

DETERMINING FACTORS URGE A REDENOMINATION

ABSTRAK

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The purpose of this research was examined factors urge a redenomination. While decisions on denomination and design of currencies may seem more technical than political, a government's control and administration of its currency and transactions within its boundaries is one of the hallmarks of the modern nation-state. With the discourse of the Indonesian central bank researchers wanted to investigate about the proper inflation level to take the redenomination. This Research aims at analysing the effect variable of inflation, exchange rate and index democracy on redenomination, and to identify the most variable than in affective redenomination. The population of this research is a country that is listed at the World Bank. Data used is secondary data. By using a purposive sampling method states that have complete data in the research consisted of 36 countries. The data is analyzed using of binary logistic regression statistical tests and with the help of SPSS V.13.0 software and Microsoft Excel 2007. The results of this research indicate that (1) exchange rate no significant effect on the decision to redenomination, (2) Form of government no significant effect on the decision to redenomination, (3) inflation significantly influence decisions redenomination of the most special is the inflation t-5. A country does not do redenomination is directly due to the socialization and factors - factors of conflict within a countries.

Keyword: Redenomination, Exchange Rate, Inflation, and Form of Government.

INTRODUCTION

Since 1960, governments of developing and transition economies have redenominated their currencies on approximately seventy occasions (Mosley, 2005). Redenomination generally involves the process whereby a country's currency is recalibrated through reduction in the number of zeros in the currency with a view to achieving a set of given economic and fiscal objectives.

While decisions on denomination and design of currencies may seem more technical than political, a government's control and administration of its currency and transactions within its boundaries is one of the hallmarks of the modern nation-state. Even though such monetary control began in the mid-nineteenth century, today, the main struggle is still to maintain this control, particularly in the face of civil conflict or economic collapse (Woodruff, 1990 in Mosley, 2005).

The central bank of Indonesia through the Indonesian central bank governor Darmin, on 2 August 2010 stated that the discourse made possible redenominated IDR. Redenominated is a reduction in the value of the currency denomination without reducing its value. Forms redenominated dollars being initiated by the BI is to eliminate the last three zeros. So fractional 1,000 will be IDR 1. BI has made study visits to countries that have done redenominated value of its currency as well as Turkey and Romania.

Redenominated is cutting the value of a currency becomes smaller without changing its exchange rate. In times of inflation, the same amount of monetary units have slowly weakened purchasing power. In other words, the price of products and services must be written with a larger amount. When these numbers are getting bigger, they can affect daily transactions because of the risks and discomfort caused by a number of bills that must be taken, or because of human psychology that is not effectively handle large number calculation. The authorities can minimize this problem by redenominated: The new unit replaces the old unit with a certain number of units of the old converted into a new unit. If redenominated reason is inflation, the conversion ratio can be greater than 1, usually a positive number multiple of ten, such as 10,

100, 1,000, and so on. This procedure can be referred to as "the removal of zero.

With the discourse of the Indonesian central bank researchers wanted to investigate about the proper inflation level to take the redenomination. Previous research analyzed using survival analysis to examine the expectations for conduct redenominated. Therefore, researchers wanted to test Factors Urge A Redenomination.

This research discusses the factors that drive countries to carry out redenomination. Factors that drive redenomination are studied, such as the level of appreciation, the form of government and the exchange rate. Redenomination referred to in this study is the policy of eliminating zeros on the currencies of countries that carry out redenomination.

Redenomination

Currency redenomination is the process where a new unit of money replaces the old unit with a certain ratio. It is achieved by removing zeros from a currency or moving some decimal points to the left, with the aim of correcting perceived misalignment in the currency and pricing structure, and enhancing the credibility of the local currency (CBN, 2007). According to Moeslay (2005) redenomination also extends to adding of zeros to the currency as recorded in the immediate post-independence period by South Africa (1961), Sierra Leone (1964), Ghana (1965), Australia (1966), The Bahamas (1966), New Zealand (1967), Fiji (1969), the Gambia (1971), Malawi (1971) and Nigeria (1973). According to CBN (2007) however, adding of zeros to the currency is called decimalization, which in management of currencies, is the process of converting from traditional denominations to a "decimal" system, usually with two units differing by a factor of 100.

Exchange rate

According to Akinboade, Siebrits and Roussot (2006) if the value of a currency decreased against the domestic currency, then this condition is called depreciation (foreign currency more expensive, this means the relative value of domestic currency declined). The establishment of the domestic

exchange rate is also influenced by government policies, including devaluation and revaluation.

Form of government

The Freedom House in "The Economist Intelligence Unit's index of democracy" (kekie, 2007) says that the definition of political freedom is somewhat (though not much) more demanding than its criteria for electoral democracy—i.e., it classifies more countries as electoral democracies than as "free" (some "partly free" countries are also categorized as electoral democracies). At the end of 2005, 122 states were classifying end as electoral democracies; of these, 89 states were classified as free. The Freedom House political-freedom measure covers the electoral process and political pluralism and, to a lesser extent, the functioning of government and a few aspects of participation.

Inflation

Akinboade, Siebrits and Roussot (2006) state that "low inflation is taken to be a sign of internal economic stability in the host country. High inflation indicates the inability of the government to balance its budget and the failure of the central bank to conduct appropriate monetary policy." In other words, inflation can be used as an indicator of the economic and political condition of the host country, but the differences between "high" inflation and "low" inflation is not distinct

Based on the above theoretical basis, it can be formulate the following hypotheses.

Hypotheses 1: simultaneously exchange rate, inflation and form of government influence redenomination and its driving factors.

Hypotheses 2: partially exchange rate, inflation and form of government influence redenomination and its driving factors

RESEARCH METHOD

Type data used in this research is data secondary which obtained through Inflation data from the World Bank, *World Development Indicators* annual percent change in consumer prices index, *Nation Master*, and *The Economist Intelligence Unit's index of democracy*. Data necessary in this research cover inflation

exchange rate and form of government which used as redenomination variable.

Analysis data consist of influence rate inflation against action monetary redenomination of cover influence redenomination against inflation t-2, t-1 and t and inflation t2 and t1, influence redenomination against form if government and influence redenomination against exchange rate. Analysis which covers is analysis logistic regression. In research, method analysis data done is, descriptive analyze, analysis logistic regression and hypotheses test. In research This, Which analyzed is redenomination of influence level rate inflation against action monetary redenomination, between States already do redenomination and which speckle do redenomination.

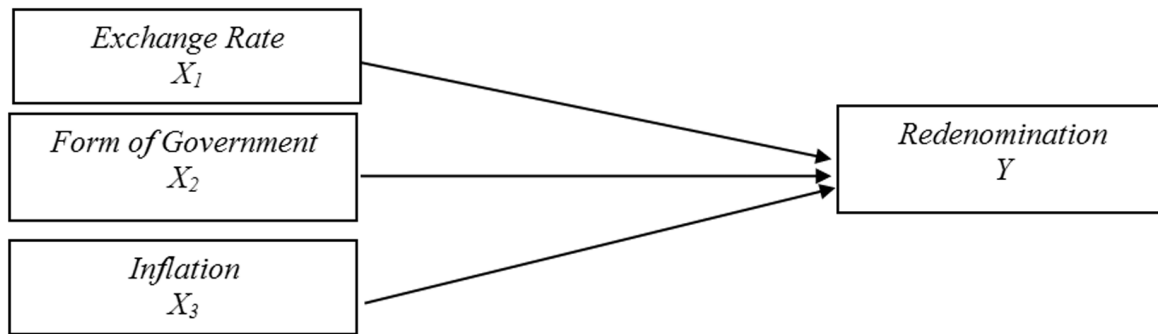


Figure 1 Research Model

Logistic Regression Model show as following:

$$Y = a + b_{x1} + b_{2x2} + b_{3x3} + b_{3x3}(t) + b_{3x3}(t-1) + b_{3x3}(t-2) + b_{3x3}(t-3) + b_{3x3}(t-4) + b_{3x3}(t-5) + e$$

Where: Y = Redenomination, b_{x1} = Exchange rate, b_{2x2} = Form of government, b_{3x3} = Inflation, $b_{3x3}(t)$ = at that moment, $b_{3x3}(t-1)$ = 1 year before redenomination, $b_{3x3}(t-2)$ = 2 year before redenomination, $b_{3x3}(t-3)$ = 3 year before redenomination, $b_{3x3}(t-4)$ = 4 year before redenomination, and $b_{3x3}(t-5)$ = 5 year before redenomination.

Hosmer and Lemeshow Test Binary

T test is a test statistically to determine whether the individual independent variables influence the dependent variable. If the probability level of less than 0.05, it can be said of independent variables affect the dependent variable. The testing procedure is that after doing the calculation of t count, then compare the t value with t table. Decision-making criteria are as follows:

- 1 If the t count > t table and the level of significance (α) < 0.05 then H_0 stated that there were no independent variables the partial effect on the dependent variable is rejected. This means that partially independent variables significantly influence the dependent variable.
- 1 If t < t table and the level of significance (α) > 0.05, then H_0 is accepted, which means partially independent variable does not significantly influence the dependent variable.

RESULTS AND DISCUSSION

Based on data that has been tested using descriptive statistics. Where descriptive statistics will display data images for checking. Descriptive data includes the average, maximum and minimum values, the standard deviation values ??of all variables to be analysed. Descriptive statistical results from

the processing variables used in this study are presented in Table 1.

Table 1 shows that the minimum and zero values ?? are one. This shows that the zero value is that the State has never redenominated and the value of one is for countries that have redenominated. There are 25 redenomination and 11 countries have never been redenominated. Twenty-five countries have been redenominated at one opportunity and some countries have done redenomination several times. In the case of Brazil in the 1980-1995 period, it was redenominated 4 times. Brazil is the country most often redenominated. While Bolivia redenominated twice in 1963 and 1987. And not all countries redenominated actions during periods of high inflation countries such as Ghana in 1977 with 116.45%

inflation in 1963 and Indonesia had 131.49% inflation [Loana: 2005]

Table 1 shows the lowest exchange rate is 0.06 while the highest level is 7102.00. Means the country that has the minimum exchange rate and Brazil is the country that has the lowest exchange rate is the country of Laos. The exchange rate in Brazil is a good country said to decrease the exchange rate against the dollar value of the country, the exchange rate will increase. While Laos has a bad exchange rate, said the exchange rate continues to expand the country's exchange rate will worsen. Because the dollar is the benchmark of a country in the exchange rate. Countries that have good exchange rates Latvia and Peru are less than 1 per dollar. While Angola and Laos are countries that have exchange rates above 1000.

Table 1 shows that the minimum and maximum 1 and 4 which means 1 is a country that is full democracy, while 4 is a country that is a regime authoritarian. Whereas inflation from 5 years before redenomination (t-5) Minimum inflation and inflation 7:00 maximum 23,773.00 means that the countries experiencing the lowest inflation are Laos and the highest inflation rate is the Rep. Congo Dem.

Redenomination

Table 1 shows that the minimum value zero and maximum value is one. This shows that the value zero is the Countries have never done redenomination and value one is for

countries that have redenomination.

Table 1 shows 25 redenomination and Countries 11 countries never redenomination. Twenty-five countries that have been redenomination on one occasion and several countries have undertaken numerous redenominations. In the case of Brazil 1980-1995 period do redenomination 4 times. Brazil is the countries most often do redenomination. While Bolivia 2 times do redenomination in 1963 and 1987. And not all Countries redenomination action during periods of high inflation countries such as Ghana in 1977 with 116.45% inflation in 1963 and Indonesia has 131.49% inflation.

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Exchange rate in Brazil is a good country is said to lower the exchange rate against the dollar value of a country, the exchange rate will improve. While Laos has a poor exchange rate, said exchange rate continues to expand the exchange rate a country will deteriorate. Because the dollar is the benchmark of a country in the exchange rate. Countries that have a good exchange rate Latvia and Peru less than 1 per dollar. While Angola and Laos is a country that has the exchange rate is above 1000.

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Inferential Analysis

Simultaneous Effects

The Hosmer-Lemeshow test the null hypothesis that there is a linear relationship between predictor variables and the log odds criterion variable By looking at the value *goodness of fit test* which is measured by value *Chi-Square* at the bottom of the test *Hosmer and Lemeshow* :

- If Probability > 0.05 hence H_0 is accepted.
- If Probability < 0.05 hence H_0 is rejected

Table 1. Descriptive Statistics

	N	Min	Max	Mean	Std. Dev
Redenomination	36	0	1	.69	.467
Exchange Rate	36	.06	7102.00	327.12	1254.59
Form Of Government	36	1	4	2.58	.874
Inflation	36	2.570	7481.66	661.30	1482.52
Inflation_1	36	7:07	4447.87	547.94	973.75
Inflation_2	36	7:07	4447.87	453.39	814.26
Inflation_3	36	3.69	11750.00	801.11	2161.67
Inflation_4	36	4:41	4735.00	506.36	1077.05
Inflation_5	36	7:00	23773.00	1252.45	4028.05
Valid N (wise list)	36				

Source: Secondary data proceed

Table 2.
Test Results Hosmer and Lemeshow Test Binary

Step	Chi-square	df	Sig.
1	8.113	7	.323

Source: Secondary data proceed

Because the figure is 0.323 probabilities which are > 0.05, then H_0 is accepted. So does it mean regression model is feasible in use for further analyze. H_0 is a linear relationship with variable criteria Predictor variables. Simultaneously, all factors that exist in these variables affect the redenomination. When a country wants to do redenomination countries consider important to the four variables which include: exchange rate, inflation, and form of government.

Partial Effects

Table 3.
Results for Binary Logistic Regression

		B	S.E.	Wald	df	Sig.	Exp (B)
Step 1	Exchange Rate	.001	.001	1.637	1	.201	1.001
(a)	Form Of Government	-1.196	.776	2.378	1	.123	.302
	Lg inflation	-8.301	4.651	3.185	1	.074	.000
	lg_inf_1	4.723	3.459	1.864	1	.172	112.539
	lg_inf_2	6.119	5.252	1.357	1	.244	454.580
	lg_inf_3	7.180	7.038	1.041	1	.308	1313.361
	lg_inf_4	-16.917	10.332	2.681	1	.102	.000
	lg_inf_5	5.974	2.872	4.326	1	.038	393.062
	Constant	6.995	3.644	3.684	1	.055	1090.771

Source: Secondary data proceed

By t test, at the end of the output shows that only variable $h_{3X3} (T_{-5})$ statistically significant in view of significant figures in the variable $h_{3X3} (T_{-5})$ below 0.38 is 0.05. Table 4.5 shows that the most significant factor is the inflation of 5 years before redenomination (t_{-5}). In the year of redenomination also affect to the decision makers to do the redenomination (t), although the level of significance .074 More than 0.05. Inflation in the t_{-4} choose a significance of .102 also affects the decision to redenomination. Likewise with the Form of Government can affect a country's conduct or dropped a decision to redenomination. Most no effect on inflation of t-test is₃ the highest level of significance is .308.

$$Y = .055 + .201 + .123 + .074 + .172 + .244 + .308 + .102 + .038 + e$$

In countries that have occurred hyperinflation, the government faces uphill battle to gain the trust of international and domestic markets. According Mosley, 2005 the most direct means is through a stabilization program, which involves using generally either exchange rate-based or-oriented monetary targeting; increasing the operational independence of the central bank; and removing distortionary economic policies. Countries with the need to redenomination in May 1970 again have this need in 1980. The hazard estimate also leaves open the possibility, again, for political considerations to affect redenomination: once the redenomination dam has been broken, it becomes a more viable political option. This assertion Could Be tested in future work using case studies of (the consideration of) redenomination, as well as assessing public opinion data before and after Various Rounds of redenomination (or in countries with similar economic problems, but with more or less redenomination experience) .

The results of this study generate a hypothesis about the factors that influence a government decision to do the redenomination. Of the three independent variables, the most dominant effect is on inflation. Inflation is influential in this variable is the inflation- t_5 . At the same time, however, not all countries by doing a redenomination. It also could indicate that other factors apart from the factor of inflation. Political factors also influence a country do redenomination. The predictor of a country do redenomination is inflation in the year prior to redenomination.

CONCLUSION AND SUGGESTION

Based on regression analysis that examined driving factors redenomination as follows:

1. Simultaneously, exchange rate, inflation, and from of government influence driving

factors redenomination.

2. Partially, inflation t_{-5} factor most driving factors redenomination. While the exchange rate and from of government does not influence the driving factor redenomination.
3. From the variable exchange rate, inflation, and from of government can be seen that the most dominant variable is the inflation driving factor redenomination.

There are several limitations that could possibly affect the hOutcome research. The sample in this study is still quite low by using only 36 state which registered in world bank. This is because many data are not available to complete so it may be less representative.

From the limited research that has been disclosed, it can be given suggestions, is as follows:

1. The research sample should be expanded to include all state which registered in World Bank.

2. This research can be expanded by adding independent variables suspected influential against dependent variable.

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