

The Impact of Persistent Depreciation of the Naira Currency on the Economy Growth in Nigeria

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Abstract

The persistent depreciation of the naira currency in the recent time have resulted to a serious concern to entrepreneurship growth in the country. This study investigated the impact of persistent depreciation of the naira currency on the entrepreneurship growth in Nigeria. The result of this research work was determined through the use of multiple regression analysis using annual time series data for the observed years 1986- 2019. The data was sourced from Central Bank of Nigeria (CBN) statistical bulletin, 2019. The findings of the study were based on the data analysis. The findings revealed that: all the independent variables account for 98% of the variation in GDP, but more specifically, it was discovered that: money supply have positive impact on economic growth over the study period. However, the study revealed that depreciation of naira, exchange rate, lending rate have negative effect but insignificant on economic growth in Nigeria. The study concluded that currency depreciation affected economic growth in Nigeria negatively. Therefore, the study recommended among others that; Nigerian government should increase its competitive chance by either revaluating its currency or banning importation of some items produced locally to boost the domestic economy and enhance investment atmosphere further by combating inflation rate to single digit. Also, the financial authority through the central bank of Nigeria should managed exchange rate that will reduce cost of doing international transactions and exportation activities within Nigeria.

Keywords: Persistent Depreciation, Naira Currency, Economy Growth

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Introduction

The persistent decline in the foreign exchange rate of naira since the introduction of adjustment programme in 1986 has generated both concern over increased inflation and reduced hope for improvement in the output level. This concern derives from the experience of countries such as Mexico and Argentina where real depreciation of their domestic currencies have consistently been associated with decline in output and increases in inflation. Similarly, among the East Asian countries, more recently, the collapse in the currency values has taken place alongside a sharp slowing-down of economic activity.

Devaluation is a deliberate down-ward adjustment to the value of a country's currency. Currencies or standard in other words, devaluation is a reduction in the value of a currency with respects to those goods, services or other monetary units with which that currency can be exchange (Yioyio in Okaro, 2017).

The currency of a nation would normally serve as a medium of exchange a standard of rate and a store of value. A close perusal of these function would show that in a complex economy money is usually the only account medium through which a buyer pays a seller. Money is a convenient way to store wealth for use whenever it is needed. If, however the value of a currency has contributed to lose value over a long period of time.

According to Lispesy (1977) currency depreciation is a fall in the free market value of domestic currency in terms of foreign currencies. This study is centered on some specific variable the currency depreciation rate per year is the independent variable while G.D.P (Gross domestic product) interest rate and inflation are the dependent variables.

According to wikipedia, currency depreciation is the loss of value of a country currency with respect to one or more foreign reference currencies, typically in a floating exchange refer system in which no official currency value is maintained. Adujie in Abomaye-Nimenibo (2016) argue that countries like Ghana, Jamaica e.tc have better strength currencies and international respect compared are more productive nor do they possess more

robust expert base in comparison with Nigeria. These countries are more having comparative advantage in term of market size or population, gross domestic product and expert base in comparison to Nigeria. Depreciation of the naira has affected all the facets of the economic life of every Nigeria: This situation has been characterized by economy instituting inflationary. perverse and high cost of doing business.

Currency depreciation refers to a sharp fall in currency. Nigeria has been experiencing currency depreciation for a very long period of time and as year go by. This does has service consequence on the economy depreciation of the naira have been occurring from 1986 till date G D P (Gross domestic product) is the total value of all final goods and services product for the market place chairing a green year with a nation boundary. It is an aggregate measure or production equal to the sum of the gross varies added unit to the sum of the gross varies added unit engaged in production (plus any taxes and minus any subsidies on products not induced in the value of them output).

According to Dickson (2012) GDP is usually measured in three ways all of which should in principle give same result. These are the production (output or value added) approach, the income approach of the expenditure approach. The most direct of the three is the production approach which sums the outputs of every class of enterprise to arrive at the total one thing people want to know about their economy is whether its total outputs of goods and services is growing or sinking. GDP is measured in the country in question and Nigeria's currency is depreciating, due to this depression of naira at will affect the measuring of GDP in Nigeria.

The problem of how to reduce inflation has been a central issue among policy maker. 1970s Falaki (2010) wrote that one of the causes of nation depreciation inflation is the rate at which the general level by price of goods and services rising and subsequently, purchasing in falling. Inflation begins with money losing its value therefore it is against the background or overview that this study is being centered. The depreciation of naira persistent has various effect on the economy of Nigeria. The instability and continuous depreciation of the naira has done a lot of damage to the economy of the Nation. The effects of the economy include decline standard of living of the populace, increased cost of production cost push inflation e.t.c.

Critically looking at the study one could observed that it consists of three integral pans that is, the impart of persistent which simply means continuing effect; depreciation which simply means reduction in the values and economic growth which means an increase in the production of goods and services over a specific period. On Juxtapose these integral parts as individual defined above, this study therefore, deals with effect of continuing reduction in the production of economics goods and services over a period of time (Wikipedia).

One of the major courses of naira depreciation is the balance payment disequilibrium. Nigeria import become more than the export and this affected the currency because the external reserves decreased fiscal deficit has been a major course of naira depreciation, this has resulted to excess -liquidity and it is blamed on the federal government for not yielding to its activities on spending especially the disbursement of N198 billion oil wind fall to the state and local government. This was the course of naira depreciation back then in 2001, 2002 and 2003, it is against the above background that the out the impact of persistent depreciation of the naira currency on the growth of Nigeria economy

Objectives of the Study

The main objective of this study is to critically find out the impact of persistent depreciation of the naira currency on the growth of Nigeria economy. Specific purpose of this study are to:

1. examine the effect of depreciation of naira currency on economic growth in Nigeria
2. examine the effect of lending rate on economic growth in Nigeria.
3. examine the effect of exchange rate on economic growth in Nigeria.
4. examine the effect of money supply on economic growth in Nigeria.

Research Questions

The study is tailored to provide answers to the following questions;

1. What is the effect of depreciation of naira currency on economic growth in Nigeria?
2. What is the effect of lending rate on economic growth in Nigeria?
3. What is the effect of exchange rate on economic growth in Nigeria?
4. What is the effect of money supply on economic growth in Nigeria?

Research Hypotheses

The following hypotheses were formulated and stated in a null form;

H0₁: there is no significant effect of depreciation of naira currency on gross domestic product.

H0₂: there is no significant effect of lending rate on economic growth in Nigeria

H0₃: there is no significant effect of exchange rate on economic growth in Nigeria

H0₄: there is no significant effect of money supply on economic growth in Nigeria

Literature Review

Conceptual Framework

Concept of Economic Growth

Economic growth is the increase in the market value of the goods and services produced by an economy over time. It is conventionally measured as the percent rate of increase in real gross domestic product, or real GDP. Between 1960 and 1970, GDP recorded 3.1 per cent growth annually as driven by agricultural sector, between 1970 and 1980 which is oil boom era, Nigeria recorded a remarkable increase in GDP of 6.3 per cent annually. In the early 1980s, the growth rate reduced but from 1986, as a result of structural adjustment and economic reform, there was an improvement because GDP increased at the rate of 4 per cent. The GDP in Nigeria averaged 1.32 percent between 2013 and 2015. The highest growth rate was achieved in the third quarter of 2015 which was 9.19 per cent. Services sector being the largest sector of the economy accounted for 50 per cent of the GDP while the fastest segment is information and communication. Agricultural sector, which used to be the biggest sector with high potential for employment accounts for 26 per cent and oil sector accounts for just 11 per cent. The effect of undervaluation on growth appears to be large and highly significant, also, stronger for developing countries (Rapetti, Skott, & Razmi, 2012).

Theoretical Review

Trade Theory

Standard trade theory relates in good with the real exchange rate. Setting all other variable fixed, the-trade theory state that exchange rate can affect the economy's imports and exports. A fluctuation in the exchange rate affect both the value and volume of trade. Thereby a unit of foreign good would give more of domestic house-holds buying less foreign goods and foreign house-holds wanting to purchase relatively more domestic goods. The higher the real exchange rate the more surplus in the net exports the country will obtain (Zhang in Anderson & Styf, 2010). Lerner widened standard trade theory by including price elasticities of demand for imports and exports as important element in determining the effect of exchange rate changes on the trade balance. An increase in exports and cut down on imports due to depreciation in the exchange rate does not necessarily mean a correction, or even an improvement, in the trade balance. The trade balance is not concerned with the amounts of physical goods but with their actual value' (Lerner, in Anderson & Styf, 2010).

Empirical Studies

Udoh and Udeaja (2019) investigated the relationship between financial dollarization and nominal exchange rate volatility in Nigeria applying Threshold Autoregressive Conditional Heteroscedasticity (TARCH) model covering the period December 2009 to September 2018 using monthly data. The findings showed that the degree of financial dollarization has a great impact on exchange rate volatility in the country. It also revealed that there is a high degree of persistence and ratchet effect exhibited by the exchange rate volatility.

Nwafor (2018) examined the effect of Nigeria's currency rate on the economic growth of Nigeria. The study was focused on establishing the extent to which Naira rate have influenced economic growth from using data spanning between 2006 and 2016; and the extent to which the Naira rate has influenced inflation in Nigeria within the same time frame. This study however employed Ordinary Least Squares technique of analysis to construct a regression model to test stated hypotheses. Findings revealed that the Naira rate has no significant impact on economic growth in Nigeria and that the Naira rate has a significant influence on inflation rate in Naira

Okaro, (2017) investigated the effect of currency devaluation on the economic growth of Nigeria. Specific objectives of the study were; to examine the relationship between currency devaluation and the following variables, the real gross domestic product, Nigerian external debt, and private domestic investment in Nigeria. This study relied on time series data generated for a period of 16years, from 2000-2015. The Ordinary Least Square (OLS) regression method and the computer software application E-views 8.0 were used for the analysis. The result of the analysis which is in line with the a priori expectation shows that: there is a significant relationship between Currency devaluation and real GDP in Nigeria; there is a significant relationship between

Currency devaluation and external debt in Nigeria and there is no significant relationship between Currency devaluation and private domestic investment in Nigeria.

Ismaila (2016) examine exchange rate depreciation and Nigeria economic growth during the SAP and post SAP period. The study covers the period of 1986–2012, using the Johansen co-integration test and error correction model analyses. The results show that broad money supply, net export and total government expenditure have significant impact on real output performance in the long run while exchange rate has direct and insignificant effect on Nigeria economic growth in both short and long run this implies that exchange rate depreciation during the SAP period has no robust effect on Nigeria economic performance

Bawa, Omotosho, and Doguwa, (2015) examined the persistence of currency substitution in Nigeria by including a ratchet variable in their projected Autoregressive Distributed Lag (ARDL) model. Beyond establishing the presence of currency substitution in the country during the period 1990 – 2013, they also found that the significant determinants of currency substitution were exchange rate hazards, predictable exchange rate devaluation, exchange rate spread, price increase potentials and the ratchet variables. According to them, the presence of currency substitution in the country may hamper the steadiness of the money demand role as well as the efficacy of monetary policy.

Doguwa (2015) estimated an autoregressive distributed lag model to identify the drivers of currency substitution in Nigeria between the period 2007 and 2011. He found that short-term foreign interest rates, devaluation expectations, exchange rate risk and political uncertainties are significant determinants of currency substitution.

Huseyin, Abdurrahman, and Gylych, (2015) using the same technique, investigated the relationship between currency depreciation and currency substitution in Nigeria during the period 1980 to 2013. Based on their cointegration test that included variables such as money supply, real income, nominal interest rate and nominal effective exchange rate, it was found that Naira depreciation causes currency substitution in the country.

Aiya, (2014) assessed people's perception on the impact of devaluation of Nigerian currency on the performance of poverty alleviation programmes in Edo state, Nigeria using primary data and Chi square statistical analysis, he found that currency devaluation limits the performance of poverty alleviation programmes in Edo state.

Kogid, Asid, Lily, Mulok and Lognathan (2012), carried out a research on the effect of exchange rates on economic growth, using nominal and real exchange rate, they found out that both exchange rates (nominal and real) are considered to have similar effects on economic growth. The results of Autoregressive distributed lags (ADRL) bounds test carried out by them suggest that long-run co integration exist between both nominal and real exchange rates and economic growth with a significant positive coefficient recorded for real exchange rate. In addition, the results of ECM-based ARDL also reveal that both exchange rates have a similar casual effect towards economic growth.

Methodology

To get secondary data for this study, Central Bank of Nigeria (CBN) statistical bulletin of various years. The estimation techniques used for this study was ordinary least square (OLS) method of multiple regression in evaluating the impact of persistent depreciation of naira currency on the growth of Nigeria economy between 1986 and 2019. The study adopted ordinary least square OLS techniques for the single equation of the model. The variables stated below were used:

$Y = f(DN, ER, INT, M_2)$

Rewriting the model in a linear form and incorporating the stochastic variable, the equations become: $GDP = \beta_0 + \beta_1 DN + \beta_2 EXR + \beta_3 LR + \beta_4 M_2 + \mu$.

Where

- Y = Gross Domestic Product (GDP)
- DN = Depreciation of Naira (Inflation)
- EXR = Exchange rate
- LR = Lending rate
- MS = Money Supply
- β_0 = Constant Term
- β_1, β_4 = Coefficient of Independent Variables
- X1, X4 = Independent or Explanatory Variable
- μ = Error Term (Stochastic Variable)

In the equation, β_0 are the parameter estimates describing the effect of the independent variables on dependent variable, u is the error terms

A Priori Expectation

The a priori expectation is determined by the principle of economic theory and refers to the sign and size of the parameters of economic relationship.

$$\frac{\partial GDP}{\partial DN} > 0 \quad \frac{\partial GDP}{\partial EXR} > 0 \quad \frac{\partial GDP}{\partial LR} < 0, \quad \frac{\partial GDP}{\partial M2} > 0.$$

Dependent Variable: GDP

Method: Least Squares

Sample: 1986 2019

Included observations: 34

Variable	Coefficient	Std. Error	t-Statistic	Prob.
DN	-12.54964	57.96375	-0.216508	0.8301
EXR	-4.933040	23.99109	-0.205620	0.8385
LR	-29.56038	268.3005	-0.110176	0.9130
M2	4.222552	0.208025	20.29829	0.0000
C	2111.152	5121.292	0.412230	0.6832
R-squared	0.988082	Mean dependent var		32663.78
Adjusted R-squared	0.986438	S.D. dependent var		43355.64
S.E. of regression	5049.028	Akaike info criterion		20.02683
Sum squared resid	7.39E+08	Schwarz criterion		20.25130
Log likelihood	-335.4561	Hannan-Quinn criter.		20.10338
F-statistic	601.0665	Durbin-Watson stat		1.287726
Prob(F-statistic)	0.000000			

Table 1: Presentation of the Regression Result

Author's computation with the aid of Eviews 10

Model Estimation

$$GDP = \beta_0 + \beta_1 DN + \beta_2 EXR + \beta_3 LR + \beta_4 M_2 + \mu.$$

$$GDP = 2111.152 - 12.54964DN - 4.933040EXR - 29.56038LR + 4.222552M_2$$

$$t\text{-stat} = 0.412230 \quad 0.216508 \quad 0.205620 \quad 0.110176 \quad 20.29829$$

$$P. \text{ Value.} = 0.6832. \quad 0.8301 \quad 0.8385 \quad 0.9130 \quad 0.0000$$

$$R^2 = 0.988082$$

$$Adj R^2 = 0.986438$$

$$F\text{-statistic} = 601.0665$$

$$\text{Durbin-Watson stat} = 1.287726$$

Interpretation of Result

Annual time series data covering the period of year 1986 to 2019 were used and the results are presented in ordinary least square of simple regression analysis for each explanatory variable selected for this study. The result of the OLS estimation in Table 1 reveals that if all the explanatory variables for economic growth area fixed at zero, the percentage increase in economic growth in Nigeria would be about 2111% very often the mechanical value of this intercept is that. it has no physical or economic meaning (perhaps it reflects the influence of all the omitted variables). It indicates that, if all other omitted variables are selected as a measure to combat currency depreciation, they will bring positive impact on economic growth which.

The regression coefficient of money supply is positive at 4.222552 which indicates that when other variables employed in this model are held constant a unit change in money supply will bring about 4% changes in Nigerian economic growth over the study period. This is an indication that, selecting money supply as a monetary policy instrument to cajole market players in order to maintain price stability may help to achieve the nation macroeconomic objectives, which will therefore render the monetary policy effective in controlling naira depreciation in Nigeria thereby influencing economic growth in Nigeria.

By the same measure if lending rate changes by a unit, where other variables are fixed. depreciation of naira by -29.56%. The relationship between economic growth and lending rate is negative and not significant in this study. This result reveals that, if lending rate increases or decreases the depreciation of naira in the economy will respond in the same way and the percent change In gross domestic product using lending rate as monetary policy instrument to control naira depreciation in Nigeria.

The regression coefficient of exchange rate stood at negative -4.933040. It shows a very strong impact on reducing naira depreciation in Nigeria, meaning that, a unit increase in exchange rate will lead to -4.9% impact on economic growth. This impact is moderate and good enough to be used as monetary policy instrument in maintaining economic growth in Nigeria. It shows that Nigerian inflationary problem (depreciation in naira) is not an imported inflation but rather it is an internal governmental policy problem. It is either the monetary policies adopted over the years were not properly formulated and or not properly implemented to achieve the desired objectives.

Furthermore, the coefficient of depreciation in naira is negative -12.5%. It indicates the existence of negative relationship between naira depreciation and economic growth in Nigeria. A unit change in naira depreciation would cause a variation in gross domestic product equivalent to -12.5%. Therefore, this result indicates a greater influence of naira depreciation on economic growth within the study period.

Test of Goodness of Fit (R^2)

R^2 measure the goodness of fit of our regression line, it also measures the explained and unexplained variation. It shows the percentage of the total variation in the dependent variable that can be explained by the independent variables.

R^2 shows that all the explanatory variables in terms of Depreciation of Naira (DN), Exchange rate (EXR), Lending rate (LR) and Money Supply (MS) explained 0.98% variability in the gross domestic product (GDP) in Nigeria. This implies that the model explains 98% of the changes in GDP and the remaining 2% cannot be explained by the model. Since R^2 measures the fitness of the model so this model has good fit i.e. the data is fitted well. Considering the adjusted R^2 (which can be less than or equal to R^2) after considering the degrees of freedom, the R^2 explained 98% variability in GDP. Therefore, we can still conclude that the explanatory variables perfectly explained the behaviour of the dependent variable.

The Durbin-Watson (DW) test statistic (d^*) shows that there is presence of serial correlation between the error terms. From the result d^* is approximately equal to 1, that is $1.287726 = 1$. We therefore reject the null hypothesis (H_0), which says that there is no positive autocorrelation of the errors' terms; we accept the alternative hypothesis (H_1), which says that there is positive autocorrelation of the errors' terms.

Normality Test

Null Hypothesis: residuals (u) are normally distributed

Alternative: Not normally distributed.

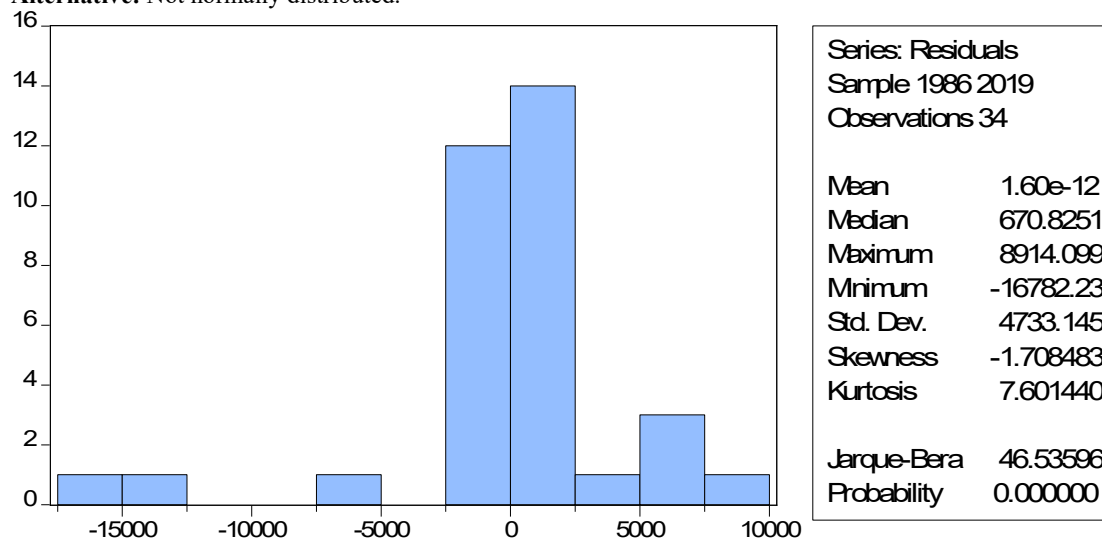


Fig1. Normality Test

Source: Author's computation with the aid of Eviews 10

Jarque-Berra 'statistics is 46.53 and the corresponding p value is 0.000 (0%). Since the p value is less than 5 percent, we then accept alternative hypothesis that the population residual (u) is not normally distributed.

Hypotheses Testing

t-test

t-test is known as confirmatory test of significance and decision is based on the outcome using 5% level of significance or 95% confidence level. The estimated parameter is significant if the calculated t-value is greater than its critical value at a particular level of significance.

Table 2: The Significance of the Estimates

Variables	t*	P-value	Decision Rule
DN	0.216508	0.8301	Not Significant
EXR	0.205620	0.8385	Not Significant
LR	0.110176	0.9130	Not Significant
M2	20.29829	0.0000	Significant
C	0.412230	0.6832	Not Significant

Source: Author's computation with the aid of Eviews 10

Discussion

The independent variables are jointly significant to explain the dependent variable or the overall significance of the model, we use F-statistic. So, given the F-statistic value to be 601.0665 with the Probability value of 0.000000 we can conclude that there is a statistically significant effects of explanatory variables on the dependent variable. This is because the probability value of 0.000000 is less than 0.05 i.e. at 5% level of significance which led to the rejection of the null hypothesis which states that there exist no significant effects of the explanatory variables on dependent variable; hence, the acceptance of alternative hypothesis which states that there exists significant effect of explanatory variables on the dependent variable. The finding supports the study of Kogid, Asid, Lily, Mulok and Lognathan (2012) who revealed that the results of Autoregressive distributed lags (ADRL) bounds test carried out by them suggest that long-run co integration exist between both nominal and real exchange rates and economic growth with a significant positive coefficient recorded for real exchange rate. The study also supports Aiya, (2014) who found that currency devaluation limits the performance of poverty alleviation programmes in Edo state. Okaro, (2017) who revealed that there is a significant relationship between Currency devaluation and real GDP in Nigeria; there is a significant relationship between Currency devaluation and external debt in Nigeria.

The result shoed that money supply has significant effect on economic growth in Nigeria. The study supports the finding of Ismaila (2016) who revealed that broad money supply, net export and total government expenditure have significant impact on real output performance in the long run. However, the result showed that depreciation of naira, exchange rate, lending rate have no significant effect on economic growth in Nigeria. The finding corroborates with the study of Nwafor (2018) who revealed that the Naira rate has no significant impact on economic growth in Nigeria and that the Naira rate has a significant influence on inflation rate in Naira

Conclusion

The study examined the effect of currency depreciation on economic growth in Nigeria. The study specifically investigates the impact of depreciation of naira, lending rate, exchange rate and money supply on economic growth in Nigeria. The results from the findings revealed that naira depreciation had negative but insignificant influence on economic growth in Nigeria while exchange rate had a negative and not significant relationship with economic growth in Nigeria; money supply which pose both positive and significant linkage on economic growth in Nigeria and lending rate also posed negative and not statistically significant with economic growth in Nigeria. Thus, the study concludes that currency depreciation affected economic growth in Nigeria negatively.

Recommendations

Based on the finding of this study, the following recommendations were made;

- ❖ Nigerian government should increase its competitive chance by either revaluating its currency or banning importation of some items produced locally to boost the domestic economy and enhance investment atmosphere further by combating inflation rate to single digit.
- ❖ The financial authority through the central bank of Nigeria should managed exchange rate that will reduce cost of doing international transactions and exportation activities within Nigeria.

- ❖ An effective policy should be made based on the fiscal and monetary policies which should be aimed at achieving a realistic exchange rate for naira.
- ❖ There is need to improve on the existing exchange rate management framework in Nigeria. This can influence the rate of income growth.
- ❖ Strict foreign exchange control policies should be adopted in order to help in determination of appropriate exchange rate value. This will go a long way to strengthen the naira and increase the value of Nigerian foreign exchange earnings and hence, economic growth.

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