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The Effect Of The Financial Crisis On Export Competitiveness In Indonesia

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Abstract

The study aims to investigate inflation and exports, and interest rates with a research period from 1990 to 2021. VECM (Vector Error Correction Model) is the analytical technique have been used to ascertain the vector causality link between variables. Utilized secondary data in this investigation. Obtained using official World Bank statistics. We discovered that strengthening the rupiah currency rate is only marginally positively impacted by increasing competition in Indonesian exports. However, inflation in Indonesia significantly depresses the currency exchange rate which has a pressing upon suppressing how much exports can value. This is because the rupiah exchange rate significantly boosts exports. When inflation depresses the value of the rupiah, it has a great effect on its suppression in terms of the rupiah exchange rate which continues to suppress Indonesia's export competitiveness.

Keyword : Export, Inflation, Interest Rate, Vector Error Correction Model.

JEL Classification : C01, E24, J24, P18

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Introduction

The financial crisis experienced by various countries has destructively damaged the joints of the economy (Bawono, Zainuri, & Wilantari, 2019). Mexico was in a crisis in 1994 and 1995 (Ibarra, C. A., & Ros, 2019), while Asian countries, including Indonesia, were in a fairly severe crisis in 1997 and 1998. (Sasongko, Bawono, & Prabowo, 2021). At almost the same time, in 1998 Russia also experienced a crisis (Barinova & Zemtsov, 2020). The same thing happened in Brazil in 1999 (Nassif, Feijó, & Araújo, 2020), In 2001 Argentina and Turkey experienced the same thing, namely the financial crisis (Singh, & Dsouza, 2022). This prompts a lot of inquiries as well as concerns that a repeat of this crisis will occur. The precise location, timing, and magnitude of the impact are not yet known (Romagosa, 2020).

The crisis that hit resulted in a slowdown in the economy, especially in developed countries, which in turn resulted in a decrease in both international and domestic demand. Because there is a shortage of export growth, businesses typically cut their output (Rajput, Changotra, Rajput, Gautam, Gollakota, & Arora, 2021). The financial crisis's impact indirectly resulted in a decrease in liquidity, an increase in interest rates, a decrease in commodity prices, a weakening of the exchange rate, and a weakening of growth in sources of funds (Liu & Lee, 2022). This also led to a decrease in consumer, investor and market confidence in various financial companies, which weakened the capital market (Lins, Servaes, & Tamayo, 2019). Most major economies have been badly shaken by the crisis, and amid this extreme situation, consumer and business confidence could shrink (Shafi, Liu, & Ren, 2020). Many households cut their spending mainly on the consumption of manufactured goods and resulting in a decline in global industrial production (Lu, Peng, Wu, & Lu, 2021). Existence of the world economic crisis a tremendous effect various industries, was among which was on global trade (Evenett, 2019).

A nation engages in foreign trade as a means of sustaining its economic. In an effort to ensure that the population has access to goods and services, countries around the world constantly engage in foreign trade, which includes exports and imports (Viphindrartin & Bawono, 2021). Every nation produces goods that are excellent and effective because can be exported to other nations. Exports support the economy of a country, including Indonesia. Exports have an important role in the economy (Daulika, Peng, & Hanani, 2020).

Indonesia as a country that adheres to an open economy also conducts trade relations with various countries in the world to sell excess products and buy shortages of products that the country needs (Kusumasari, 2020). Economic relations between countries are factors that influence the economic development of each country (Zafar, Shahbaz, Hou, & Sinha, 2019). This condition causes competitiveness as one of the factors that determine competition between countries in order to benefit from the opening of international trade (Radović-Marković, Salamzadeh, & Vujičić, 2019). The rupiah exchange rate (exchange rate) is very influential on Money enters Indonesia in foreign currencies as a result of export-related activity and transactions (Nurwulandari, Hasanudin, & Budi, 2021). The study aims to investigate exports, inflation, interest rates.

Literatur Review

The estimation results illustrate which in the near future changes in the rate of exchange have a negative effect on Indonesian exports (Sugiharti, Esquivias, & Setyorani, 2020). The global financial crisis significantly affected several companies in eastern Europe. This can be seen from the lack of limited financial flexibility and liquidity (Notteboom, Pallis, & Rodrigue, 2021).

The production value has a significant positive effect and inflation has an insignificant negative effect on exports in Indonesia. This means that every production will increase along with an increase in its total value of exports and every increase in the inflation rate will reduce the value of exports in Indonesia (Simamora & Widanta, 2021). The production value has a significant positive effect and inflation has an insignificant negative impact on Indonesia's economic expansion. As a result, every rise in production will also produce a rise in economic growth and the rise and fall of inflation is inversely proportional to the rise and fall of speed rate of industrial

growth (Nabila & Anwar, 2021). Rate of exchange between Rupiah and USD had such a significant and positive effect on the volume of Indonesia's tobacco exports in 1990-2019. This results as every decrease in rupiah ratio against the USD increase the volume of Indonesian tobacco exports (Salim, Susilastuti, & Murti, 2021).

Exports of Indonesian coffee to the United States are positively and significantly impacted by the Gross Domestic Product (GDP) and exchange rate of the country. On the other hand, coffee prices and coffee production do not have a significant effect (Sihombing, Supriana, & Ayu, 2020). The global financial crisis significantly affected several companies in eastern Europe. This can be seen from the lack of limited financial flexibility and liquidity (Batuman, Yildiz, & Karan, 2022). The financial crisis in Nigeria occurred due to a decline in supply for oil-related products and social distancing policies imposed because of the Covid-19 virus. This resulted in the government reacting to the emergency by giving enterprises and a small number of households virus-related corona impacts (COVID-19) epidemic cash aid. This endeavor should have existed to stop the economic disaster from happening, but it did not. Economic players are prohibited from freely engaging in economic activity for worry of contracting the then widely dispersing COVID-19 illness (Ozili, 2020).

Research Method

In this investigation, we investigate exports, interest rates and inflation with a study period from 1990 to 2021. We use VECM (Vector Error Correction Model) is the analytical technique ascertain the vector causality link between variables. The research used source of data. Source of data obtained from the world bank, according to Table 1.

Table 1. Description and Variables

Variabel	Deskripsi	Resource
Exsपोर्ट	Export is the process of transporting goods or commodities from one country to another.	World Bank
Rate of Interest	Rate of Interest is the difference between the interest rates that commercial or similar banks pay on demand deposits, time deposits, or other similar deposits and the interest rates that banks charge on loans to private sector customers. savings.	World Bank
Inflation	An ongoing, general increase in the cost of goods and services is referred to as inflation in about a specific time frame.	World Bank

This study uses a quantitative method with the VECM (Vector Correction Model) method with the following equation:

$$\text{Exp}_t = \beta_0 + \beta_1 \text{Inf} + \beta_2 \text{Irs} + e_t$$

$$\text{Inf}_t = \beta_0 + \beta_1 \text{Exp} + \beta_2 \text{Irs} + e_t$$

$$\text{Irs}_t = \beta_0 + \beta_1 \text{Inf} + \beta_2 \text{Exp} + e_t$$

Description :

Exp: Expor

Inf: Inflasi

Irs: Interest rate

e : error term

β : Constant

t : Time period

Results and Discussion

Before analyzing the VECM model, we must first perform a Stationary-lag Uptimun test-Stability Test-Cointegration test and then we can perform VECM modeling. Here are the test results in the order above:

Table 2. Root Test Results

Variabel	Unit Root	Statistic For The ADF	Probability	Information
Ekspor	1 st difference	-8.323436	0.0000	Stationary
Inflasi	1 st difference	-6.682606	0.0000	Stationary
Suku Bunga	1 st difference	-6.526733-	0.0000	Stationary

In the Stationarity Test at the first difference level for the variables of exports, inflation and interest rates are already stationary. Where the inflation and exchange rate variables have a prob value <0.05. Therefore, all data variables are not moving and the 1st difference level, the next step in VECM estimation can be carried out, namely determining the optimal lag length.

Table 3. Optimum Lag Test Results

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-250.3048	NA	4330.472	16.88699	17.02711	16.93181
1	-225.7813	42.50748	1545.722	15.85209	16.41256	16.03139
2	-202.7279	35.34849*	618.8326*	14.91519*	15.89603*	15.22897*

From the table above, it can be seen that the optimal lag length lies in lag 2, with the highest sequential modified LR test statistic, which is 35.34849. Therefore, The ideal latency employed in this research is lag 2.

Table 4. Stability Test Results

Root	Modulus
0.765447 - 0.253607i	0.806366
0.765447 + 0.253607i	0.806366
-0.181863 - 0.602868i	0.629702
-0.181863 + 0.602868i	0.629702
0.152910 - 0.506831i	0.529395
0.152910 + 0.506831i	0.529395

In Table 4, in the Var estimation test, all of the roots have a modulus < 1 so that the data in the Var estimation test is stable.

Table 5. Cointegration Test Results

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None*	0.650330	40.27072	24.27596	0.0002
At most 1	0.270966	9.798525	12.32090	0.1277
At most 2	0.21608	0.63349	4.129906	0.4867

Considering the outcomes of the cointegration exam on the table 5, it can be explained which is probability value in the None row is with a probability of 0.0002, which is <0.05, which means that there is a cointegration equation that has a long-term balance. Therefore, the VECM estimation in this study can be used and the VECM stability test can then be carried out. Testing data through the Vecm test obtained the following results:

Table 6. VECM estimation

Error Correction:	D(EXPORTS)	D(INFLASI)	D(IRS)
CointEq1	0.840528	2.215667	-0.268201
	(0.29755)	(0.52739)	(0.12343)
	[2.82484]	[4.20120]	[-2.17282]
D(EXPORTS(-2))	-0.393927	-0.393927	0.148773
	(0.30845)	(0.54671)	(0.12796)
	[-1.27711]	[-1.28207]	[1.16268]
D(INFLASI(-2))	0.693717	1.392387	-0.210149
	(0.35998)	(0.63804)	(0.14933)
	[1.92710]	[2.18228]	[-1.40725]
D(IRS(-2))	0.713001	2.749322	-0.695942
	(1.00885)	(1.78813)	(0.41851)
	[0.70674]	[1.53754]	[-1.66290]

To compare the t-statistics with the coefficient values to see whether the significance of the relationship between variables must know how many t-tables are. Where if the t- statistic value higher than in the coefficient importance, its relationship was significant.

Table 7. Results of the Granger Causality VECM Test

Incorrect Theory:	Obs	F-Statistic	Probabilitas
INFLASI does Granger Cause not IRS	30	3.51838	0.0450
IRS does Granger Cause not INFLASI		0.98606	0.3871
EXPORTS does Granger Cause not IRS	30	0.70183	0.5052
IRS does Granger Cause not EXPORTS		1.73797	0.1965
EXPORTS does Granger Cause not INFLASI	30	1.63505	0.2151
INFLASI does Granger Cause not EXPORTS		2.26837	0.1244

Based here on Granger Causality exam's conclusions in the table:

The fact of inflation significantly has an impact on the interest rates and probability worth of $0.0450 > 0.05$, and also interest rates do not significantly affect inflation, with a probability value of $0.03871 > 0.05$. Therefore, it can be said that there is one-way, only inflation, which has an impact on interest rates. It is known that exports do not significantly affect interest rates, with a probability worth of $0.5052 > 0.05$, and also interest rates do not significantly affect exports, with a probability value of $0.1965 > 0.05$. Therefore, it can be seen that there are no 2 different causal relationship involving Interest rates as well as exports. It is known that exports do not significantly affect inflation, with a probability value of $0.2151 > 0.05$, and also that increase does not significantly affect exports with a probability value of $0.1244 > 0.05$. It can be seen that there is no bidirectional causality between exports and inflation.

Conclusion

Increased competition in Indonesian exports has an insignificant positive greatly affect upon it strengthening the rate of exchange for the rupiah. However, inflation in Indonesia significantly depresses the value of the rupiah which does have an effect suppressing a export value. This is because the rupiah exchange rate significantly boosts exports. When inflation depresses the value of the rupiah, it have an affect in the suppression the rate exchange for the rupiah which continues to suppress Indonesia's export competitiveness.

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