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The Effect Of Redenomination and Currency Exchange Rate on Foreign Investment in Some Countries

Felicia Vionita Djayadi

Universitas Airlangga, Indonesia
Email: vionitafelicia@gmail.com

Abstract: *This study provides a comprehensive investigation into the impact of redenomination and currency exchange rates on Foreign Direct Investment (FDI) across 20 countries, offering critical insights into the intersection of monetary policy and global investment flows. Recognizing the pivotal role of economic development, the research explores redenomination as a strategic policy to enhance financial credibility and stimulate foreign investment. Employing robust multiple regression analysis on secondary data sourced from the World Bank, the study examines key variables during a critical period—one year before and after redenomination. The findings reveal a significant positive relationship between redenomination and FDI, demonstrating that simplifying currency denominations bolsters investor confidence and financial clarity. Conversely, currency exchange rates exhibit no measurable influence on FDI in this context. These results underscore the transformative potential of redenomination when implemented under stable macroeconomic conditions, positioning it as a viable policy tool for fostering international investment. By highlighting the nuanced dynamics of these financial factors, the research delivers valuable implications for policymakers in developing countries striving to strengthen their economic infrastructure. The study not only advances academic discourse on the subject but also serves as a practical guide for countries considering redenomination as a pathway to economic resilience and enhanced foreign investment attraction.*

Keywords: *Foreign Investment, Redenomination, Currency Exchange Rate.*

INTRODUCTION

Economic development is one of the instruments to increase a country's national income. Any economic development is expected to stimulate economic growth by increasing the national income or income per capita of the community. With economic development, there will be economic growth, namely the process of increasing the production of goods and services in the economic activities of society (Surya et al., 2021). Harrod and Domar put forward the theory of economic growth, where Harrod presented his theory in 1939 in the Economic Journal, while Domar presented it in 1947 in the Journal of America Economic Review. In their theory, Harrod and Domar explain the conditions that must be met by a country so that the economy can develop steadily over the long term (steady growth). This theory explains that investment activities are considered one of the important factors and have two roles at once in influencing the economy (Wade, 2018).

First, this theory views that there is a positive relationship between investment and state income. Therefore, the easier the investment process, the more investment activities will be carried out and the higher the income generated by the country. Second, investment can expand the production capacity of the economy by increasing the capital stock.

This capital is considered an expenditure that will increase the demand for the needs of the entire community (Miar et al., 2024). The investments that can be made by a country are Domestic Investment (PMDN) and Foreign Investment (PMA). This research will analyze Foreign Direct Investment (FDI). The purpose of Foreign Direct Investment is to increase national economic growth, which in turn not only increases economic growth but will also equalize and improve national welfare continuously, which is referred to as economic development (Kambono & Marpaung, 2020).

This study will analyze the factors that can affect Foreign Direct Investment by using two factors, namely Redenomination and Currency Exchange Rate. Redenomination, in recent years, there have been pros and cons to the redenomination discourse in Indonesia. The concept of redenomination itself is to summarize or reduce the number of numbers on the currency. According to Tauhid Ahmad, an economist and Executive Director of the Institute for Development of Economics and Finance (Indef), explained that redenomination can improve the image of Indonesia's currency in other countries' currencies and can increase credibility which will ultimately affect investment (Liputan6, 2013)

Redenomination can also speed up the settlement process of stock trading on the IDX because redenomination will minimize the number of numbers of each transaction made by investors. Transactions made by foreign investors can also increase because it is easier to adapt to a simpler rupiah value unit. However, this of course must be supported by all economic actors so that it can be implemented. Accepted and implemented without hindrance. The redenomination law should be able to cover all aspects of economic and industrial actors (Durand & Villemot, 2020).

Several countries have redenominated their currencies and one of those countries is Turkey. Turkey was considered successful in redenomination by removing 6 zeros from its currency. It redenominated its currency by converting 1,000,000 lira into 1 lira in 2005. This policy was done to reduce the inflation rate that had been very high since the 1970s. Many countries experienced hyperinflation and ended up redenominating. In the case of Indonesia, the redenomination plan was not done because of hyperinflation, but merely to simplify (Priyono & Putri, 2019).

Redenomination in Turkey was announced in the official newspapers on January 31, 2004 and was implemented from January 1, 2005. The Turkish government chose the beginning of the year to simplify the recording and accounting of the country's finances. In the duration of one year, the Turkish government prepared all kinds of possibilities and preparations for the big changes that would happen to their money (Keyder, 2020). This is because redenomination requires careful and complex preparations. Redenomination in Turkey itself was done in two stages. The first is the affixing of the word yent (new) on the new printed money. It should be noted that after the Republic of Turkey was established on October 29, 1923, Turkey has issued 9 new currency issues and the current currency (2016) is the 9th issue. The 8th issue of currency was the first issue after the lira became yeni lira (Turkish lira). Secondly, starting from January 1, 2009, the stage when the word yeni was removed, and the name Lira was reused as it was before the redenomination.

The reason for Turkey to redenominate is that the soaring inflation is one of the main reasons why redenomination is needed by this country that is straddled by the Asian and European continents. Inflation has also caused Türkiye Merkez Bankası (Central Bank of Turkey) to issue a new currency whose denominations have continued to grow since the 80s. In fact, Turkey once had a currency denomination of

20 million Lira. These large-digit denominations have caused problems in accounting, statistics, and buying and selling of goods. Of course, it is very difficult to imagine 20 million lira notes being issued and used in 'people's daily transactions' (Sands, 2016).

Until now in Indonesia, the discourse on the implementation of redenomination is still a pro and con. Since 2018 when Minister of Finance Sri Mulyani submitted a request for a currency redenomination bill to Indonesian President Joko Widodo until 2020, the Rupiah Redenomination Bill has not been included in the national legislation program. According to the President Director of the

Indonesia Stock Exchange (IDX), Tito Sulistio, Indonesia currently does not need efforts to simplify the value of the rupiah currency (Anindya, 2022). Indonesia itself, in the past, has done redenomination. On December 13, 1965 President Sukarno issued PP No.27/1965 to take monetary action in the form of reducing the value of the old currency Rp 1,000 to Rp 1 new money (redenomination). Nominals in circulation were Rp 5, 10, 25, 50 and 100. Starting February 20, 1967, the nominal circulation was Rp 500 and 1,000.

Along with the money, the Sukarelawan or Dwikora Series of 1, 5, 10, 25, and 50 cents was also circulated. However, the implementation of this redenomination failed because the state of the country was getting chaotic, and people did not understand redenomination.

Figure 1. Money Rp 2,500 becomes Rp 2,50
Source: (Kompasiana, 2020)

According to (Susy Suhendra & Handayani, 2012) there are several reasons for a country to redenominate including credibility, domestic and international political identity. In particular, inflationary pressure, psychological effects, currency substitution control and domestic politics were identified as the main reasons for redenomination.

High inflation and weakening exchange rates against other currencies are problems for developing countries. High inflation is the reason for redenomination. Inflation is also one of the indicators that show the success of redenomination (Ifunanya et al., 2021). If the inflation rate becomes lower and more stable after the redenomination policy is implemented, then the country is considered to have a successful redenomination. Conversely, a country is considered a failure if the inflation rate becomes higher and tends to be unstable. Besides inflation, currency exchange rate is also one of the reasons why a country redenominates (Handayani, 2017). The countries that have the lowest currency exchange rates in 2021 are :

Table 1. Ten Countries with Low Currency Exchange Rates

No.	Country	Currency Rates	
		Rates in Currency Units	**Rate in 1 USD (US Dollar)**
1	Venezuela	111 VES	1,552,540 VES
2	Iran	3 IRR	41.908 IRR
3	Vietnam	1.64 VND	23,002 VND
4	Indonesia	14,032 IDR	14,032 IDR
5	Uzbekistan	0.75 UZS	10,483 UZS
6	Republic of Guinea Franc	0.72 GNF	10.234 GNF
7	Africa	0.73 SLL	10.213 SLL
8	Laos	0.66 LAK	9,322 LAK
9	Paraguay	0.48 PYG	6.874 PYG
10	Cambodia	0.29 KHR	4,055 KHR

Source: FXSSI, 2021

Based on the table above, it is known that there are 10 countries with low currency exchange rates, of these ten countries, it is known that Venezuela redenominated in 2018. In August 2018, Venezuela held a massive redenomination and took 5 zeros off the national currency. Due to the severe economic crisis in the country with the world's largest explored oil reserves, in 2018, according to the IMF, hyperinflation exceeded 1 million percent. The year 2019 fared better for Venezuela - inflation accumulated from the beginning of the year was around 3,300% and on an annualized basis from October 2018 to September 2019 - 50,100% (CNN Indonesia, 2018).

Besides Venezuela, the country that has redenominated is Turkey. Starting from the low exchange rate of the Lira currency against the US Dollar, in 1998 the Turkish government launched a redenomination program. The preparation for redenomination was carried out for seven years, until on January 1, 2005, redenomination was officially carried out, where Turkey eliminated 6 zeros so that the Lira would be redenominated. 1,000,000 Lira equals 1 New lira.

Table 2. Comparison of Turkish Currency Value Before and After Redenomination

No.	Before Redenomination	After Redenomination
1	20,000,000 TL	20 YTL
2	1,000,000 TL	1 YTL

Source: Jawa Pos, 2017

To avoid confusion, Turkey issued a new currency that was similar in appearance, color, or design to the old currency. At the beginning of the redenomination, two currencies circulated in Turkey, namely, the old currency (TL) and the new currency (YTL). At that time, people were encouraged to start exchanging the old currency at banks. A year later, the old currency (TL) was withdrawn from circulation so that by the 3rd year, only the new currency (YTL) was circulating in the market. In total, Turkey took 10 years, starting from the consultation and socialization process in 1998 until it was completed in 2008 (Pos, 2017).

However, not all countries that redenominate are successful like Turkey, there are some countries that fail when redenominating, one of them is Brazil. Brazil failed to redenominate its currency. This is because after redenomination, the Brazilian currency depreciated severely against the US dollar and inflation reached 500% per year (Liputan6, 2013). The next country that failed to implement redenomination was Russia. This happened because the redenomination was done in an unstable economic condition and high inflation rate. Another country is North Korea. In 2009, they did redenomination, but similar to Russia, North Korea also failed due to the lack of socialization by the government. At the time of redenomination, many people came to exchange their money but the supply of new money was lacking.

The second factor to be examined is the currency exchange rate. Currency rates can be a driver of investment inflows to destination countries, this is because the strengthening of the destination country's currency will increase the investment returns of investors. If the investor's destination is the local market, if there is an appreciation of the exchange rate on the local currency, this can increase Foreign Direct Investment due to the increased purchasing power of local consumers (Roikhatul Masruroh et al., 2020). This is because a country's economy is also vulnerable to exchange rate movements, which can increase foreign investment.

Is one of the important indicators in a country's economy. The movement or fluctuation of the currency exchange rate can be seen from the volatility of the exchange rate which can affect people's behavior in holding money and affect the stability of the country. The exchange rate is the price of a country's currency against another country's currency. The need (demand and supply) for foreign currency is one of the main determinants of the strength of the currency. Whether a country's currency is strong or not reflects the strength of the country's economic foundation, or whether the country's economy is stable.

In this study, the foreign investment referred to is Foreign Direct Investment (FDI). In general, FDI occurs when an investor creates a new business or acquires a foreign company in another country, which is different from a foreign investment. With portfolio investment where investors only buy stocks or capital. A country with an unstable or devalued currency is less likely to attract foreign investment (Obuobi et al., 2020).

Research conducted by (Obuobi et al., 2020) analyzed the effect of Redenomination on Foreign Direct Investment (FDI), the results explained that after Redenomination there was an increase in investment (FDI), so this study concluded that Redenomination is one of the tools to increase direct investment. According to the research results of (Ullah et al., 2017) explained Redenomination is a policy that can increase economic credibility which in turn will attract foreign investment. Based on this, the second hypothesis of this research is as follows:

H0 : It is suspected that Redenomination has no effect on Foreign Direct Investment (FDI).

H1 : It is suspected that Redenomination affects Foreign Direct Investment (FDI).

(Roikhatul Masruroh et al., 2020) explains a very important factor that can bring in foreign investors, namely the stability of the rupiah. A stable domestic currency value can prevent foreign investors, or local investors from the high investment costs that must be incurred and the swelling of production costs when using raw materials exported by other countries. An unstable exchange rate can bankrupt the business of foreign investors, or local investors who have foreign exchange debt. If the investor's destination is the local market, if there is an appreciation of the exchange rate on the local currency, this can increase FDI due to the increased purchasing power of local consumers. Based on this, the second hypothesis of this study is as follows:

H0 : It is suspected that the currency exchange rate has no effect on foreign direct investment (FDI).

H2 : It is suspected that currency exchange rate affects Foreign Direct Investment (FDI).

Based on this, this research is conducted to review the effect of redenomination on credibility with the research title "The Effect of Redenomination and Currency Exchange Rate on Foreign Investment in Some Countries". This study provides several benefits to academics, policymakers, and practitioners, This study enriches the literature on redenomination and its macroeconomic impacts, particularly on foreign investment. This study bridges the gap in understanding the interaction between currency stability, redenomination, and FDI flows.

To address the challenges of redenomination and its effects on foreign investment, this study explores the dynamics of currency adjustments and their implications. For instance, Turkey successfully issued a new currency that resembled the old one in appearance, color, and design. During the transition, the old currency (TL) and the new currency (YTL) coexisted, allowing the public to exchange the old currency at banks. A year later, the old currency was withdrawn, leaving only the new currency in circulation by the third year. Turkey’s redenomination process spanned a decade, starting with consultations and socialization in 1998 and concluding in 2008.

METHOD

Type of Research

Based on the type of data used in this study, the research design used is quantitative research. Quantitative research is research that is structured and quantifies data to be generalized (Kurniawan, 2016). The quantitative approach views human behavior as predictable and social reality; objective and measurable. Therefore, the use of quantitative research with valid and reliable instruments and appropriate statistical analysis causes the research results achieved not to deviate from the actual conditions.

Data Type and Source

In this study, the data used is quantitative data because it is expressed in numbers that show the value of the magnitude of the variables it represents. Research data sources can be divided into 2, namely primary data sources and secondary data sources. In this research, the data source used is secondary data from the world bank. The data used are redenomination data and foreign investment 1 year before redenomination and 1 year after redenomination published by the world bank.

Data Collection Methods

The data collection methods used in this study are as follows:

1) Literature Study
   Literature study is data collection whose sources are written sources obtained from various books, journals and literature related to the object of research.
2) Observation
   The data to be used in this study is secondary data collected by conducting Non Participant Observational method, which is a data collection method where researchers only observe the data that has been available without being part of a data system, namely by recording data on redenomination and FDI.

Population and Sample

Population is a generalization area consisting of objects or subjects that have certain qualities and characteristics that are determined by researchers for studied and then draw conclusions. The population in this study are all countries that have redenominated.

The sample is part of the number and characteristics of the population. The samples in this study are countries that redenominate.

Data Analysis Technique and Hypothesis Test

The data analysis technique and hypothesis testing in this research aim to systematically analyze data and test hypotheses using specific methods to address the problem formulation.

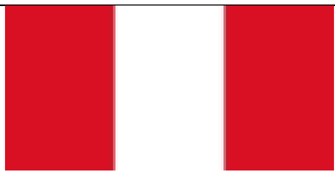
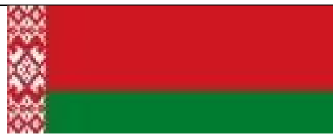
Descriptive analysis is applied to summarize data through tables, graphs, mean calculations, and other statistical tools without generalizing the findings. The classical assumption tests include normality testing, using the Kolmogorov-Smirnov test, and multicollinearity testing to ensure no correlation exists between independent variables (Ghozali, 2016). Simple regression analysis is employed to examine the relationship between variables, represented by the equation $Y=a+\beta 1X1 +\beta 2X2+e$ while the coefficient of determination (R^2) measures the model's explanatory power. Hypothesis testing involves the F-test to determine the combined significance of independent variables and the t-test to evaluate the individual impact of each variable, such as redenomination and currency exchange rate, on Foreign Direct Investment (FDI).

RESULTS AND DISCUSSION

Overview of Research Objects

This study aims to determine the effect of Redenomination on Foreign Direct Investment by using a sample of 20 countries, where each country's general description is explained as follows:

Table 3. Countries and Flags of Research Sample Countries

No.	Country Name	Country Flag	No.	Country Name	Country Flag
1.	Israel		11.	Dem.Rep of Congo	
2.	Bolivia		12.	Russia	
3.	Peru		13.	Angola	
4.	Argentina		14.	Bulgaria	
5.	Sudan		15.	Belarus	
6.	Mexico		16.	Romania	
7.	Uruguay		17.	Turkey	
8.	Brazil		18.	Azerbaijan	
9.	Poland		19.	Mozambique	
10.	Ukraine		20.	Ghana	

Source: World Bank, 2021

1. Israel

   Israel was established on May 14, 1948 or the day before the British Mandate in Palestine ended. The head of the Yishuv (Jewish Community in Palestine), David Ben-Gurion, declared the establishment of the state of Israel in front of 250 guests at the Tel Aviv Museum. Israel eliminated 9 zeros through four stages of redenomination from 1980 to 1985.

2. Bolivia

   Bolivia became independent on August 6, 1825 but its independence was recognized on July 21, 1847. Bolivia was a former Spanish colony. Bolivia remains the poorest country in South America after Guyana. This has been attributed to high levels of corruption and the imperialist role of foreign powers in the country since colonization. Bolivia redenominated twice, in 1963 and 1987.

3. Peru

   Peru declared its independence from Spain on July 28, 1821 but was recognized on May 2, 1866. Peru's economy has become increasingly market oriented, with major privatizations completed since 1990; in the mining, electricity and telecommunications industries. Peru redenominated in 1991.

4. Argentina

   Argentina is the second largest Latin American country and the largest Spanish-speaking country in the world. Argentina's independence was recognized on April 29, 1857. Argentina is a country with rich natural resources, a high literacy rate, a developed agricultural sector and diverse industries. Unfortunately, since the late 1980s the country has accumulated high foreign debt, inflation of up to 200% a month. Argentina redenominated 4 times in 1970, 1983, 1985 and 1992 by removing 13 zeros.

5. Sudan

   Sudan became independent from Great Britain and Egypt on January 1, 1956. Sudan is a country located in the northeast of the African continent. Sudan's economy is one of the world's weakest and most underdeveloped. Sudan redenominated its currency in 1992.

6. Mexico

   Mexico is the third largest country in Latin America and also the most Spanish-speaking country. Its independence recognized on December 28, 1836. Mexico is rich in petroleum and at one point was the 10th largest petroleum producing country in the world. Mexico redenominated in 1993.

7. Uruguay

   Uruguay is a small country located in Latin America. Uruguay is one of South America's most economical countries, with a high GDP per capita and the 52nd highest quality. Uruguay's economy is characterized by an export-oriented agricultural sector, an educated workforce, and a high level of social spending. After averaging 5% growth annually during 1996-1998, the economy experienced a large decline in 1999-2002. Uruguay redenominated in 1993.

8. Brazil

   Brazil is the largest and most populous country in South America. It is the easternmost country on the South American continent and borders the Andes Mountains and the Atlantic Ocean.Brazil has the eighth largest economy by nominal GDP in the world, and the seventh by purchasing power parity. Brazil redenominated in 1994.

9. Poland

   From 1795 to 1918, there was no truly independent Polish state, the Second Polish Republic was formed in 1918. 1918, and existed as an independent state until it was destroyed in 1939 by Nazi

Germany and the Soviet Union in the invasion of Poland at the beginning of World War II. The third Polish Republic was formed in 1989. Poland's economy is considered one of the more resilient of the post-Communist countries and is one of the fastest growing countries in the EU. Having a strong domestic market, low private debt, low unemployment, a flexible currency, and not relying on a single export sector, Poland was the only European economy to avoid the 2008 recession. Poland re-denominated in 1995.

10. Ukraine

    Ukraine emerged as the idea of a nation with the Ukrainian National Awakening in the mid-18th century, amidst the revolt of 1768/69 and the partition of the Polish Lithuanian Commonwealth. Galicia fell to the Austrian Empire and the rest of Ukraine to the Russian Empire. Ukraine's economy is free-market and developing. As in other post-Soviet countries, its gross domestic product fell sharply during the 10 years following the collapse of the Soviet Union in 1991. Ukraine re-denominated in 1996.

11. Dem.Rep of Congo

    The Democratic Republic of Congo (sometimes referred to as DR Congo, DRC, Congo Kinshasa, or just Congo; formerly Zaire between 1971 and 1997) is a country in Central Africa. The economy is a mixture of rural agriculture and handicrafts, a largely petroleum-based industrial sector, support services, and a government characterized by budgetary problems and overstaffing. Petroleum extraction has replaced forestry as the mainstay of the economy. In 2008, the oil sector accounted for 65% of GDP, 85% of government revenue, and 92% of exports. The country also has large, untapped mineral wealth. Congo re-denominated in 1998.

12. Russia

    Russia is a sovereign state with the most extensive territory in the world, stretching across eastern Europe and northern Asia. It is a high-income market economy with enormous natural resources, especially oil and natural gas. The country ranks 15th by nominal GDP and 6th by purchasing power balance (PPP). Russia re-denominated in 1998.

13. Angola

    The Republic of Angola is a country located in southwestern Africa. Angola borders Namibia, the Democratic Republic of Congo, Zambia and the Atlantic Ocean. Cabinda, an exclave-shaped Angolan province, borders the Republic of Congo. The economy of Angola is in disarray due to a protracted war that lasted for nearly a quarter of a century. Angola has resources, but the country's per capita income is among the lowest in the world. About 85% of the population works in agriculture. Oil production is the country's largest economic resource, accounting for 45% of GDP and 90% of exports. Angola redenominated in 1999.

14. Bulgaria

    Bulgaria is a country in Southeast Europe. Bulgaria borders five countries: Romania to the north (mostly along the Danube River), Serbia and the Republic of Macedonia to the west, and Greece and Turkey to the south. The Black Sea borders the country to the east. Bulgaria has an open market economy, with a developed and large private sector, and a number of strategic state-owned enterprises. Bulgaria has experienced rapid economic growth, despite its income ranking as the smallest in the European Union. According to Eurostat data, Bulgaria's GDP per capita (on a purchasing power balance basis) was 43 percent of the EU average in 2008. Bulgaria redenominated in 1999.

15. Belarus

Belarus is a country in Eastern Europe with the capital city of Minsk. The country is administratively divided into 6 provinces (voblasts) and a special city. It borders Russia to the east and northeast, Ukraine to the south, Poland to the west, and Lithuania and Latvia to the northwest. The currency of Belarus is the Belarusian ruble. It was introduced in May 1992 to replace the Soviet ruble and has been redenominated twice since then. The first coin of the Republic of Belarus was issued on December 27, 1996. Belarus redenominated in 2000.

16. Romania

    Romania is a country located in Central and Southeast Europe, in the northern part of the Balkan Peninsula and bordering the Black Sea. Almost the entire delta of the Danube river lies within Romania. The country borders Hungary and Serbia to the west, Ukraine and the Republic of Moldova to the northeast, and Bulgaria to the south. After the communist regime fell in 1989, the country experienced decades of economic decline and instability, resulting from the collapse of the industrial base and the lack of structural reforms, but since 2000, the Romanian economy has transformed into an economy with macroeconomic stability, characterized by high economic growth, low unemployment and reduced inflation. In 2006, Romania posted an economic growth of 7.7%, one of the largest in Europe.

17. Turkey

    Turkey is a country in the Eurasian region. Its territory extends from the Anatolian Peninsula in Southwest Asia to the Balkans in Southeast Europe. Turkey's economy is categorized as an emerging market economy by the IMF. Turkey has the 18th largest nominal GDP. The country is among the world's leading producers of agricultural products, textiles, motor vehicles, ships, other means of transportation, building materials, consumer electronics, and household appliances.

18. Azerbaijan

    Azerbaijan is a country in the Caucasus at the crossroads of Europe and Southwest Asia. It borders Russia to the north, Georgia and Armenia to the west, and Iran to the south. Azerbaijan's Nominal GDP growth was reported at 5.116 % in 2021-03. This is up from the previous record of - 13.848% for 2020-12. Azerbaijan Nominal GDP Growth data is updated quarterly, averaging 13.359% from 2002-03 to 2021-03. Azerbaijan Nominal GDP Growth data remains active in CEIC and is reported by CEIC Data. Data is categorized in the Global Economic Monitor World Trend Plus - Table: Nominal GDP: Y-o-Y Growth: Quarterly: Europe and Central Asia.Azerbaijan redenominated in 2006.

19. Mozambique

    Mozambique is a country in southern Africa bordered by South Africa, Eswatini, Tanzania, Malawi, Zambia and Zimbabwe. Mozambique remains dependent on foreign aid for a large part of its annual budget, and most of the population remains below the poverty line. Agriculture continues to employ most of the labor force in Mozambique. The trade balance remains far from balanced although the opening of the MOZAL aluminum plant, the largest foreign investment to date, managed to drastically increase export earnings. Mozambique redenominated in 2006.

20. Ghana

    Ghana is a country in West Africa bordered by Ivory Coast to the west, Burkina Faso to the north, Togo to the east, and the Gulf of New Guinea to the south. Its area is almost twice the size of the island of Java. Ghana has twice the per capita production of any poor country in West Africa. However, Ghana remains somewhat dependent on foreign trade and aid as well as investment activity from Ghanaians working abroad. About 28% of the population lives below the international poverty line (US$1.25 a day), the majority of whom are Ghanaian women from the poor and politically marginalized northern and upstream regions. Ghana, known for its gold since colonial times, remains one of the world's top gold producers. Other exports include cocoa beans, timber, electricity, diamonds, bauxite. Fields oil reportedly containing more than 3 m^3 of light oil was discovered in 2007. Ghana redenominated in 2007.

Descriptive Test Results

The descriptive test results in this study will explain the lowest, highest and average values on each research variable, as follows:

Table 4. Descriptive Test Results

	N	Minimum	Maximum	Mean	Std. Deviaton
X1	20	-4435000,00	6553000000	1590279014	1987505783
X2	20	1,69	2010,00	170,9550	460,33231
Y	20	-79000000,00	201885000000	3425240447	5220187940
Valid N (listwise)	20				

Source: Research Results (2021) processed (See Appendix 1)

Based on the test results, it can be explained that the lowest redenomination value is -44,350,000 and the highest is 6,443,000,000, the lowest currency exchange rate is 1.69 and the highest is 2,010 while after redenomination the lowest FDI value is -79,000,000 and the highest is 20,185,000,000.

Classical Assumption Test Results

The classic assumption tests carried out in this study are data normality test, data multicollinearity test and autocorrelation test, as follows:

Data Normality Test

The data normality test in this study is using the Kolmogorov-Smirnov test. Normality testing is done by looking at the Asymp. Sig. (2-tailed). If the significance level
> 0.05, it can be concluded that the data is normally distributed.

Table 5. Normality Test Results

Variables	Asymp.sig (2 tailed)	Description
Redenomination	0.863	Normally Distributed
Currency Rates	0.520	Normally Distributed
FDI	0.648	Normally Distributed

Source: Research Results (2021) processed (See Appendix 2)

Based on the results of the normality test above, it can be explained that each variable in this study has an Asymp. Sig. (2-tailed) value is greater than 0.05, so it is concluded that the data in this study is normally distributed.

Multicollinearity Test

The multicollinearity test aims to test whether the regression model found a correlation between independent variables (independent). A good regression model should not have a correlation between independent variables (Ghozali, 2016). A regression model that is free from multicollinearity is a model that has a tolerance value ≥ 0.01 or a tolerance value ≥ 0.01. if the variance inflation factor (VIF) value ≤ 10. The test results are:

Table 6. Multicollinearity Test Results

Variables	VIF Value	Description
Redenomination	1.129	No Multicollinearity
Currency Rates	1.129	No Multicollinearity

Source: Research Results (2021) processed (See Appendix 2)

Based on the test results above, it can be explained that the variables in this study do not contain multicollinearity of data, so that testing can be carried out to the next stage.

Multiple Linear Regression Test Results

Simple Regression Equation

Based on the results of simple regression testing, it can be seen that the regression equation is :

$$Y = a + \beta 1X1 + \beta 2X2 + e$$

$$Y = -1.103 + 1.089X1 - 0.106X2 + 2.422$$

Where:

Y : Foreign Direct Investment
(FDI) a : Constant
β1,2 : Regression coefficient
X1 : Redenomination
X2 : Currency Exchange Rate
e : error

Based on the simple regression equation in this study, it can be explained as follows:

a. The constant value shows the amount of FDI value, if the value of Redenomination is fixed then the unit value of FDI is -1,103 US$.
b. The value of Redenomination is 1.089 indicating a positive relationship between Redenomination and Foreign Direct Investment (FDI). If there is an increase in the unit amount of Redenomination, it will increase FDI by 1.089 US$.
c. The value of the currency exchange rate is -0.106, indicating a negative relationship between the currency exchange rate and FDI. Where if the currency exchange rate of a country is low, it will increase FDI, on the other hand, if the currency exchange rate is high, it will decrease FDI by one unit, namely 0.106 by the currency exchange rate unit of each country.

Coefficient of Determination

The R value shows the strength of the relationship between the Redenomination variable and FDI. The value of R shows 0.930 close to 1, it can be interpreted that the relationship between Redenomination and Currency Exchange Rate with FDI is very strong.

The value of R Square shows the amount of influence of Redenomination variable on FDI. The value of R square shows a value of 0.865 or 86.5%, this explains that the magnitude of the influence of the Redenomination and Currency Exchange Rate variables on FDI is 86.5% and the remaining 13.5% is influenced by other factors not examined in this study.

Hypothesis Test Results

As for answering the hypothesis of this study, the t test was conducted with the following results:

Table 7. Hypothesis Test Results

Hypothesis	F Test Valu e	Test Value t	Description
Redenomination FDI		0.000	H_1 accepted
Currency Rates PMA		0.444	H_2 rejected
Redenomination & Exchange Rates Currency FDI	0.000		H_3 accepted

Source: Research Results (2021) processed (See Appendix 2)

Based on the results of the hypothesis test above, the answers to the research problem formulations can be explained as follows:

1. Redenomination affects Foreign Direct Investment in twenty research countries.

2. Currency Exchange Rate has no effect on Foreign Direct Investment in twenty research countries.
3. Redenomination and currency exchange rate simultaneously affect Foreign Direct Investment in twenty research countries.

Effect of Redenomination on Foreign Direct Investment

Based on the results of hypothesis testing, it can be explained that redenomination affects Foreign Direct Investment (FDI) as measured by GDP. The descriptive test results also show that with the redenomination there is an increase in the amount of Foreign Direct Investment in each sample country. The results of this study explain that for countries that have redenominated will increase the number of foreign investors who conduct FDI in the country.

As for the countries that experienced an increase after redenomination, which means that after implementing redenomination, foreign markets have more confidence to invest or invest their capital in Turkey, Romania, Bulgaria and Mexico. Some countries, on the contrary, as experienced by Russia and Angola, FDI decreased drastically after 1 year of redenomination, which means that the trust in the Russian and Angolan currencies decreased so that the interest of foreign markets to secure their capital in Russia and Angola also decreased.

Turkey's success in redenomination has impacted investor confidence, as well as resulted in a decline in unemployment and a gradual increase in economic growth. Turkey's Foreign Direct Investment was reported at 975.0 USD mn in 2021-02. This is up from the previous record of 515.0 USD mn for 2021-01. Turkey's Foreign Direct Investment data is updated monthly, averaging 441.5 USD mn from 1992-01 to 2021-02, with 350 observations. It reached a high of 6.8 USD bn in 2006-05 and a record low of -697.0 USD mn in 2000-07. Turkey's Foreign Direct Investment data remains active in CEIC and is reported by the Central Bank of the Republic of Turkey (CEIC, 2021; Surya et al., 2021).

A good economic condition after the implementation of redenomination in a country depends on the economic condition before the country implemented the redenomination policy. If the macroeconomic condition of a country is in a good and stable condition, then after the redenomination policy is implemented, the macroeconomic condition of a country will also remain in a good and stable condition, and vice versa. A good macroeconomic condition before redenomination is implemented is low inflation with creeping inflation type or around one digit each year, a relatively stable exchange rate that does not experience depreciation or extreme and fluctuating changes, stable or increasing exports and foreign investment, which will automatically have an impact on economic growth (Febrida & Sebayang, 2016).

The Effect of Currency Exchange Rates on Foreign Direct Investment

Based on the results of the research that has been done, it can be explained that the Currency Exchange Rate has no effect on Foreign Direct Investment. This result explains that the low or high currency exchange rate of each research sample country does not affect Foreign Direct Investment in each of these countries because a currency value will change from time to time. These continuous changes will be caused by changes that always occur in the demand or supply of money (Hidayati, 2020).

Exchange rates can affect investment, the effect of which depends on the investor's objectives in investing. If the investor's goal is for foreign markets, the stronger local currency will actually reduce FDI inflows through low competitiveness due to high labor costs that can reduce company profits. One of the motives of multinational companies interested in conducting FDI in a country is to reduce their capital by paying attention to the reaction to exchange rate changes. In such a situation, the company will invest its capital to operate in a country where the currency is relatively lower. Profits from new businesses will periodically be converted back into the investor company's currency when the exchange rate improves (Sari & Baskara, 2018).

CONCLUSION

This research analyzed the effects of redenomination and currency exchange rates on Foreign Direct Investment (FDI) across 20 countries. The findings reveal that redenomination positively influences FDI by enhancing economic credibility and boosting investor confidence, as observed in countries like Turkey, Romania, and Mexico, which have successfully implemented redenomination policies. In contrast, currency exchange rates showed no significant direct effect on FDI, likely due to the influence of market dynamics and investor-specific objectives. The study underscores the importance of stable macroeconomic conditions for the effective implementation of redenomination and its subsequent role in attracting foreign investment. Future research could further investigate the long-term implications of redenomination on FDI, including its interaction with other economic variables such as inflation, interest rates, and political stability, as well as its effects in varying economic and institutional contexts.

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