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Will the US-China Trade War's Abnormal Returns From China Have an Effect on the Chinese Economy?

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Abstract

This studies objective is to look at China's abnormal return in the event of a tariff war between the US and China. Data categories that are quantitative, or that can be expressed as numbers or ratos, are used in this study and uses utilizes auxiliary data sources in the form of historical data from all countries recorded on the data.worldbank.org website. The kind of data used is annual data series and will be adjusted to the factors affected by the tariff war between America and China. The VAR Analysis Model through the ADF Unit Root Test using the variables GDP, Tariff (TAX), and Exchange Rate (REX) in China from 1990 to 2021 is one of the data analysis strategies utilized in this study. We found that China's GDP is significantly positively to the Chinese exchange rate. Both China's own exchange rate and its tariffs are significantly influenced favorably by China's exchange rate. The tariffs applied by China have a significant negative correlation, which means that the increase in China's tariffs injures China's own economy. However, the rate at which the Chinese currency is exchanged and tariffs in China are significantly positively correlated. The trade war with the USA is not only bad for the global economy but also bad for the Chinese economy. And likely get a detrimental effect into the US economy.

Keywords: Tariff War, Exchange Rate, America, China
Jel Classification: F13, F15, F18

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Introduction

A trade war is a conflict that occurs in the economy between two or more countries by involving trade tariffs with one another. The resulting trade confrontation in China and the United States has a detrimental effect on the world market, because both countries are giant economies

(Sasongko, Bawono, & Prabowo, 2021). The consequences of the trade conflict is almost experienced by various countries, especially developing countries. The impact of the tariffs imposed most worrying effect with a trade dispute the global recession (Steinbock, 2018). In addition to the negative impact, the trade war is an opportunity and a challenge for the Indonesian state to take over exports to the two countries (Nugroho, Irawan, & Amaliah, 2021). The Americas and China were involved in a trade war that began in early 2018 when the then-US President raised import duties on goods imported from China (Carvalho, Azevedo, & Massuquetti, 2019). From the incident of increasing import duties for Chinese goods to the US, the Chinese government firmly took countermeasures by increasing import duties on 128 US products (Sundoro, 2020).

The The United States and China's trade war has actually result in global economic chaos. Many countries have been harmed by the trade dispute, particularly developing economies. The war's impacts have had a very significant influence. wide because of the fact that the relevant nations are worldwide largest economic countries (Wilantari & Bawono, 2021). The most significant impact is the weakening of foreign investment interest in Indonesia due to uncertain turmoil, Indonesia has the possibility of exporting goods to two nations, Indonesia could climb to third place for some products made in China or America, declining exports of raw materials Indonesia America and China and it was a trade interruption that Indonesia could maximize, this happened due to the intensive reduction in tariffs (Anggraeni, 2019). The use of tariffs is the right of a country with the principle of reciprocity between countries and should not be discriminatory (Adolf, 2016). However, with the China and the US is fighting a trade dispute, it has such a broad influence on the economies of developing countries, especially Indonesia, even though in the WTO there are several principles that protect the interests of developing countries (Pangestu, 2019).

The US-China tariff war has a net loss effect in three countries: China, the United States, and Canada (Guo, Lu, Sheng, & Yu, 2018). The results show the broad impact of China's tariffs in the international soy industry, include areas not a direct involvement in the a trade conflict. The US-China imposition war has a significant effect on developing countries by causing welfare losses and creating economic inefficiencies (Sabala, & Devadoss, 2019). However, fluctuations in the exchange rate also have an impact on slowing global economic growth (Bawono, Zainuri, & Wilantari, 2019). If trade conflicts continue to improve, not just consumers will experience rising disrupted input-output relationships in addition to prices relations and the business would be unstable further impacted some industry (Žemaitytė & Urbšienė, 2020). That investigation provides very crucial to policy makers given the probability impact of which tariff trading position. The success of this protectionist policy turned out to be highly dependent on the retaliation of trading partners.

Literature Review

China, the United States, and Canada all suffer net losses as a result of the US-China trade dispute. The results show the wide-ranging effects of Chinese tariffs on the global wheat market, particularly those in regions not immediately affected by the trade conflict. The US-China trade dispute has a significant impact on developing countries by causing welfare losses and creating economic inefficiencies. Brazil is one of the countries that did not get the the effects from the

tariffs, precisely with the trade war making Brazil a largest soybean producer in the world (Sabala, &Devadoss, 2019).

China is the world's largest exporter. The US-China trade dispute may both a potential for and a struggle for Indonesia's trade performance (Wijaya, Zunairoh, Eriandani, & Narsa, 2022). The international trade sector is one of the sources of foreign exchange in financing a country's development. From this sector, a country can rely on foreign exchange from exports and imports of goods (An, Mikhaylov, & Richter, 2020). In addition to influencing its economic growth, international trade is a way to increase the prosperity of a nation, namely based on the legal source "General Agreement on Tariffs and Trade" (Anderson, 2022). In export-import activities, member countries have the right to protect domestic products through the application of barriers in international trade, one of which is tariff barriers (Viphindrartin & Bawono, 2021). Tariff is a list of import duties or taxes imposed by the government on goods imported into a country, the imposed import duties can be ad valorem, specific, and mixed. In WTO terms, tariffs are also called custom duties (Malkawi, 2019). Tariffs can also be interpreted as taxes levied on goods transported from one political territory to another, in particular the tax on goods imported by one political power into another political area or the level of tax imposed on these goods. One of the aims of such an arrangement is to make the scope of the protection transparent and to reduce the trade distortion it creates (Wilantari & Assyami, 2021).

Economic growth is a very interesting macroeconomic variable for continuous empirical research. This is because Economic expansion is a sign of a nation's economic performance (Widarni, Drean, & Bawono, 2022). Economic growth that is vulnerable to shocks, both domestically and from abroad, has an impact on the instability of a country's economic performance, for example experiencing a recession, so it is necessary to implement appropriate measures to strengthen the resilience of the domestic economy (Prabowo, Sulisnaningrum, & Harnani, 2021). Research conducted by Xu & Donald (2020) is related to just the effect of the United States and China's trade dispute (US) both China on the dynamics of exchange rate dependence. This study uses the quantitative method of Generalized Autoregresive GAS score-driving and copula method. The results of just this project state the trade dispute amongst the China and the US has an influence on changing the currency dependence of China's main trading partner countries. In addition, fluctuations in the conversions also get an influence on the slow down in global economic growth.

The U.S.-China tariff war is taking a toll on the Chinese economy. Even though the retaliatory tariffs imposed by China by importing into the US did not show a significant effect on the recovery of the US-China tariff war (Muhammad & Jones, 2021). Thus, tariffs may cause Chinese firms to withhold investment in production capacity (Behuria, 2019). The dynamics of exchange rate dependency are significantly impacted by the trade conflict between the US and China. Impacts in the currency reliance of China's top trading partners are a result of the US-China trade conflict. (Ajami, 2020). In addition, fluctuations in exchange rates also have an impact on slowing global economic growth (Barguellil, Ben-Salha, & Zmami, 2018).

H1 = The world economy is significantly impacted by the US-China trade war.

H2 = The slowdown in the world economy is significantly influenced by exchange rates.

Research Method

The objective of the this study will be to determine China's abnormal return in the event of a tariff war between the US and China. In this study, numeric or ratio data are the quantitative data types used, and uses additional data sets in the form of historical data from all countries recorded on the data.worldbank.org website. The utilized data is in the shape of annual data sequence and will be adjusted to the factors affected by the tariff war between America and China. One of the data analysis techniques The VAR is utilized in this analysis. Analysis design through the ADF Unit Root Test with GDP, Tariff (TAX), and Exchange Rate (REX) variables in China from 1990 to 2021. This analysis was carried out to systematically describe the analysis of facts and the relationship between variables. The picture will then be analyzed by adjusting other facts that can be described clearly. Using the following equation:

$\Delta yt = \alpha et{-}1 + Q1\ \Delta yt{-}\ 1 + Q2\ \Delta yt{-}2 + \cdots + Qp\Delta yt{-}p{+}1 + st$ (1)

Where $et{-}1 = Yt{-}\ 1 - (\varphi + \omega Xt{-}1)$

Δyt : Vector of dependent variable

$\Delta yt{-}\ 1$: Vector of dependent variable with first lag

$et{-}1$: inaccuracy resulting from the regression formula across Y and X at lag-1

st : leftover triangle

α : matrix of cointegration values

βi : coefficient matrix of dependant element -i, where i = 1, 2, ..., p

Result and Discussion

Autoregressive analysis requires stationary data (Irawan, Sasongko, Mukhlis, Yanto, Wulandari, 2022 ; Harnani, Prabowo, Alim, Wulandari, 2022), so that for the beginning of the test we tested stationary data with the test results presented in table 1.

Table 1.ADF's Unit Root Test

Variable	Unit Root	Include in The Examination Equation	Statistic for the ADF Test	5% Critical Value	Description
GDP	Level	Intercept	-1.689354	0.4148	
	First Diff	Intercept	-3.707608	0.0183	Stationer
Tariff (TAX)	Level	Intercept	-6.653217	0.0003	Stationer
Exchange	Level	Intercept	-0.089108	0.9256	

Rate (REX)	First Diff	Intercept	-2.552604	0.1390	
	Second Diff	Intercept	-11.68746	0.0001	Stationer

The conclusion of all stationarity tests using the unit root test is that the three variables are stationary at different levels, including; GDP on the first level, Tariff on the second level, and REX on the second level. To be sure with the results obtained, do a unit root test with all three variables at once.

Table 2. Optimum Lag Test

Lag	LogL	LR	FPE	AIC	SC
0	-62.22338	NA	93.04246	13.04468	13.13545
1	-39.57501	27.17804*	6.981504	10.31500	10.67810
2	-17.63350	13.16491	1.242185*	7.726700*	8.362128*

Note: *) is a sign of uniqueness, if *) is at most in one lag than other lags. Because Lag 2 is the most unique, Lag 2 was chosen for the analysis of the VAR model. The output result is known that the value is at lag "2". LR, FPE, AIC, and SC all have the lowest values with a lag level of "2". The author does not use a lag above "2" even though the lag limit in this data is "2", if it is forced "3" then the stability test will be disturbed and if using a lag "4" or so on, a warning will appear as below. Therefore, the author does not use a lag of more than "3".

Table 3.VAR Model Analysis

	GDP	REX	TARIFF
GDP	-0.598989	0.133647	-1.013899
	(0.35145)	(4.96966)	(0.42039)
	[-1.70434]	[0.02689]	[-2.41181]
REX	-0.018147	0.707146	-0.201436
	(0.04358)	(0.61618)	(0.05212)
	[-0.41645]	[1.14764]	[-3.86463]
TARIFF	-0.671190	1.838404	1.440295
	(0.15237)	(2.15462)	(0.18226)
	[-4.40493]	[0.85324]	[7.90237]
C	41.17699	-9.540024	4.487264
	(7.69595)	(108.824)	(9.20555)
	[5.35048]	[-0.08766]	[0.48745]
R-squared	0.966946	0.786320	0.993910
Adj. R-squared	0.900837	0.358960	0.981729

Sum sq. resids	0.378194	75.62088	0.541115
S.E. equation	0.355056	5.020653	0.424702
F-statistic	14.62663	1.839946	81.59795
Log likelihood	2.185282	-24.30512	0.394158
Akaike AIC	0.962944	6.261024	1.321168
Schwarz SC	1.174753	6.472834	1.532978
Mean dependent	9.475278	93.96920	12.39500
S.D. dependent	1.127514	6.270722	3.141989

GDP has a positive relationship to REX with cointegration 0.133647 and t-statistic 0.02689. That is, economic growth has a prosperous connection on the discussion rate. China's GDP is significantly positively related to the Chinese exchange rate. China's currency rate has a very favorable impact. impact on China's own exchange rate and the tariffs set by China. The tariffs applied by China have a significant negative correlation, which means that the increase in China's tariffs injures China's own economy. However, tariffs in China have a significant favorable rapport with the Chinese currency exchange rate.

Table 4. Granger Causality Test

Null Hypothesis:	**Obs**	**F-Statistic**	**Prob.**
REX does not Granger Cause GDP	10	0.38089	0.7015
GDP does not Granger Cause REX		0.38176	0.7010
TARIFF does not Granger Cause GDP	13	1.43612	0.2931
GDP does not Granger Cause TARIFF		0.08919	0.9156
TARIFF does not Granger Cause REX	10	0.96533	0.4421
REX does not Granger Cause TARIFF		1.25918	0.3607

The output results show no reciprocal relationship (two-way relationship). This can be seen from the value of Prob. REX does not Granger Cause GDP, Prob. Tariff does not Granger Cause GDP and REX whose value is above the alpha level of 0.05 (5%), meaning that Tariff does not significantly affect GDP and REX, and vice versa GDP and REX do not significantly affect Tariff.

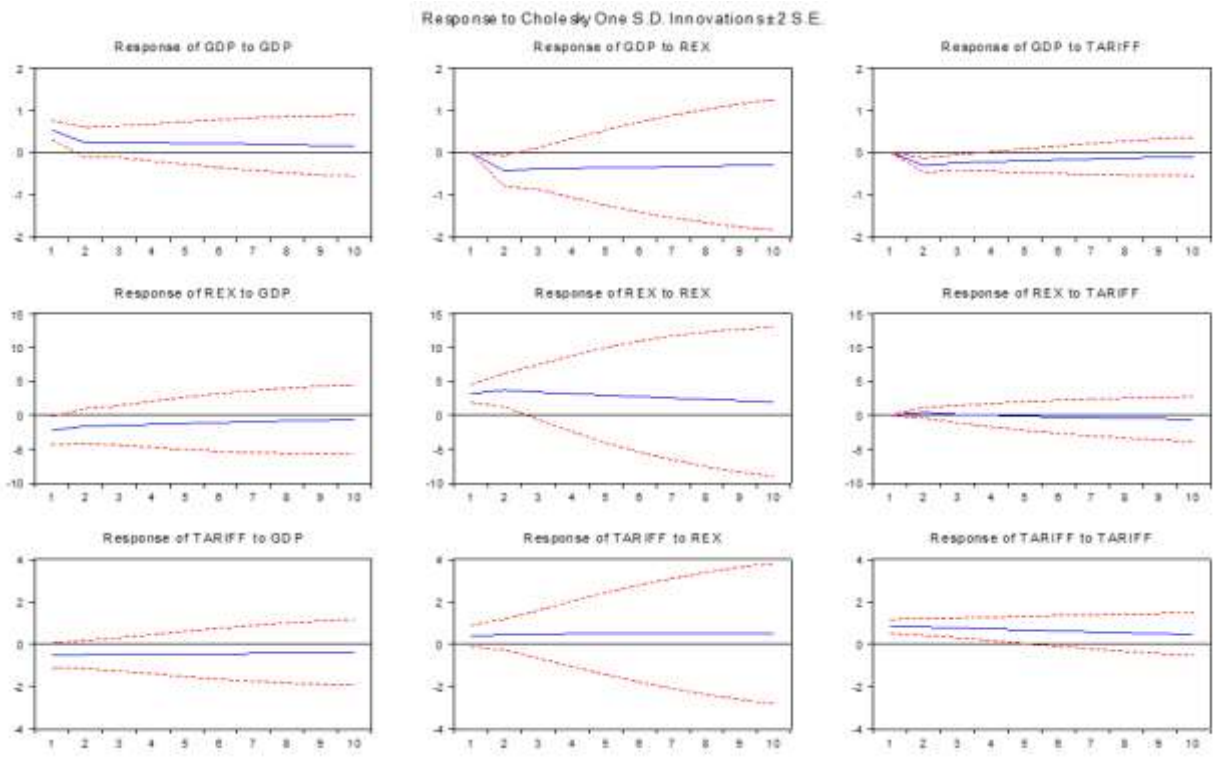

Figure 1. Impulse Response Graph

The output results from the Impulse Response above show that between GDP, Tariff and REX there is an increase in each period, or it can be said that there is no decline or there is a stagnant trend each period.

Conclusion

China's GDP is significantly positively related to the Chinese exchange rate. Both China's own exchange rate and its tariffs are significantly influenced favorably by China's exchange rate. The tariffs applied by China have a significant negative correlation, which means that the increase in China's tariffs injures China's own economy. However, The rate at which the Chinese currency is exchanged and tariffs in China are significantly positively correlated. The trade war with the USA is not only bad for the global economy but also bad for the Chinese economy. And very likely also have a negative impact on the US economy.

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