

5. Conclusions

This study concludes that foreign direct investment and money velocity significantly affect economic growth. Besides that, inflation does not affect economic growth.

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References

Amalia, F., Sinaga, R., Soeyatno, R. F., Silitonga, D., Solikin, A., Hubbansyah, A. K., Siregar, R. T., Maulina, D., Kusumaningrum, R., & Sahamony, N. F. (2022). *Ekonomi pembangunan*. Penerbit Widina.

Fachruddin, I. (2009). *Desain penelitian*. Universitas Islam Negeri.

Fisher, A. (2009). *Berpikir kritis sebuah pengantar* (4th ed.). Erlangga.

Ghozali, I. (2016). Aplikasi Analisis multivariete dengan program IBM SPSS 23 (Edisi 8). *Cetakan Ke VIII. Semarang: Badan Penerbit Universitas Diponegoro*, *96*.

McEachern, W. A., & Triandaru, S. (2000). *Ekonomi Makro: Pendekatan Kontemporer*. Salemba Empat.

Natsir, B. (2014). *Ekonomi Moneter dan Kebanksentralan*. Mitra Wacana Media.

Prasetyo, P. E. (2009). Fundamental makro ekonomi. In *Yogyakarta: Beta Offset*. Beta Offset.

Rachmawati, V., Widodo, J. S., Wijaya, M. E., & Hirawan, F. B. (2021). Community-based tourism: natural resource management to improve social resilience in Pasir Eurih Village. *IOP Conference Series: Earth and Environmental Science*, *771*(1), 1–10. https://doi.org/10.1088/1755-1315/771/1/012042

Sarwedi, S. (2002). Investasi Asing Langsung Di Indonesia Dan Faktor Yang Mempengaruhinya. *Jurnal Akuntansi Dan Keuangan*, *4*(1), 17–35.

Sugiyono, D. (2013). *Metode penelitian pendidikan pendekatan kuantitatif, kualitatif dan R&D*. Alfabeta.

Sukirno, S. (2011). Makro ekonomi teori pengantar edisi ketiga. In *Rajawali Pers, Jakarta*. Rajawali Pers.