



THE EFFECT OF THE GLOBAL STOCK INDEX ON THE JOINT STOCK PRICE INDEX (JCI) IN THE INDONESIA STOCK EXCHANGE, 2015 – 2019

^{1*)}Sri Budiwati Wahyu Suprapti, ²⁾Luthfi Hafizh

^{1,2)}Department of Management, Faculty of Economics and Business,
Yogyakarta "Veterans" National Development University.

*Email: ¹⁾sribudiwati131@gmail.com, ²⁾luthfihafizh.lh@gmail.com

*Correspondence: sribudiwati131@gmail.com

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ABSTRAK

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The purpose of this study is to identify and analyze the impact of the global index, are the Dow Jones Index (DJIA), Nikkei 225(N225), Shanghai Composite Index Composite (SSEC) and Singapore Straits Times (STI) Against the Jakarta Composite Index (JKSE) on the Indonesia Stock Exchange (IDX). This type of research is explanatory research with quantitative research. This study takes all the time series data listed on the Dow Jones Index, Nikkei 225 Index, Shanghai Stock Composite Index, Singapore Straits Times Index, and the Jakarta Composite Index (JKSE) for the period January 2015 to December 2019. The research sample used was 60 samples. The data analysis technique used is multiple linear regression analysis. Hypothesis testing results show the Dow Jones Index, Nikkei 225 Index, Shanghai Composite Exchange Composite Index, Singapore Straits Times Index, Financial Times Stock Exchange 100 and the Kuala Lumpur Composite Index associated simultaneously with the Jakarta Composite Index (JKSE). The Dow Jones Index has a significant effect on the positive direction of the Jakarta Composite Index (JKSE), The Nikkei 225 index has a significant effect on the negative direction of the Jakarta Composite Index (JKSE), Kuala Lumpur Composite Index 100 has a significant on the positive direction of the Jakarta Composite Index. Shanghai Stock Index Composite Index Singapore Strait Times Index and Financial Times Stock Exchange have no effect on the Jakarta Composite Index (JKSE).

Keywords: Dow Jones Index (DJIA); Nikkei 225 (N225); Shanghai Composite Index Composite (SSEC); Singapore Straits Times (STI); Financial Times Stock Exchange (FTSE100); Kuala Lumpur Composite Index (KLCI); Jakarta Composite Index (JKSE).

INTRODUCTION

The world economy has entered the era of globalization. This condition is marked by increasing economic relations between countries. The development of financial investment in various countries is one of the factors that cause this dependence. The financial investment made in the capital market will increase the national output of a country which in turn will affect the economy as a whole.

During the 1980s the world's capital markets began to move towards greater global integration. Several factors explain this movement. One of them is that investors are starting to realize the benefits of international portfolio diversification ([Eun & Shim, 1989](#)). The impact of globalization,

if there is an event in a country, the information can affect the economy of other countries either directly or indirectly ([Surbakti](#), 2012).

As a benchmark for the activity or performance of a country's equity market, an index of shares traded on a country's stock exchange is used. One of the indexes used as a reference to show the condition of the capital market in Indonesia is the Composite Stock Price Index (CSPI) where the JCI itself records every stock movement listed on the Indonesian stock exchange ([Eun & Shim](#), 1989).

In 2008 when the subprime mortgage crisis occurred in the US, almost all global stock exchanges recorded a large decline while making the worst record in Indonesia. The Composite Stock Price Index in December 2008 fell 51.17 percent to the level of 1,340.89. The Composite Stock Price Index on the Indonesia Stock Exchange recorded the fourth-worst decline after the stock indexes in Shenzhen, Shanghai, and Mumbai ([Tamara](#), 2013).

The Indonesian economy is currently increasingly integrated with the global economy, in terms of exports China, the United States, and Japan are the largest non-oil and gas export destinations from Indonesia. As of 2018 the value of Indonesia's exports to China was \$ 27 132.2 million, to the United States was \$ 18 439.8 million, to Japan was \$ 19 465.6 million and to Singapore was \$ 12 915.0 million ([www.bps.go.id](#)). With a high export value, of course, the economic conditions of these countries can affect the Indonesian economy itself. The capital market itself is also a representative to assess the condition of companies in a country, this is because industries in each country enter the capital market ([Mauliano](#), 2009). Recently, the capital market has also been used as an indicator of a country's economy. The rise and fall of the index of an exchange can be read as a reflection of the country's economic dynamics ([Sawidji](#), 2015).

METHODS

A. Population and Sample

This research is the Global Composite Stock Index, which consists of 106 major indices in each country, with the following samples the New York Stock Exchange with Dow Jones Index (DJI), the Tokyo Stock Exchange with the Nikkei 225 Index (N225), the Shanghai Stock Exchange with the SSE Composite Index (SSEC), and Singapore Exchange with Straits Times Index, London Stock Exchange with The Financial Times Stock Exchange 100 (FTSE 100), Kuala Lumpur Stock Exchange with Kuala Lumpur Composite Index (KLCI) data used are data for the period January 2015 to December 2019.

B. Types and Sources of Data

This study uses secondary data. According to ([Istijanto & Com](#), 2009), secondary data is data that has been collected by other parties (not by the researchers themselves) for other purposes. Secondary data is data obtained and stored by other people which is usually past data (historical).

The data collection technique in this study uses the documentation method, namely by recording or documenting the monthly closing price of the Dow Jones Industrial Average (DJIA), Nikkei 225, Shanghai Stock Exchange Composite Index (SSEC), Straits Times Index (STI), The Financial Times Stock Exchange. 100 (FTSE 100), Kuala Lumpur Composite Index (KLCI) Composite Stock Price Index (JCI) which is available on the website www.finance.yahoo.com and www.investing.com.

C. Classical Assumption Test

1. Multicollinearity Test

The multicollinearity test aims to test whether the regression model found a correlation between the independent variables (independent). A good regression model should not correlate with the independent variables. If the independent variables are mutually correlated, then these variables are not original (Ghozali, 2011).

There are several methods used to detect multicollinearity, but to detect the presence or absence of multicollinearity in the regression model in this study, it is seen from the tolerance value variance inflation factor (VIF).

2. Autocorrelation Test

Autocorrelation shows residual properties that are not independent of one observation to another. To detect the presence or absence of autocorrelation, the Breusch - Godfrey Test is used, with the following criteria:

- a. If Prob. Chi Square > a = 0.05 then H_0 is rejected
- b. If Prob. Chi Square < a = 0.05 then H_0 is accepted

3. Heteroscedasticity Test

Heteroscedasticity occurs when the variance of U_t is not constant or changes frequently as the value of the independent variable changes (Gujarati, 2006). The heteroscedasticity test aims to test whether in the regression model there is an inequality of variance from the residuals of one observation to another observation. If the variance from the residual of one observation to another observation is fixed, it is called homoscedasticity and if the variance is not constant or changing it is called heteroscedasticity.

D. Hypothesis Testing

The analytical technique used in this study is quantitative data analysis, to quantitatively estimate the influence of several independent variables simultaneously (simultaneously) or partially (individually) on the dependent variable. The functional relationship between the independent variable and the dependent variable can be done with multiple regression. The analytical method used is linear regression model with the following model:

$$Y = a + b_1 X_1 + b_2 X_2 + b_3 X_3 + b_4 X_4 + b_5 X_5 + b_6 X_6 + e$$

Information:

Y = Composite stock price index (CSPI)

a = constant

b₁, b₂, b₃, b₄, = regression coefficient

X₁ = Dow Jones index

X₂ = Nikkei 225 index

X₃ = SSE Composite Index

X₄ = Straits Times Index

X₅ = FTSE100

X₆ = KLCI

RESULTS AND DISCUSSION**A. Classical Assumption Test**

1. Multicollinearity Test

Table 1
Multicollinearity Test

	Coefficient	Uncentered	Centered
Variable	Variance	VIF	VIF
C	569.2914	1.119614	NA
D (DJIA)	0.002299	3.183521	3.025047
D (.N225)	0.001452	2.496784	2.467419
D (SSEC)	0.015553	1.505915	1.505689
D (STI)	0.078823	2.158746	2.157483
D (FTSE100)	0.015788	1.581661	1.575367
D (KLCI)	0.332189	1.288159	1.280356

Seeing the results of the VIF values obtained in the table shows the independent variables in the regression model are not correlated with each other. The VIF value obtained for each independent variable is less than 10 and. This shows that there is no correlation between the independent variables in the regression model and it is concluded that there is no multicollinearity problem among the independent variables in the regression model that is formed.

2. Heteroskedasticity Test

Table 2
Heteroscedasticity Test

Heteroskedasticity Test: Glejser			
F-statistic	1.429995	Prob. F(6.52)	0.2211
Obs*R-squared	8.356196	Prob. Chi-Square(6)	0.2132
Scaled explained SS	7.658253	Prob. Chi-Square(6)	0.2642

Based on table 4.5 it is known that the significance level of the probability value is $Obs * R^2 > 0.05$, indicating that there are no symptoms of heteroscedasticity.

3. Autocorrelation Test

Table 3
Autocorrelation Test

Breusch - Godfrey Serial Correlation LM Test			
F-statistic	1.759707	Prob. F (2.50)	0.1826
Obs*R-squared	3.879815	Prob. Chi-Square (2)	0.1437

In the table above, it is known that the value of Obs*R-squared is 3.879815 and Prob. Chi-Square 0.1437 is large from $\alpha=0.05$. Thus it can be concluded that the model is free from the problem of autocorrelation.

B. Hypothesis Testing

Table 4
Multiple Linear Regression Test

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	22.62848 0.474830 0.6369			10.74468
D (DJIA)	0.094708	0.047071	2.012050	0.0494
D (.N225)	-0.083541	0.036432	-2.293083	0.0259
D (SSEC)	-0.026287	0.117833	-0.223087	0.8243
D (STI)	0.170890	0.280015	0.610289	0.5443
D (FTSE100)	0.167142	0.125649	1.330237	0.1892
D (KLSE)	1.444688	0.576358	2.506580	0.0154
R-squared	0.349262	Dependent Var Mean		17.12102
Adjusted R-squared	0.274177	SD dependent var		191.9362
SE of regression	163.5205	Akaike Information Criterion		13.14275
Sum squared resid	1390426.	Schwarz Criterion		13.38924
Log-likelihood	-380.7111	Crater: Hannan-Quinn.		13.23897
F-statistic	4.651551	Durbin-Watson Stat		2.382947
Prob. (F-statistic)	0.000745			

Based on table 4 above, the calculation of multiple linear regression analysis using the Eviews 10 program got the following results:

$$Y = 10.74468 + 0.094708 X_1 - 0.083541 X_2 - 0.026287 X_3 + 0.170890 X_4 + 0.167142 X_3 + 1.444688 X_4$$

1. Simultaneous Test (f-test)

Based on the table above, the F-count value is 4.305883 with a significance = 0.000745. Based on the provisions of the F test where the F-count = 0.05, it can be concluded that the Dow Jones Index, Nikkei 225, Shanghai Stock Exchange Composite Index, Straits Times Index, The Financial Times Stock Exchange 100, and the Kuala Lumpur Composite Index simultaneously affect the Price Index. Joint Stock (JCI). Thus H1 is accepted.

2. Partial Test (t-test)

- The results of the analysis show that the Dow Jones Index variable has a significant positive effect on the Composite Stock Price Index (JCI). With a significance value of 0.0494, it is smaller than a significance level of 0.05. While the regression coefficient is 0.094708 and the t-count is 2.012050. Thus H2 is accepted.
- The results of the analysis show that the Nikkei 225 index variable has a significant and negative effect on the Stock Price Index (CSPI). With a significance value of the Nikkei

225 index of 0.0259, it is smaller than the significance level of 0.05. While the regression coefficient is -0.083541 and the t-count is -2.293083. Thus H3 is accepted.

- c. The results of the analysis show that the variable Shanghai Stock Exchange Composite Index has no effect with a significance value of 0.8243 which is greater than a significance level of 0.05. While the regression coefficient of the Shanghai Stock Exchange Composite Index is -0.026287 and the t-count is -0.223087. Thus H4 is rejected.
- d. The results of the analysis show that the variable Singapore Straits Times Index does not affect the Jakarta Composite Index (JCI). With a significance value of 0.5443, it is greater than a significance level of 0.05. While the regression coefficient is 0.170890 and the t-count value is 0.610289. Thus H5 is rejected.
- e. The results of the analysis show that the variable The Financial Times Stock Exchange 100 has no effect on the Composite Stock Price Index (IHSG). With a significance value of 0.1892, it is greater than a significance level of 0.05. While the regression coefficient is 0.167142 and the t-count value is 1.330237. Thus H6 is rejected.
- f. The results of the analysis show that the variables and the Kuala Lumpur Composite Index have a significant positive effect on the Composite Stock Price Index (JCI). With a significance value of 0.0154 which is smaller than a significance level of 0.05. While the regression coefficient is 1.444688 and the t-count value is 2.506580. Thus H7 is accepted.

C. Discussion

1. The effect of the Dow Jones Index on the Composite Stock Price Index (CSPI)

America, which is one of the countries with the largest economy, will certainly affect the economy of other countries, therefore economic changes in the United States will more or less affect the economy in Indonesia. The Dow Jones Index is the largest average stock price index in the world in the American Capital Market. America is still a superpower country that can affect Indonesia's economic conditions.

In monetary terms, the decision on the interest rate applied by Bank Indonesia is still based on the movement of the Fed. Export-Import in Indonesia still uses the US dollar currency. Therefore, the movement of the Dow Jones index can affect almost all world stock price indexes, including the JCI in Indonesia.

The Dow Jones index is moving up, indicating the performance of the United States economy, in general, is in a good position. With good economic conditions, it will drive the Indonesian economy through export activities and capital inflows, both direct investment and through the capital market. This research supports the research of Immanuel ([Wicaksono & Yasa, 2017](#)).

2. The influence of the Nikkei 225 Index on the Composite Stock Price Index (JCI)

The Nikkei 225 index which is one of the main indexes in Japan, the movement of this index will be one of the analytical tools by investors because the Nikkei 225 is one of the most influential indexes, this is because Japan is a country that greatly influences the world's economic cycle ([Surbakti, 2012](#)).

The results of this study indicate that the Nikkei 225 has a significant negative effect on the JCI. Japan, which since 2018 has been facing economic turmoil that could lead to a possible recession, began the decline in the Japanese economy, which contracted 2.5 percent in the third quarter of 2018, which marked the worst slump in four years, this was exacerbated by the statement "A total of 28 of 38 economists said Japan could fall into a recession in the 2019

fiscal year" (Internasional.kontan.co.id) which pushed investor perceptions to worsen. Plus, in October 2019 the Prime Minister's Government Japanese launched a policy of increasing the national sales tax from 8 percent to 10 percent, which it feared would hurt the economy amid the trade war and sluggish external demand.

Because of this, the Nikkei 225 index experienced a bearish trend from October 2018 to early 2019 and had touched its lowest point at that time in the 1900s. In contrast to the JCI, which had risen at that time, even to the 6400s.

This may occur because the slowdown in Japan's economic growth of 0.6% will invite a response from the government and monetary authorities in each country in the form of looser fiscal and monetary policies. Loose fiscal and monetary policies, particularly in America and Europe, will have a positive impact on encouraging foreign capital flows to develop countries, including Indonesia. This is also supported by the government's policy which is one of the positive sentiments for the stock market, with the government's steps in intensifying investment activities as a positive sentiment for investors. With this, investors will prefer to invest their funds in Indonesia with a lower level of risk.

This research supports the research of ([Wicaksono & Yasa, 2017](#)). In contrast to the research, ([Utama & Artini, 2015](#)) states that .N225 does not affect the JCI.

3. Effect of Shanghai Stock Exchange Composite Index on Stock Price Index (CSPI)

China became a destination country for Indonesian exports the largest after Japan, of course, the rise and fall of the index SSEC being China's main index will affect the Indonesian capital market.

The results of the study stated that the SSEC index did not affect the JCI because of other influences that were considered by investors, especially foreign investors to invest their funds in a country's capital market. In 2015, China, which was experiencing an economic slowdown at that time, was reflected by the decline in the SSEC Index which immediately moved bearish.

In 2019 China, which conflicted with the US in terms of a trade war which made China's economic condition unstable itself, this had an impact on the Chinese capital market becoming less attractive because of the large investment risk that would be accepted especially for foreign investors because of this they prefer to keep their funds on the capital market of other countries or other investment instruments.

Investors who originally invested in Indonesia will prefer to keep their funds because it has a smaller risk compared to the risk when investing in China.

4. The influence of the Straits Times Index on the Composite Stock Price Index (JCI)

From Indonesia's export data, it shows that Indonesia's largest exports to ASEAN countries are the largest to Singapore and with the free trade agreement.

However, the Indonesian economy, which is currently experiencing growth and is supported by domestic investors who have started to control the proportion of share ownership on the Indonesia Stock Exchange (IDX), has made the STI Index, which is a reflection of Singapore's trade, less in the eyes of Indonesian investors as a reference to see the direction of movement. stock prices in Indonesia. Plus, during this research, there was an economic situation that was seen as more likely to affect the JCI, such as the trade war, and the policies of the American central bank.

Based on this, it can explain the results of this study which show that STI does not affect the JCI.

5. The influence of The Financial Times Stock Exchange 100 (FTSE 100) index on the Composite Stock Price Index (JCI)

This index represents the performance of all companies listed on the main market of London Stock Exchange (LSE) which have passed both selectively and directly. This index represents 98% of the UK market capital. This index is considered a measure of the best performance in the London equity market.

The results of this study state that the FTSE 100 index does not affect the JCI because of other influences that are considered by investors, especially foreign investors to invest their funds in a country's capital market.

After the announcement of the results of the Brexit referendum, global financial markets experienced a decline in the composite stock index in almost all countries on June 24, 2016. This seems to have a continued impact on the foresight and against the weather. However, this situation did not last long, several stock indices began to recover, where the strengthening of the index occurred in: Thailand, the Philippines, China, Indonesia, Australia, and Vietnam. This shows that the information circulating about Brexit does not have a significant impact on Indonesia's economy due to the sudden turmoil.

The FTSE 100 Index has no effect on the HSG. Because the UK does not invest too much in the form of stocks, but in the form of real investments. Investment made by the UK in Indonesia is more active in the field of chemical industry, metal goods, mining, real estate, regional industri, transportation and communication, food, trade, hotel and restaurant; and electronic and services ([Bery & Worokinasih, 2018](#)).

6. The influence of the Kuala Lumpur Composite Index (KLCI) on the Composite Stock Price Index (CSPI)

The Kuala Lumpur Composite Index (KLCI) is an indicator of stock price movements on the IDX. This index covers the price movements of all common and preferred shares listed on the Malaysian Stock Exchange.

The results of this study indicate that the Kuala Lumpur Composite Index (KLCI) has a significant effect in a positive direction on the JCI. As a country that has the closest position to Indonesia, Indonesia has trade relations that influence each other between the two countries. Likewise, the capital markets of the two countries are interconnected, in the investment sector, Malaysia itself is one of the countries with a high investment value for Indonesia. This is a positive sentiment for the Indonesian capital market.

CONCLUSION

Based on the analysis of the influence of the Dow Jones Index, Nikkei 225, ShangHai Stock Exchange Composite Index, Straits Times Index Singapore, The Financial Times Stock Exchange 100, and Kuala Lumpur Composite Index on the Composite Stock Price Index (CSPI) on the Indonesian Stock Exchange (IDX)) For the 2015-2019 period, it can be concluded: Dow Jones, Nikkei 225, Shanghai Composite Index, Singapore Straits Times Index, FTSE 100 dan Kuala Lumpur Composite Index berpengaruh terhadap Indeks Harga Saham Gabungan Bursa Efek Indonesia (BEI) Indeks Harga Saham Gabungan (IHSG) Bursa Efek Indonesia (BEI) telah memberikan dampak positif yang signifikan selama tahun 2019. Nikkei 225 berpengaruh negatif signifikan terhadap Indeks Harga Saham

Gabungan (IHSG) Bursa Efek Indonesia (BEI) periode 2015-2019. Indeks Harga Saham Gabungan Bursa Efek Shanghai tidak berpengaruh terhadap Indeks Harga Saham Gabungan (IHSG) Bursa Efek Indonesia (BEI) periode 2015-2019. Indeks Singapore Straits Times tidak berdampak pada Indeks Harga Saham Gabungan (IHSG) di Bursa Efek Indonesia (BEI) periode 2015-2019. Indeks bursa FTSE 100 tidak berpengaruh terhadap Indeks Harga Saham Gabungan (IHSG) Bursa Efek Indonesia (BEI) periode 2015-2019. KLCI berpengaruh positif signifikan terhadap Indeks Saham Gabungan (IHSG) Bursa Efek Indonesia (BEI) periode 2015-2019

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Sri Budiwati Wahyu Suprapti, Luthfi Hafizh

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