



Research Paper

Determinant of foreign exchange rate fluctuation on the performance of private investment in Ethiopia

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ABSTRACT

A foreign exchange rate is an important aspect of a nation's international trade, private investment decision, and overall economic performance. The foreign exchange rate level is determined by various factors which include Exchange rate, Governmental debt, Balance payment, and lending interest rate. In light of this, the main objective of this study was to determine the foreign exchange rate fluctuation on the performance of private investment in Ethiopia. The study used a time series correlation research design with the target population being all private investment that is listed in Ethiopia between 2009 and 2019 years. Data was sourced from the National Bank of Ethiopia and published yearly accounts of listed private investment. The study used multivariate linear regression to establish the relationship between foreign exchange rate fluctuations, exchange rate, government debt, balance payment, lending interest rate, and private investment performance indicators. Pearson product-moment correlation was applied to establish the relationship between the variables. The study found that there existed a strong negative relationship between exchange rates, governmental debt, lending interest rate and private investment performance indicators of numbers of employees in private investment, the number of private investment opened, and the capital of private investment in Ethiopia. The positive correlation between balance payment, numbers of employees in private investment, the number of private investment opened, and the capital of private investment performance in Ethiopia. The study recommends that the Government should put up more measures to increase the country's exports, and set clear transparency and directives on the exchange rate, lending interest rate, and governmental debt.

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INTRODUCTION

Ethiopia is currently implementing a five-year (2010/11-2014/15) growth and transformation plan (GTP) in line with its long-term vision of achieving rapid, sustainable, and equitable socio-economic growth and development, reducing poverty, and meeting the Millennium Development Goals (MDGs) within the framework of macroeconomic stability. In order to promote the private investment sector, the Government intends to facilitate the development of industrial clusters, for interconnected firms

in a particular field with links to related institutions such as financial service providers, technical and vocational educational institutions, and various levels of government institutions. These initiatives aim to enable firms overcome constraints in the areas of the capital, skills, technology, logistics as well as to grow and compete by fostering production value chains and achieving efficiency gains. According to the micro and small enterprises development strategy of the GTP, MSMEs are given strategic focus by the

Government due to the fact that they play an essential role in the country's industrial development plan and in the creation of employment opportunities in Ethiopia ("SME finance in Ethiopia", 2015).

Real currency appreciation accounts for a significant part of the widening external imbalance, particularly before the devaluation in October 2017. The birr appreciated rapidly over the past few years and it remains overvalued by 12-18 percent in real effective terms depending on the period of analysis. The sharp appreciation of the United States dollar (USD) during 2015-2016 has caused additional real overvaluation of the birr, which has been reinforced by the gradual nominal depreciation of the birr (Haile, 2019). Even though ambiguous results were observed on the possible effect of devaluation, developing countries have actively used devaluation as a policy instrument. A strong export sector could generate considerable spillovers to other sectors thereby promoting overall economic growth. In the last decade or so, India witnessed strong economic performance coupled with a strong export sector (Nagahisarchoghaei et al., 2018). In most cases, a depreciation of the home currency increases the value of industries with net foreign-denominated assets, while an appreciation decreases the value of these industries. Comprehending the sources of exchange rate fluctuations and their impacts on the economy has been a pressing issue for researchers following the breakdown of the Bretton Woods system. As a result, the economic impacts of the level and volatility of exchange rate movements are explored extensively using a variety of empirical and theoretical strategies. Nevertheless, we know very little about how changes in the level and volatility of exchange rates have an effect on productivity. Despite a major amount of analysis generated on the effects of the rate of exchange movements on investment, growth, and export performance of firms, analysis on firm-level productivity has been restricted. So it is crucial for us to have a better view of how exchange rate fluctuations and movements will impact in micro-level of the economy. Besides, need to understand that if exchange rate movements and fluctuations effect on firm productively directly or it will affect on another Macro level of an economy, and subsequently this changes in Macro level will cause changes in productively (Nagahisarchoghaei et al., 2018). Therefore, the main objective of the study is to measure and determine foreign exchange rate fluctuation on the performance of a private investment in Ethiopia that have different international transactions or no international transactions (domestic firms) but may face indirect exposure to currency movements.

REVIEW OF RELATED LITERATURE

The effects of foreign exchange rate fluctuations are generally understood and general methods of hedging

against them well documented. Despite this, an organization needs to do a careful analysis of these effects on its operations before making a decision on how to deal with them. The theories associated with international transactions and exchange rate systems are highlighted here. It also reviews empirical evidence from other similar research work done before in order to conceptualize and keep the study functioning. Foreign exchange policies like, The National Bank of Ethiopia (NBE) is mandated to do the following:

- i) formulate and implement exchange rate policy,
 - ii) manage international reserves,
 - iii) set limits on foreign exchange assets which banks can hold
 - iv) set limits on the net foreign exchange position of banks.
- Under the Monetary Policy Framework (MPF), NBE seeks to preserve the purchasing power of the national currency to maintain price stability. The headline inflation rate is however high, rising by 4% between the third and fourth quarters of 2017/18 (Lloyd and Teshome, 2018).

Exchange rate systems in Ethiopia

Modern banking in Ethiopia started in 1905 with the establishment of Abyssinian Bank which was based on a fifty-year agreement with the Anglo-Egyptian National Bank. In 1908, a new development bank was also established (Nandeeswara and Tolcha, 2016). These banks were criticized for being wholly foreign-owned. In 1931 the Ethiopian government purchased the Abyssinian Bank, which was the dominant bank and renamed the Bank of Ethiopia, the first nationally owned bank on the African continent. Further financial institutions were established during the Italian occupations of the late 1930s. In 1943 the Ethiopian government established the State Bank of Ethiopia which was operating both as commercial and a central bank until 1963 when it was remodeled into today's National Bank of Ethiopia. After this period, many other banks were established and just before the 1974 revolution, about ten banks were in operation (Nandeeswara and Tolcha, 2016).

Pre-reform exchange rate systems

This period covers both the Imperial and Derg regimes. The legal currency of Ethiopia was issued on 23rd July 1945 by defining the monetary unit as the Ethiopia dollar (renamed as Ethiopian birr in September 1976) with a value of 0.36 grams of fine gold ("Haile Kibret_Is the Ethiopia Birr over valued_0.pdf."). The linkage with fine gold was in accordance with the monetary system established by the Bretton Woods agreement of 1944 which established the exchange rate between the national currency and other currencies with the same arrangement. Accordingly, the

official exchange rate of Ethiopian currency was 2.48 birr per US dollar on July 23, 1945. This fixed exchange rate was under operation for almost two decades. On January 1, 1964, the Ethiopian dollar was slightly devalued to 2.50 birr per US dollar. Following the collapse of the Bretton Woods System in 1971, the Ethiopian dollar was revalued to 2.30 birr per US dollar on 21st December 1971.

The subsequent 10% devaluation of the US dollar had temporarily brought about the undervaluation of the birr. To realign the Ethiopian birr, it was again revalued to 2.07 Ethiopian dollars per US dollar in February 1973. From then on, the Ethiopian currency was pegged to the US dollar at the rate of 2.07 birr per dollar until the massive devaluation of October 1992. This fixed official exchange rate was left unaltered for two decades despite the floating of the major world currencies including the US dollar. In effect, the birr became over-valued in terms of the US dollar as well as many other foreign currencies. According to "Haile Kibret_Is the Ethiopia Birr over valued_0.pdf.", the real exchange rate is consistently higher than the nominal exchange rate which implies that the Ethiopian birr has been over-valued since the mid-1970s. The over-valuation of the birr may be followed by the continuous appreciation in real official exchange rate prior to the huge devaluation of the birr in October 1992 (Nandeewara and Tolcha, 2016).

Post-reform exchange rate system (1991- to date)

Following the overthrow of the Derg regime, EPRDF introduced the auction-based exchange rate determination scheme and the interbank money market. Additionally, the principle of gradualism in the liberalization of the exchange rate market is at the heart of this policy development. In 1993, the NBE introduced the auction-based exchange rate system.

It was conducted on a fortnightly basis and took the form of the discriminatory price which clears the market for the coming two weeks. The supply of funds for this market was obtained from export earnings, loans, and grants. The auction-based exchange rate system was initially worked side by side with the official exchange rate. The system was supervised by a committee composed of the NBE, Ministry of Finance, Ministry of Economic Development and External Cooperation, and two representatives from the private sectors. Before the unification of official exchange rate and auction-based exchange rate systems in August 1995, the official exchange rate was used for import of fertilizer, petroleum, pharmaceutical products, Ethiopia's contribution to international organizations, and external debt service payments. In July 1996 the NBE introduced a weekly auction replacing the previous auction system. The NBE also replaced the retail auction system by a wholesale auction system where banks are considered as wholesale bidders. In 1998, the NBE issued directives aimed at

establishing interbank foreign exchange and money markets. The interbank foreign exchange market (IBFEM) is a wholesale market, where the amount traded is large and the spread between buying and selling rates is narrower than the normal situation for commercial transactions. It is an exclusive market for banks to trade foreign exchange with each other. The establishment of this market is primarily motivated by the recognition that the foreign exchange supply by NBE through the auction system is not sufficient to satisfy the demand of banks. Currently, the exchange rate is determined through an interbank foreign exchange market on a daily basis, a clear indication of the government's policy of gradualism toward liberalizing the exchange rate market.

Exchange rate regimes in Ethiopia

Prior to the adoption of the auction market system for foreign exchange in Ethiopia, there were two foreign exchange markets: the official and the parallel markets. However, from May 1993 to July 1995, three foreign exchange markets were in operation, two of them were legal and one was illegal. The two legal foreign exchange markets were the official rate and the auction marginal rate while the illegal rate is the parallel market rate. Besides, we had what is called the weighted average rate, which was in force between February 1995 and the date of official and auction marginal rates of unification in July of the same year. The official exchange rate regime in effect from the date of unification up to the present time can be described as a single quasi-market determined rate system.

Thus, after the date of unification, the exchange rate of the birr against the US dollar and the resultant cross-rates were being determined through the auction system only. Of course, as pointed out earlier, the parallel market for foreign exchange continues to function despite the efforts of the government to abolish it (Degefa, 2001). Thus, the four dominant exchange rates that were applicable in Ethiopia prior to the date of unification of the official and the auction exchange rates in July 1995 were: the official rate, the parallel rate, the auction marginal rate, and the weighted average rate. The official and the weighted average rates were determined by administrative means, while the parallel and the auction exchange rate are determined by the market and quasi-market system, respectively. Particularly after the adoption of the auction system, the official exchange rate was applied to essential imports such as imports of petroleum products, pharmaceuticals, and fertilizers, and for the government's foreign exchange contributions to international organizations and official debt service payments. Before 1 May 1993, the official exchange rate was applied to all necessities that includes the above and other imports that had been financed at the auction exchange rate between 1 May 1993 and 25 July 1995. The Ethiopian auction market for foreign exchange was established on 1 May 1993.

Sources of supply and demand for foreign exchange

The sources of supply and demand for foreign exchange in the parallel market differ from country to country and depend on the nature and effectiveness of exchange restrictions imposed.

The supply of foreign currency in the parallel foreign exchange market generally has five principal sources, smuggling of exports, under-invoicing of exports, over-invoicing of imports, foreign tourists, and the diversion of remittances from abroad into unofficial channels. Besides, government officials may also divert foreign currency from the official to the parallel market through corruption. Notwithstanding this variety of sources of supply of foreign exchange in the parallel market, there is, in general, a dominant source at each time and in each country. In Ethiopia, the dominant sources of supply of foreign exchange for the parallel market are largely contraband exports (smuggled exports) of goods and services and unofficial private transfers. On the other hand, legal and illegal imports, portfolio diversification motive and capital flight, and residents' travel abroad are generally the principal sources of demand for foreign exchange. Contraband importers (who want to escape import taxes as long as the risk of engaging in illegal import is a worthwhile venture) and invisible payments such as payments for medical, educational and travel services abroad are the dominant sources of demand for foreign exchange in the parallel foreign exchange market of Ethiopia. Also, a large portion of franco valuta imports was financed with the foreign exchange obtained on the parallel foreign exchange market before it was banned by the government in July 1996 (Degefa, 2001).

Theoretical review on determinants of private investment in developing countries

It is commonly and widely thought that investment is the engine of economic growth. Those who acknowledge that this is an oversimplified view of the relationship would nevertheless argue that although other considerations may be relevant, investment is likely to be the major constituting factor to economic growth (Hussien, 2000). This view has implicitly, and sometimes explicitly, underpinned substantial elements of government policy in developing countries in influencing the determinants of investment. Following this view, concerned people in the area such as economists, researchers, and policymakers have undertaken enormous empirical analyses.

Determinants of macroeconomic variables on domestic private investment

Macroeconomic policies may affect economic growth either directly through their effect on the accumulation of factors

of production or indirectly through their impact on the efficiency with which factors of production are used (Hussien, 2000). Macroeconomic stability is important signals to the private sector about the direction of economic policies and the credibility of the authorities' commitment to managing the economy efficiently. Such stability by facilitating long-term planning and investment decisions encourages savings and private capital accumulation (Hussien, 2000).

Domestic inflation rate

Besides the factor derived from the neoclassical investment model, the domestic inflation rate affects the private investment growth rate. Macroeconomic stability such as low and predictable inflation is a strong signal to ensuring a strong response of private investment to economic investors. The direction of the effects of inflation on savings, investment, and growth is ambiguous in the theoretical literature. According to the Tobin, Mundel effect, higher anticipated inflation leads to lower interest rate and cause portfolio adjustments away from real money balance towards real capitals, hence higher inflation would be expected to lead to higher real investment and faster growth. However, in the case of developing countries with under developing domestic capital and financial markets, the portfolio adjustment would most likely be from real money balance to real assets (examples are, land, livestock, jewelry, and consumer durable) (Hussien, 2000)..

The foreign exchange constraint

Another key factor determining private investment is access to international markets. As developing countries' investments have undertaken by importing capital goods, it is supposed that most developing countries are subjected to foreign exchange constraints. Indeed, this was the origin of the debt crisis and again the central focus of the adjustment policies.

In consequence, there is a real limit on import capacity, resulting from foreign exchange shortfalls which are in turn caused by inelastic export supply, exogenous fluctuations in export prices, external credit rationing by international financial institutions and exogenous rise in interest rates on the outstanding debt (Hussien, 2000). This is the likelihood that for most developing countries, private investment will be highly responsive to import capacity.

Interest rate and credit availability

The user cost of capital is an important factor in investment decisions by the private sector. When the user cost is generally raised by increasing the cost of bank credit through raising interest rate or by increasing the

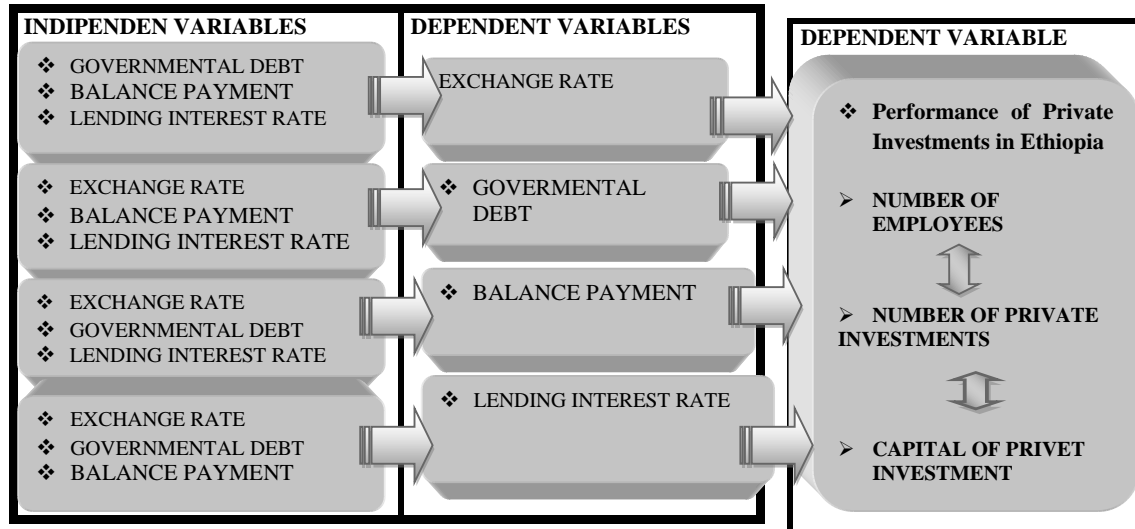


Figure 1: Conceptual framework.
Source: Developed by the author.

opportunity cost of retained earnings, which is the other main source of investment financing, private investment declines (Hussien, 2000). The findings of various empirical studies are not, however, consistent. The negative influence of interest rates on investment is confirmed by certain studies in developing countries (Hussien, 2000). However, studies by others have shown that, in the repressed financial markets in developing countries, credit policy affects investment directly through the stock of credit available to firms with the access to preferential interest rates, rather than through the interest channel). Thus institutional set up of the financial markets is an important factor for the transmission mechanism of the impact of monetary policy and credit policies on private investment.

The effects of exchange rates on trade

The impact of the fluctuations or variations in the exchange rates had been studied extensively and analyzed in the literature, but there was no clear cut evidence about how it might affect the overall trade. The general perception about the variations in the exchange rates was that in a fixed exchange rate regime the currency of a country either was to be devalued or revalued against any other currency. While in a flexible exchange rate system, the changes in the currency are made through depreciation or appreciation. Both kinds of variations had different effects on the trade as it affects the price level of the commodities to be exported and also the goods to be imported. The overall balance of the export receipts and that of import payments determines the trade balance of the country along with the balance of payment, that is, it determined the position of the current account. When examining the effects of the exchange rate on the international trade, it had to be considered in three different aspects, namely; its effects on the exports and

imports of the economy; second, the effects on the other macroeconomic variables important enough in the formulation of the trade and the overall monetary and fiscal policy and third, its effects on a single firm as to how it affects the output of a single firm (Shah et al., 2012) Discussed three different channels in which the changes in the prices could be affected by the exchange rate policies. The first was the System of multiple exchange rates in which different nominal exchange rates were applied to different export and import sectors, which might be similar to different taxes and subsidies used in the import and export sectors. The second effect could be through the changes in the allocation of the resources by the movements in the nominal multiple exchange rates or the unified exchange rates.

Through this the countries could affect the prices of the domestic as well as of the foreign goods or it could influence the wages employed in the factors of production, while the third and final channels was through the changes in the government policies, the distribution of the expenditure among the goods or the level of spending in relation to the income.

CONCEPTUAL FRAMEWORK

The conceptual framework of the study is shown in Figure 1.

Research hypotheses

H1: There is no significant association between the Exchange rate and performance of private investment.

H2: Governmental debt has no significant association with the performance of a private investment.

H3: There is no significant association between Balance payments and performance of a private investment.

H4: There is a significant and positive association between the Lending interest rate and performance of private investment.

RESAERCH METHODOLOGY

Research approach

As stated above, the objective of this study is to investigate the determinant of foreign exchange rate on the performance of private investment in Ethiopia. In order to achieve this objective, the study employed quantitative research methodology and panel data. Quantitative research is a means for testing objective theories by examining the relationship among variables (Lagat and Nyandema, 2016).

As noted by prominent scholars, quantitative panel data give more informative data, more variability, less linearity among variables, more degrees of freedom, and more efficiency. All this could minimize the bias that might result if individuals or firms are aggregated into broad aggregates.

Source and type of data

This research is done exclusively based on secondary data. Data was sourced from the Central Bank of Ethiopia (NBE) and published yearly accounts of listed private investment.

The technique was applied to the study to select the sample in view of the fact that, all the private investment in Ethiopia to be included in the sample should be those which have been in operation for the past eleven years. Financial figures of the sample commercial banks for the study period (2009-2019) were collected from the NBE report and published yearly accounts of listed private investment.

Method of data analysis and presentation

Variable specification

Four regression models are specified to measure the Determinant of foreign exchange rate fluctuation on the performance of the private investment in Ethiopia. The first model is to determine the overall impact of the exchange rate on the performance of private investment while the second model is specified to determine how governmental debt affected the performance of private investment. The third one is how the balance payment affected the performance of a private investment, and the last one is how lending interest rate affected the performance of the private investment in Ethiopia. A number of employees in private investment, number of private investments opened

in Ethiopia, and the number of the capital of private investors is specified as a dependent variable for all models to measure the performance of private investment in Ethiopia.

Model specification

Four econometric models are specified to measure how affected the Ethiopian private investment performance were. The performance of private investment (dependent variable) is represented by a number of employees, the number of private investments opened, and the capital of private investment in Ethiopia. Accordingly, the first econometric model indicated by equation 1 is developed to measure the impact of the exchange rate on the performance of a private investment in Ethiopia. This model was further adjusted to include control of other independent variables as a control variable. The second econometric model as represented by equation 2 is specified to determine how governmental debts affect the performance of private investment in Ethiopia. Again this model is adjusted to include other independent variables as a control variable.

The third econometric model as represented by equation 3 is specified to determine how to balance payment affects the performance of private investment in Ethiopia. This model is adjusted to include other independent variables as a control variable. The last econometric model as represented by equation 4 is specified to determine how lending interest rate affects the performance of a private investment in Ethiopia. Again this model is adjusted to include other independent variables as a control variable.

$$EXCHR_{it} = \beta_0 + \beta_1 GVTDT_t + \beta_2 itBALPY_t + \beta_3 itLENDIT_t + \mu_{it} \quad (1)$$

Where:

EXCHR = Exchange Rate *i* at time *t*

β_0 = The Constant Term

GVTDT = Governmental Debt

BALPY = Balance Payment

LENDIT = Lending Interest Rate

μ_{it} = The Error Term.

$$GVTDT_{it} = \beta_0 + \beta_1 EXCHR_t + \beta_2 itBALPY_t + \beta_3 itLENDIT_t + \mu_{it} \quad (2)$$

Where:

GVTDT_{it} = Governmental Debt *i* at time *t*

β_0 = The Constant Term

EXCHR = Exchange Rate

BALPY = Balance Payment

LENDIT = Lending Interest Rate

μ_{it} = The Error Term.

$$BALPY_{it} = \beta_0 + \beta_1 EXCHR_t + \beta_2 itGVTDT_t + \beta_3 itLENDIT_t + \mu_{it} \quad (3)$$

Where:

BALPY = Balance Payment i at time t

β_0 = The Constant Term

EXCHR = Exchange Rate

GVTDt i = Governmental Debt

LENDIT = Lending Interest Rate

μ i = The Error Term.

$$\text{LENDIT } i = \beta_0 + \beta_1 \text{EXCHR} + \beta_2 \text{GVTDt } i + \beta_3 \text{BALPY} + \mu_i \quad (4)$$

Where:

LENDIT = Lending Interest Rate i at time t

β_0 = The Constant Term

EXCHR = Exchange Rate

GVTDt i = Governmental Debt

BALPY = Balance Payment

μ i = The Error Term.

Descriptive data analysis is employed to analyze this quantitative research data. The techniques used included; descriptive statistics, correlation, and regression analysis. (Maigua and Mouni, 2016) Asserted that correlation is used when a researcher wants to describe the association between two or more variables in terms of magnitude and direction while regression analysis is used when a study is about the prediction of variables from other predictor variables.

RESULTS

Correlation analysis of dependent and explanatory variables

The relationship between the explanatory variables and the dependent variables of the exchange rate, governmental debt, balance payment, lending interest rate, number of employees, number of private investment, and capital of private investment which measures private investment performance in Ethiopia is presented here. The relationship was explained by the parameter coefficients between the explanatory and explained variables.

The coefficients show the magnitude and direction of the relationships, whether it is strong, weakly positive, or negative. As already explained above, the higher the values, the stronger the relationship, and the smaller the coefficient is an indicator of a weak relationship. The sign also shows the direction of the relationship. The positive sign shows a positive relationship and the negative shows the opposite. As can be seen from Table 1, Exchange rate and Governmental debt are negative correlations to the number of employees, the number of private investments, and the capital of private investment in Ethiopia.

These indicate that private's investment performance in Ethiopia had largely been affected by high exchange rate fluctuation and governmental debts on the number of employees, the number of private investment, and the capital of private investment during the last ten years. Likewise, consistent with the theory, the negative relationship of exchange rate and governmental debt to the number of employees, the number of private investment, and capital of private investment for the study period. It indicates that private investment in Ethiopia had achieved low performance during the time of high fluctuation of Exchange Rate And Governmental Debt in Ethiopia.

Moreover, balance payment was in a positive correlation with the number of employees, the number of private investments, and the capital of private investment in Ethiopia. These indicate that the performance of private investment in Ethiopia had been kindly affected by the balance of payment, which means that exported merchandise was higher than imported merchandise within the study period. On the other hand, the lending interest rate was a negative correlation with the number of private investments, and the capital of private investment in Ethiopia. This result indicates that a high lending interest rate was adversely affected by a number of private investments opened and the capital of private investment in Ethiopia. Generally, lending interest was affecting the performance of private investment in Ethiopia. Finally, the number of Employees in private investment, the number of private investments in Ethiopia, and the capital of private investment are positive correlations within each variable to influence private investment performance in Ethiopia.

Regression analysis of dependent and explanatory variables

Regression result from exchange rates on the performance of private investment model

The Adjusted R squared value in Table 2 was 0.932 which shows that only 93.2% of the foreign exchange rate is explained by governmental debt, balance payment, and the lending interest rate on the performance of a private investment in Ethiopia. The remaining 6.8% is explained by other factors. The standard error term is 1.4578. R is the correlation coefficient which shows the relationship between the study variables, from the findings, there was a strong positive relationship between the study variables as shown by 0.976^a.

From the ANOVA statistics in Table 3 above, the processed data, which is the population parameters, had a significance level of 0.000 which shows that the data is ideal for making conclusions on the population's parameter as the value of significance (p-value) is less than 5%, an indication that Governmental Debt, Balance Payment, And The Lending Interest Rate was affected exchange rate that

Table 1: Correlation analysis of dependent and explanatory variables.

Correlations		exchange rate of USD to birr	governmental debt(in millions of USD)	balance payment (in millions of USD)	Lending interest rate(in percent per annum)	number of employees in private investment	number of private investment	capital of private investment(in millions of USD)
Exchange Rate Of Usd To Birr	Pearson Correlation	1	0.938**	-0.789**	0.715*	-0.482	-0.782**	-0.770**
	Sig. (2-tailed)		0.000	0.004	0.013	0.133	0.004	0.006
	N	11	11	11	11	11	11	11
Governmental Debt	Pearson Correlation	0.938**	1	-0.919**	0.776**	-0.464	-0.856**	-0.838**
	Sig. (2-tailed)	0.000		0.000	0.005	0.151	0.001	0.001
	N	11	11	11	11	11	11	11
Balance Payment	Pearson Correlation	-0.789**	-0.919**	1	-0.543	0.617*	0.908**	0.873**
	Sig. (2-tailed)	0.004	0.000		0.084	0.043	0.000	0.000
	N	11	11	11	11	11	11	11
LENDING INTEREST RATE(In Percent Per Annum)	Pearson Correlation	0.715*	0.776**	-0.543	1	0.053	-0.438	-0.442
	Sig. (2-tailed)	0.013	0.005	0.084		0.878	0.178	0.174
	N	11	11	11	11	11	11	11
Number Of Employees In Private Investment	Pearson Correlation	-0.482	-0.464	0.617*	0.053	1	0.708*	0.706*
	Sig. (2-tailed)	0.133	0.151	0.043	0.878		0.015	0.015
	N	11	11	11	11	11	11	11
Number Of Private Investment	Pearson Correlation	-0.782**	-0.856**	0.908**	-0.438	0.708*	1	0.0943**
	Sig. (2-tailed)	0.004	0.001	0.000	0.178	0.015		0.000
	N	11	11	11	11	11	11	11
CAPITAL OF PRIVATE INVESTMENT(In Millions Of USD)	Pearson Correlation	-0.770**	-0.838**	0.873**	-0.442	0.706*	0.943**	1
	Sig. (2-tailed)	0.006	0.001	0.000	0.174	0.015	0.000	
	N	11	11	11	11	11	11	11

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

Source: Author’s SPSS correlation analysis, 2019.

Table 2: Model summary.

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.976 ^a	0.953	0.932	1.4578

a. Predictors: (Constant), Lending Interest Rate, Balance Payment, Governmental Debt

Source: Author's SPSS Regression analysis, 2019.

Table 3: ANOVA^a

ANOVA^a						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	299.329	3	99.776	46.951	0.000 ^b
	Residual	14.876	7	2.125		
	Total	314.204	10			

a. Dependent Variable: EXCHANGE RATE OF USD to Birr

b. Predictors: (Constant), Lending Interest Rate, Balance Payment, Governmental Debt

Source: Author's SPSS Regression analysis, 2019.

measures the performance of a private investment in Ethiopia. The significance value was less than 0.05 indicating that the model was significant.

Table 4 shows the coefficients of the prediction of Exchange Rate access by Lending Interest Rate, Balance Payment, and Governmental Debt. It can be seen that the Governmental Debt, Balance Payment, and Lending Interest Rate of private investment significantly predicted Exchange Rate on the performance of private investment in Ethiopia at the 5% significance level [(t = 5.617, p < 0.05, β = 0.001), (t = 3.271, p < 0.05, β = 0.002), (t = -2.398, p < 0.05, β = -3.749) respectively]. Moreover, a unit changes in Governmental Debt, Balance Payment, and Lending Interest Rate of private investment the conditional average exchange rate access by 2.121 0.928 and -0.426 respectively.

$$\text{EXCHR} = 61.393 + 0.001it + 0.002it - 3.749it$$

The regression model in Table 4 shows that a one-unit change in the governmental debt leads to an increase of 0.001 in the Exchange rate of private investment performance in Ethiopia.

Regression result from governmental debt on the performance of private investment model

Adjusted R squared is coefficient of determination which tells us the variation in the dependent variable due to changes in the independent variable, from the findings, the value of adjusted R squared was 0.988, an indication that there was a variation of 98.8% on governmental debt on the performance of a private investment in Ethiopia due to

changes in translation exposure exchange rate, Balance Payment, and Lending Interest Rate exposure at 95% confidence interval. This shows that 98.8% of changes in Governmental Debt on the performance of private investment in Ethiopia could be accounted for by translation exposure Exchange Rate, Balance Payment, and Lending Interest Rate. Finally, R represents a strong positive correlation between the two constructs. In Table 5, the Exchange Rate, Balance Payment, and Lending Interest Rate for 99.6 % of the variation in the performance of private investment right to use Governmental debt, reflecting a high effect of Exchange rate, Balance payment, and Lending interest rate (challenges perceived by private investment in Ethiopia) on access to Governmental debt.

Table 6 shows the coefficients of the prediction of Governmental debt effect by Exchange Rate, Balance Payment, and Lending Interest Rate. It can be seen that Exchange Rate, Balance Payment, and Lending Interest Rate of the private investment significantly predict Governmental Debt access by private investment in Ethiopia at the 5% significance level P=0.000 [(p < 0.05)] respectively. As depicted in Table 7, it was revealed that there exists strong significant relationship between Governmental debt and Exchange Rate, Balance Payment, and Lending Interest Rate on performance of private investment in Ethiopia with a [(t = 5.617, p < 0.05, β = 588.480), (t = -8.507, p < .05, β = -1.301), (t = 4.692, p < 0.05, β = 3163.437) respectively]. Moreover, a unit changes in Exchange Rate, Balance Payment, and Lending Interest Rate of private investment, the conditional average Governmental debt access by 0.386, 0.928, -0.486, and 0.236 respectively. In terms of the significance of the predictor variables, the individual variables whose t-values are significant (p= <0.05) are considered.

Table 4: Coefficients^a

Coefficients ^a						
Model	Unstandardized Coefficients			Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.	
1	(Constant)	61.393	19.712		3.115	0.017
	GOVERNMENTAL DEBT	0.001	0.000	2.121	5.617	0.001
	BALANCE PAYMENT	0.002	0.000	0.928	3.271	0.014
	LENDING INTEREST RATE	-3.749	1.564	-0.426	-2.398	0.048

a. Dependent Variable: Exchange Rate Of USD To Birr

Source: Author's SPSS Regression analysis, 2019.

Table 5: Model summary.

Model summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.996 ^a	0.991	0.988	948.273

a. Predictors: (Constant), Lending Interest Rate, Balance Payment, Exchange Rate Of USD To Birr

Source: Author's SPSS Regression analysis, 2019.

Table 6: ANOVA^a

ANOVA ^a						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	724727273.901	3	241575757.967	268.650	0.000 ^b
	Residual	6294556.605	7	899222.372		
	Total	731021830.506	10			

a. Dependent Variable: Governmental Debt

b. Predictors: (Constant), Lending Interest Rate, Balance Payment, Exchange Rate Of USD To Birr

Source: Author's SPSS Regression analysis, 2019.

Table 7: Coefficients^a

Coefficients ^a						
Model	Unstandardized Coefficients			Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.	
1	(Constant)	-48644.116	7362.965		-6.607	0.000
	EXCHANGE RATE OF USD to Birr	588.480	104.768	0.386	5.617	0.001
	BALANCE PAYMENT	-1.301	0.153	-0.486	-8.507	0.000
	LENDING INTEREST RATE	3163.437	674.267	0.236	4.692	0.002

a. Dependent Variable: Governmental Debt

Source: Author's SPSS Regression analysis, 2019.

$$GVTDt = -48644.116 + 588.480it - 1.301it + 3163.437it$$

The regression model the Table 7 shows that a one-unit change in the exchange rate leads to an increase of 588.48 in the governmental debt of private investment performance.

Regression result from balance payment on the performance of private investment model

The Adjusted R squared value in Table 8 was 0.953 which shows that only 95.3% Balance payment is explained by Exchange Rate, Governmental debt, and the lending interest

Table 8: Model summary.

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.983 ^a	0.967	0.953	695.952

a. Predictors: (Constant), Lending Interest Rate Exchange Rate Of USD To Birr, Governmental Debt

Source: Author's SPSS Regression analysis, 2019.

Table 9: ANOVA^a

ANOVA^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	98664993.070	3	32888331.023	67.902	0.000 ^b
	Residual	3390446.672	7	484349.525		
	Total	102055439.742	10			

a. Dependent Variable: BALANCE PAYMENT

b. Predictors: (Constant), Lending Interest Rate, Exchange Rate Of USD To Birr, Governmental Debt

Source: Author's SPSS Regression analysis, 2019.

Table 10: Coefficients^a

Coefficients^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-34391.682	6504.458		-5.287	0.001
	EXCHANGE RATE OF USD to Birr	371.170	113.484	0.651	3.271	0.014
	GOVERNMENTAL DEBT	-0.701	0.082	-1.876	-8.507	0.000
	LENDING INTEREST RATE	2236.357	548.132	0.446	4.080	0.005

a. Dependent Variable: Balance Payment

Source: Author's SPSS Regression analysis, 2019.

rate on the performance of private investment in Ethiopia. The remaining 4.7 % is explained by other factors. The standard error term is 695.952. R is the correlation coefficient which shows the relationship between the study variables, from the findings, there was a strong positive relationship between the study variables as shown by 0.983^a.

From the ANOVA statistics in Table 9, the processed data, which is the population parameters, had a significance level of $p = 0.000$ which shows that the data is ideal for making conclusions on the population's parameter as the value of significance (p-value) is less than 5% and an indication that Exchange Rate, Governmental debt, and the lending interest rate was affected by Balance payment of private investment performance in Ethiopia. The significance value was less than 0.05 indicating that the model was significant. Table 10 shows the coefficients of the prediction of exchange rate access by Exchange Rate, Governmental debt, and lending interest rate. It can be seen that the Exchange Rate, Governmental debt, and lending interest rate significantly predicted Balance payment of the private investment

performance in Ethiopia at the 5% significance level [(t = 3.271, $p < 0.05$, $\beta = 371.170$), (t = -8.507, $p < 0.05$, $\beta = -0.701$), (t = -4.080, $p < 0.05$, $\beta = 2236.357$) respectively]. Moreover, a unit changes in Exchange Rate, Governmental debt, and lending interest rate of private investment was the conditional average Balance payment access by 0.651, -1.876, and 0.446 respectively.

$$\text{BALPY} = -34391.682 + 371.170\text{it} - 0.701\text{it} + 2236.357\text{it}$$

The regression model in Table 10 shows that a one-unit change in the exchange rate leads to an increase of 371.170 in the balance payment of private investment performance.

Regression result from lending interest on the performance of private investment model

Adjusted R squared is coefficient of determination which tells us the variation in the dependent variable due to changes in the independent variable, from the findings, the

Table 11: Model summary.

Model summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.939 ^a	0.883	0.832	0.26110

a. Predictors: (Constant), Balance Payment, Exchange Rate of USD To Birr, Governmental Debt

Source: Author's SPSS Regression analysis, 2019.

Table12: ANOVA^a

ANOVA^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3.585	3	1.195	17.527	0.001 ^b
	Residual	0.477	7	0.068		
	Total	4.062	10			

a. Dependent Variable: LENDING INTEREST RATE

b. Predictors: (Constant), Balance Payment, Exchange Rate Of USD To Birr, Governmental Debt

Source: Author's SPSS Regression analysis, 2019.

value of adjusted R squared was 0.832 an indication that there was a variation of 83.2% on the Lending interest rate on private investment performance in Ethiopia due to changes in translation exposure Exchange Rate, Governmental Debt, and Balance Payment exposure at 95% confidence interval. This shows that 83.2% of changes in the Lending interest rate on private investment performance in Ethiopia could be accounted for by translation exposure Exchange Rate, Governmental Debt, and Balance Payment exposure. Finally, R represents a strong positive correlation between the two constructs. In Table 11, the Exchange Rate, Governmental Debt, and Balance Payment exposure for 93.9% of the variation in the performance of private investment right to use Lending interest rate, reflecting a high effect of Exchange Rate, Governmental Debt, and Balance Payment exposure (challenges perceived by private investment in Ethiopia) on access to the Lending interest rate.

Table 12 shows the coefficients of the prediction of the Lending interest rate effect by Exchange Rate, Governmental Debt, and Balance Payment. It can be seen that Exchange Rate, Governmental Debt, and Balance Payment of the privet investment was significantly predicted by the Lending interest rate of privet investment in Ethiopia at the 5% significance level $P=0.000$ [$p < .05$] respectively. As depicted in Table 13, it was revealed that there exists strong significant relationship between Lending interest rate and Exchange Rate, Governmental Debt, and Balance Payment on the performance of private investment in Ethiopia with a [$(t = -2.398, p < 0.05, \beta = -0.120)$, $(t = -4.692, p < 0.05, \beta = 0.000)$, $(t = 4.080, p < 0.05, \beta = 0.000)$ respectively]. Moreover, a unit changes in Exchange Rate, Governmental Debt, and Balance Payment of private investment, the conditional average of lending

interest rate was 0.386, 0.928, -0.486, and 0.236 respectively. In terms of the significance of the predictor variables, the individual variables whose t-values are significant ($p < 0.05$) are considered.

$$\text{LENDIT it} = 14.271 - .120\text{it} + .000\text{it} + .000\text{it}$$

The regression model in Table 13 shows that a one-unit change in the exchange rate leads to a decrease of -0.120 in the lending interest rate of private investment performance.

Regression result from independent

This section presents the regression result of the model that estimates the impact of exchange rate fluctuation on the performance of a private investment in Ethiopia as measured by the independent variable. Model diagnosis and robustness checks are made to enhance the quality of the econometric estimates followed by the presentation of regression results.

Regression result from variable number of employees in private investment model

The regression result shown in Table 14 shows that the estimated result of the regression analysis is not satisfactory. The R- and adjusted R- squared of the regression output is 0.717^a and 0.393 respectively. The value of the R- revealed that there are good relationships between dependent and independent variables, where all independent variables can explain about 71.7% of the performance of a private investment in Ethiopia as

Table 13: Coefficients^a

Coefficients^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	14.271	0.802		17.796	0.000
	EXCHANGE RATE OF USD To Birr	-0.120	0.050	-1.058	-2.398	0.048
	Governmental Debt	0.000	0.000	3.217	4.692	0.002
	Balance Payment	0.000	0.000	1.578	4.080	0.005

a. Dependent Variable: LENDING INTEREST RATE

Source: Author's SPSS Regression analysis, 2019.

Table 14: Model summary.

Model Summary						
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	F	Sig.
1	0.717 ^a	0.515	0.393	109877.484	4.239	0.056 ^b

a. Predictors: (Constant), capital of private investment, number of private investment

Source: Author's SPSS Regression analysis, 2019.

Table 15: Model summary.

Model Summary						
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	F	Sig.
1	0.945 ^a	0.894	0.867	1203.113	33.595	0.000 ^b

a. Predictors: (Constant), capital of private investment, number of employees in private investment

Source: Author's SPSS Regression analysis, 2019.

Table 16: Model summary.

Model Summary						
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	F	Sig.
1	0.945 ^a	0.893	0.866	21805.547	33.292	0.000 ^b

a. Predictors: (Constant), Number Of Private Investment, Number Of Employees In Private Investment

Source: Author's SPSS Regression analysis, 2019.

measured by the number of Employees' in private investment. The remaining 28.3% of the changes in the number of Employees' in the private investment model are explained by other factors that are not included in the regression model. Thus, collectively these variables are not good in explaining the performance of private investment measured by the number of Employees as the Adjusted R-square is insufficiently less than 50%. Therefore, the number of Employees of private investment is not a significant model of regression, because of $P = 0.056$; $P > 0.05$.

Regression result from number of private investment

The Adjusted R squared value in Table 15 was 0.867 which

shows that only 86.7% of the number of private investment is explained by the number of employees and capital of private investment in Ethiopia. The remaining 3.3 % is explained by other factors. The standard error term is 1203.113. R is the correlation coefficient which shows the relationship between the study variables, from the findings, there was a strong positive relationship between the study variables as shown by 0.945^a

Regression result from capital of private investment

The Adjusted R squared value in Table 16 was 0.866 shows that only 86.6% number of capital investment is explained by the number of Employees in private investment and the

number of private investment in Ethiopia. The remaining 3.3 % is explained by other factors. The standard error term is 21805.547. R is the correlation coefficient which shows the relationship between the study variables, from the findings there was a strong positive relationship between the study variables as shown by .945^a

CONCLUSION

As mentioned at the very beginning, the main objective of this study is to identify the determinant of foreign exchange rate fluctuation on the performance of a private investment in Ethiopia. Exchange Rate and Governmental debt are negative correlations to the number of employees, the number of private investments, and the capital of private investment in Ethiopia. These indicate that private's investment performance in Ethiopia that had largely been affected by high exchange rate fluctuation and governmental debts on the number of employees, the number of private investment, and the capital of private investment during the last ten years. Balance payment was a positive correlation with the number of employees, the number of private investments, and the capital of private investment in Ethiopia. Finally, the number of Employees in private investment, the number of private investment in Ethiopia, and the capital of private investment are positive correlations within each variable to influence private investment performance in Ethiopia. The Adjusted R squared value in Table 16 was 0.932 which shows that only 93.2% of foreign exchange rate is explained by governmental debt, balance payment, and the lending interest rate on the performance of private investment in Ethiopia. The remaining 6.8% is explained by other factors. The standard error term is 1.4578. R is the correlation coefficient which shows the relationship between the study variables, from the findings, there was a strong positive relationship between the study variables as shown by 0.976a. Adjusted R squared is coefficient of determination which tells us the variation in the dependent variable due to changes in the independent variable, from the findings, the value of adjusted R squared was 0.988, an indication that there was a variation of 98.8% on Governmental Debt on the performance of a private investment in Ethiopia due to changes in translation exposure Exchange Rate, Balance Payment, and Lending Interest Rate exposure at 95% confidence interval. This shows that 98.8% of changes in Governmental Debt on the performance of a private investment in Ethiopia could be accounted for by translation exposure Exchange Rate, Balance Payment, and Lending Interest Rate. Finally, R represents a strong positive correlation between the two constructs. In Table 16, the Exchange Rate, Balance Payment, and Lending Interest Rate for 99.6% of the variation in the performance of private investment right to use Governmental Debt, reflecting a high effect of Exchange Rate, Balance Payment,

and Lending Interest Rate (challenges perceived by private investment in Ethiopia) on access to Governmental Debt. Table 16 shows the coefficients of the prediction of exchange rate access by Exchange Rate, Governmental debt, and lending interest rate. It can be seen that the Exchange Rate, Governmental debt, and lending interest rate was significantly predicted by Balance payment of the private investment performance in Ethiopia at the 5% significance level [(t = 3.271, p < 0.05, β = 371.170), (t = -8.507, p < 0.05, β = -0.701), (t = -4.080, p < 0.05, β = 2236.357) respectively]. Moreover, a unit changes in Exchange Rate, Governmental debt, and lending interest rate of private investment was the conditional average Balance payment access by 0.651, -1.876, and 0.446 respectively.

RECOMMENDATIONS

The depreciating trend of the Ethiopian birr exchange rate and the government debt against major negative influence on the private performance in Ethiopia by the study, the empirical result of this study shows that on an aggregate basis, the variation in the exchange rate is negatively impacting the profitability of Ethiopian commercial banks. Based on the findings, this study recommended that the Government should put up more measures to increase the country's exports, and set clear transparency and directives on the exchange rate, lending interest rate, and governmental debt.

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