

Determinants of Private Investment Performance in Ethiopia

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To cite this article:

Mikiyas Nigussie Jobir. Determinants of Private Investment Performance in Ethiopia. *International Journal of Accounting, Finance and Risk Management*. Vol. 8, No. 3, 2023, pp. 57-67. doi: 10.11648/j.ijafirm.20230803.11

Received: March 3, 2023; **Accepted:** July 7, 2023; **Published:** July 20, 2023

Abstract: This study was conducted with the main objective of investigating and analyzing factors that determine private investment performance in Ethiopia. Study may give valuable information to the stakeholders in the Investment arena including the government, investors and general public. The study may clearly show the prospects for the investment activity. Moreover, the study explains determinants of private Investment performance in Ethiopia. 27- Years secondary data (i.e. from 1992 to 2018) was collected from various national and international institutions for example EIC NBE, MOFED, and WB. Then, ARDL regressions model was applied after the data sets were transformed to natural log form and, to account for inherent problems of time series data, different tests such as correlation, autocorrelation tests, Heteroscedasticity, multicollinearity and stationarity test were made for. The regression results show that Growth GDP, and access to Domestic credit have significant positive effect on private investment, while Trade openness external debt, and real effective exchange have significant negative effect on performance of private investment under the study period. Hence, to promote the performance of private sector in the country, it is essential to take measures that can improve real income of people, and make trade liberalization and institutions that are crucial to attract private investment. Besides, strengthen financial institutions to provide sufficient financial resource to private investors.

Keywords: Determinants, Private Investment, Ethiopia, Performance

1. Introduction

1.1. Background of the Study

Investment is the commitment of resources made with the hope of realizing benefits which are expected to occur over a reasonably long period of time. It is an economic activity where an individual, group or government buys assets with the hope of receiving adequate risk premium (returns) overtime and the key determinant to economic growth. Investment is the source of manufactured goods that will be used to produce other goods. It is the major foundation of enhancement in the level of literacy, improvement in technology and increase in the capital stock [11].

Rapid economic growth has reliably increased the income and purchasing power of individuals around the world. Indeed, this growth has increased their desire and need for a wide variety of financial products and services

[26] In today's fast changing environment, financial products have gained significant attention from individuals, and attracted individuals to make investment by way of different instruments in order to gain extra income and earnings. In addition, investments have been used as an instrument by individuals as part of their personal financial planning [4].

Ethiopia is one of the fastest growing economies in the world. It has registered impressive GDP growth for several years and the World Bank and IMF forecast continuous average growth of 7 to 7.5 per cent over the 2015-2018 period. Ethiopia is one of the prime destinations for foreign direct investment. The country is attracting investors with tax incentives, low-cost labour, strategic location for trade, and improved transport infrastructure. In recent years, the Government of Ethiopia has made considerable efforts to improve the country's business and investment climate

though the issuance of targeted legislative measures. The revised Investment Code of 1996, as well as the Investment Proclamation, provide incentives for development-related investments and have gradually removed most of the sectorial restrictions on investment [6].

1.2. Statement of the Problem

The private investment sector plays a vital role in the growth process of developing countries and it determines the rate at which physical capital is accumulated. Private investment has been a major economic heart for developing countries. Private investment has a stronger, more positive effect on growth than government investment, because private investment is more efficient and less closely associated with corruption. In Ethiopia, private investment sectors also have an important contribution to make to economic development and poverty reduction [5].

Rise in private investment leads to creation of more capital, job opportunities and higher tax revenue for government, put pressure on public sector to expand road networks and other infrastructure that leads to enhanced investment and growth, help reduce poverty, promotes competition and discipline in the market place & consumers benefit by getting best products at competitive prices. It promotes innovation and research [18].

Ethiopia require fast growing private sector to ensure structural transformation of the economy and its sustainability which require identification of determinants of private investment to address their respective roles and take policy tools and measures. The other rationale behind undertaking this study currently is to evaluate the investment endeavour of the government in different social and physical infrastructure components of public investment. [1]

Previously a number of studies had been conducted in the topic of determinants of private Investment performance in different country including Ethiopia. Such as, "Weldemariam [27] studied the determinants of private investment in Ethiopia" over the period ranging from 1996-2016 motivated by modified flexible accelerator model by applying OLS econometric technique. According to his study the coefficients of real GDP, external debt servicing, national reserve, public investment and access to bank credit rate found to be statistically significant positive effect. On private investment in the study period, while foreign direct investment, interest rate and inflation rate had negative effect in private investment in the study period.

"Osmond, C [18] studied the determinants of private investment in Nigeria" for the period from 1970- 2012 by estimating the Investment rate function derived from life cycle hypothesis while taking into account the structural distinctiveness of developing country. The study employed error correction model to avoid for the problem of spurious relations. The results of the study confirmed that investment rate is positively influenced by the growth rate of disposable income and the real interest rate on bank deposits. Investment rate in Nigeria is found to be influenced negatively due low public infrastructure, high lending rate, low saving rate and

political insatiability.

"Hailu and Debele [15] conducted his research on determinants of private investment in Ethiopia for the period from 1981 to 2010)" the study was conducted using OLS regression model. Augmented Dickey Fuller/ADF/Technique were applied to check for stationary in the data series. Based on the study private investment performance is positively influenced by public investment, real GDP Growth, favorable investment climate, real interest rate on bank deposits and private investment performance in Ethiopia is found to be influenced negatively due high and protracted inflation rate, pressure of external debt, high lending rate.

This study is unique in that, unlike the majority of the past studies reviewed in literature that used static OLS estimation technique to evaluate the relationship between economic variables and private investment, this study used ECM estimation technique together with ARDL modelling technique. The benefit of using these two approaches is the fact that besides getting the effects of Growth GDP, access of domestic credit, external debt, trade openness, exchange rate and interest rate on private investment, the study was able to go a step further and evaluate the nature of effect on private investment. And The research used the most recent available data.

1.3. Objectives of the Study

1.3.1. General Objective

The main objective of this study is to examine the major determinants of private investment performance in Ethiopia.

1.3.2. Specific Objectives

To accomplish general objective of the study, the following specific objectives were developed and stated below:

1. To investigate the effect of gross GDP on Private Investment performance.
2. To evaluate the effect of stable exchange rate on Private Investment performance.
3. To examine the effect of domestic credit on Private Investment performance.
4. To evaluate the effect of trade openness on Private Investment performance.
5. To evaluate the effect of external debt stock on Private Investment performance.
6. To examine the effect of Interest rate on Private Investment performance.

1.4. Research Hypotheses

Based on the empirical studies reviewed the following research hypotheses have been developed.

H₁ gross GDP has statistically significant positive effect on private Investment performance..

H₂ Unstable exchange rate has statistically significant negative effect on private Investment performance.

H₃ availability of domestic credit has statistically significant positive effect on private Investment performance.

H₄ Trade openness has statistically significant positive

effect on private Investment performance.

H₅ External debt stock has statistically significant negative effect on private Investment performance.

H₆ Interest rate has statistically significant negative effect on private Investment performance.

1.5. Significance of the Study

The student assumes that the study may give valuable information to the stakeholders in the Investment arena including the government, investors and general public. The study may clearly show the prospects for the investment activity. Moreover, the study explains determinants of private Investment performance in Ethiopia. Upcoming students may also refer the study and the study serves as spring board to address other non-researched area of investment. Finally the study may come up with a good recommendation that could enhance both domestic and foreign investment.

1.6. Scope of the Study

The study set out to identify and examine the major determinants of private investment performance in Ethiopia. In order to make this research work extensive and manageable, it covers a period of 27 years (1992 – 2018). Within this period, GDP growth, Availability of domestic credit, external debt stock, trade openness, real effective exchange rate and interest rate were examined against the corresponding investment using available published data. The study did not include micro and small enterprises (MSE), public investment, endowment fund investments, non-governmental organizations (NGO). Finally, as the study would be conducted based on sample that was drawn from Ethiopia and generalization of the study is valid for Ethiopia only.

2. Literature Review

2.1. Theoretical Literature Review

The term 'investment' may mean different things in different disciplines and contexts. Thus, it may mean "expenditure to acquire property or assets to produce revenue. Investment is defined as a commitment of funds made in the expectation of some positive rate of return. The return will commensurate with the risk the investor assumes if the investment is properly undertaken. [18]

According to "Mohamed, S. [17] investment is the flow of capital which is used for productive purposes". There is a great emphasis on investment for being the primary instrument of economic growth and development for a country. Investment means an increase in capital spending and it helps in creating a robust economy. In economics, investment can be defined as the purchase of plant, equipment or inventory. In lay terms investment is the acquisition of an asset such as a stock or a bond".

Once an individual receives income, there are two alternatives to spend or to save it. Regardless of how you

use your income, investment can be defined as postponed consumption. Individuals may postpone their current consumption to accumulate for the sake of accumulating. For any or all of these reasons individuals save part of their income rather than spend all of their income. This shows that investment has a strong relationship with saved income. But the extent of investment also depends on the level of consumption. As Theresa observes "there are no other roads of economic development than a compulsory rise in the share of the nation's income which is withheld from consumption. In an economy where living standards of the masses are too low, to curb consumption, it is difficult to mobilize and allocate resources into investment activity [24].

In Ethiopia foreign direct investment has been steadily growing. The federal and regional governments encourage investment: they provide land incentives such as; tax holding, an improved bureaucracy at the federal and regional investment offices. The Ethiopian government's special focus on investment and private investors both Ethiopian and non-Ethiopian national undertakes investment activities in the agriculture, construction and manufacturing sectors, flower farms, cement factories, steel melting and rolling mills are becoming more and more common in Ethiopia. Investment is the current commitment of dollars (birr) for a period of time in order to drive further payments that will compensate the investors: the time and funds are committed, the expected rate of inflation and the uncertainty of the future payment.

2.1.1. Types of Investment

Investment may be categorized differently. From the standpoint of an individual, two types of investment may be distinguished: investment in the means of production, and purely financial investment. Both types may provide a monetary return to the investor. However, from the standpoint of the entire economy, purely financial investments appear only as title transfers, and do not constitute an addition to productive capacity. Investment may also be grouped into foreign (international) and local (domestic) investment. The classification of investment into foreign and domestic depends on the identity of the investor because the identity of the investor would attract several legal consequences. The identity of the investor poses different policy considerations, and this in turn attracts several legal manifestations. Foreign investment is an investment by a foreign investor while a domestic investment is an investment by a domestic investor.

A Foreign Investor is one who is a foreigner not permanently residing in Ethiopia and who invests capital obtained from foreign sources or reinvests profits accruing to her/him from investment already made in Ethiopia.

- (i) Foreign Direct Investment (FDI) is investment that is made to acquire a lasting interest the investor's purpose being to have an effective choice in the management of the enterprise. To be more specific, a foreign direct investment is ownership of assets by

foreign residents for the purpose of controlling the use of these assets. Foreign direct investments are made largely by multinational corporations. Multinational corporations are large business organizations so the sum of money invested is large. Further, those multinational corporations will implement a global strategy in making foreign investment. Consequently, controlling is essential for the implementation of the global strategy.

- (ii) Domestic Investor- Proclamation No 280/2002 Art 2 (5) defines domestic investor as: An Ethiopian or a foreign national permanently residing in Ethiopia having made an investment, and includes the Government, Public enterprises as well as a foreign national, Ethiopian by birth, and desiring to be considered as domestic investors from this definition, an investor to be regarded as a domestic investor s/he or it must either be 1) An Ethiopian national; or 2) A foreigner who is a permanent resident of Ethiopia; or 3) A person of Ethiopian origin who is no longer an Ethiopian national even where s/he does not live in Ethiopia so long as s/he chooses to be treated as a domestic investor; Or 4) Public enterprises which according to Proclamation No. 25/1992, business entities owned by the Ethiopian Government or regional governments or other state entities in Ethiopia. In short, they are publicly owned business entities (Federal Democratic Republic of Ethiopia, 2002).

2.1.2. Investment Opportunities & Policies in Ethiopia

Investment Opportunities: Agro Processing 74 million hectare of arable land (only 15 million hectare cultivated), largest producer of Wheat and third largest producer of Maize in Africa, Has the largest Livestock in Africa, 55 million cattle, 28 million goats, 27 million sheep Top producer of Coffee in Africa and 5th in the world. Opportunities in: Cotton, Flower, Vegetables, Fruits, Herbs, Livestock and Poultry breeding (Investment Opportunities Directory, 2006).

Textile and Textile Garments: Ethiopian textile firms export to Europe & US, Potential to develop a competitive cotton or textiles industry due to favourable climatic and soil conditions, Strong export performance: the Ethiopian garment and apparel industry has grown an average of 51% over the last 6 years: US imports 40% of Ethiopian textile and garment exports UK imports 10% of Ethiopia's textile and garment exports - other European countries import 50%

Ethiopia is endowed with abundant and untapped resources such as large number of trainable labour force, vast arable land, varieties of plant and animal stocks, and precious minerals together with favourable weather conditions According to "CSA [8], indicating one of the potentially large domestic markets in Africa. Since 1991" major economic and structural reforms have been made and different investment incentives have been given to create investment friendly environment in the country. In spite of the macro-economic, political and structural reforms and

ranges of investment incentives given, domestic investment has shown gradual increase. However, the gradual increase is not consistent and investor's enormous development potential is far under fetched.

During 1996 Ethiopia introduced new investment proclamation and reform in the country. The objectives of the proclamation were to expand the domestic market, increase employment opportunities, strengthen private-sector investment, and encourage the use of domestic raw materials and the absorption of foreign production know-how. The proclamation enabled the private sector to invest in most sectors, except in those areas reserved for the government such as defence industries, the production and supply of electricity, telecommunication and postal services, large-scale air and marine transport services and the import of petroleum and weaponry for the government [4].

As a result, overall economic performance has shown a relative improvement in spite of fluctuations (due to recurrent drought, population pressure, border war, and land degradation) over the period, and the country experienced broad-based growth across sectors [27]. The rising importance of private investment during the study period, which was brought about by the liberalization policies pursued by the support of the WB and IMF stabilization polic.

2.2. Empirical Literature Review from Ethiopia

"Woldemariam [27] Studied the determinants of private investment in Ethiopia" over the period ranging from 1996-2016 motivated by modified flexible accelerator model by applying OLS econometric technique. According to his study the coefficients of real GDP, external debt servicing, national reserve, public investment and access to bank credit rate found to be statistically significant positive effect On private investment in the study period, while foreign direct investment, interest rate and inflation rate had negative effect in private investment in the study period.

"Tesfaye, E [23] The study assessed the determinants of investment activities in Nekemte town" he used both primary and secondary data and descriptive analysis was employed. The result shows that output/national income, public investment and exchange rate are the critical variables affecting the performance of private investment. The higher real GDP per capita is assumed increase effective demands for goods and services and thereby inspire private investors..

"Osmond, C [18] studied the determinants of private investment in Nigeria" for the period from 1970- 2012 by estimating the investment rate function derived from life cycle hypothesis while taking into account the structural distinctiveness of developing country. The study employed error correction model to avoid for the problem of spurious relations. The results of the study confirmed that investment rate is positively influenced by the growth rate of disposable income and the real interest rate on bank deposits. Investment rate in Nigeria is found to be influenced negatively due low public infrastructure, high lending rate, low saving rate and political insatiability.

2.3. Conceptual Frame Works

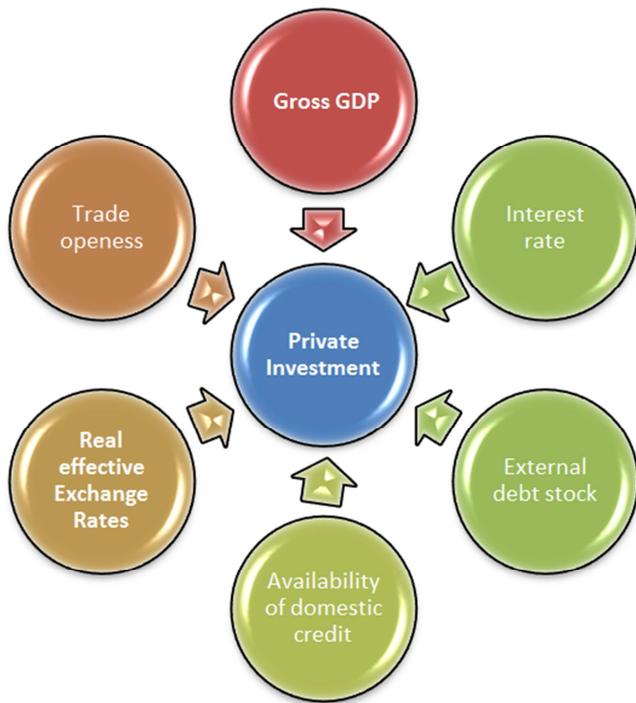


Figure 1. Conceptual frame works.

Source: own construction (by taking the theoretical and empirical review, 2020

3. Research Methodology

3.1. Research Design

A research design is a plan to guide the researcher in collecting, analyzing and interpreting observed fact. [7] there are different research designs, namely exploratory, descriptive and explanatory designs. Explanatory studies are used when exploring relationships between different factors and variables and how they affect each other [21]. This study employed both descriptive and explanatory types of research design. The descriptive analyses was employed to explain the overall Secondary data was collected from different secondary source such as NBE, CSA, EIC, MOFED, and WB and explanatory research design used to explain the relationship between dependent and Independent variable.

3.2. Research Approach

There are three types of research approach these are quantitative, qualitative and mixed research approach. This research would be used quantitative research approach because of the nature of data. That means data was collected from secondary data sources in order to tests the main economic variables that determine private investment performance in Ethiopia. The quantitative approach was employed in order to conduct quantifiable and empirical data with respect to the study area [14].

3.3. Types and Source of Data

The study conducted basically using secondary data. An attempt made to gather a 27-years data on some important variables. The study covered the period 1992 up to 2018; allowing for full annual data on all the variables. The data gathered from various sources such as NBE, EIC, CSA, MoFED and WB. Data thus are purely secondary all used secondary data from national and international statistical organizations, such as WB.

3.4. The Model Specification

When using the ARDL approach, the order of integration of the series does not matter. It can accommodate both I (1) and I (0) series or series that are mutually integrated. The lag order of the ARDL is determined using a recursive method called "from general to specific". To test long-run relationship between private investment and its determinants in Ethiopia using bounds testing, a joint significance test for $H_0: \beta_1 = \beta_2 = \beta_3 = \beta_4 = \beta_5 = \beta_6 = \beta_7 = 0$ against the alternative hypothesis of $H_1: \beta_1 \neq \beta_2 \neq \beta_3 \neq \beta_4 \neq \beta_5 \neq \beta_6 \neq \beta_7 \neq 0$ is performed. The test is based on Wald-test (F-statistics); the asymptotic critical values for the test were supplied [22]. To confirm that cointegration exists, the F-statistics from joint test of significance should be greater than asymptotic critical values from Pesaran for upper bounds and lower bounds, otherwise there is no cointegration. The bounds test approach enables examination of both short-run and long run dynamics following ARDL model estimated in equation 1.

Following the co-integration test using the bounds testing approach the last step is to estimate the long-run and short-run error correction models. The models are specified as follows:

$$\Delta \ln PI_t = \alpha_0 + \sum \beta_1 \ln PI_{t-1} + \sum \beta_2 GDP_{t-1} + \sum \beta_3 INABC_{t-1} + \sum \beta_4 INEXD_{t-1} + \sum \beta_5 INTO_{t-1} + \sum \beta_6 INREER_{t-1} + \sum \beta_7 IR_{t-1} + \theta W + \mu_i \tag{1}$$

$$\Delta \ln PI_t = \alpha_0 + \sum \beta_1 \ln PI_{t-1} + \sum \beta_2 GDP_{t-1} + \sum \beta_3 INABC_{t-1} + \sum \beta_4 INEXD_{t-1} + \sum \beta_5 INTO_{t-1} + \sum \beta_6 INREER_{t-1} + \sum \beta_7 IR_{t-1} + \Omega ECT_{t-1} + \theta W + \mu \tag{2}$$

In equation 1 and 2 all the variables are as previously defined, μ_i is the error term and Ω is the coefficient of the error correction term (ECT_{t-1}). The ECT captures the speed of adjustment to restore equilibrium in the dynamic model.

The ECT coefficient should be statistically significant with a negative sign.

The study has used Eviews 10, statistical software package for the entire analysis of the study.

4. Result and Discussion

4.1. Descriptive Analysis

Table 1. Descriptive Analysis (PI and GDPG are presented in millions of Birr, ABC% GDP, EXD and TO be% of GNP).

	PI	GDPG	ABC	EXD	TO	REER	IR
Mean	6560.538	8.184519	2.772447	61.79479	311.8583	119.7707	12.11519
Maximum	25876.30	13.57260	7.730642	147.1813	604.8284	183.8800	15.50000
Minimum	323.8410	-3.458139	0.608630	10.50851	19.91732	88.85000	6.800000
Std. Dev.	5470.582	4.475559	1.788160	42.94018	183.8718	25.61579	1.792389
Observations	27	27	27	27	27	27	27

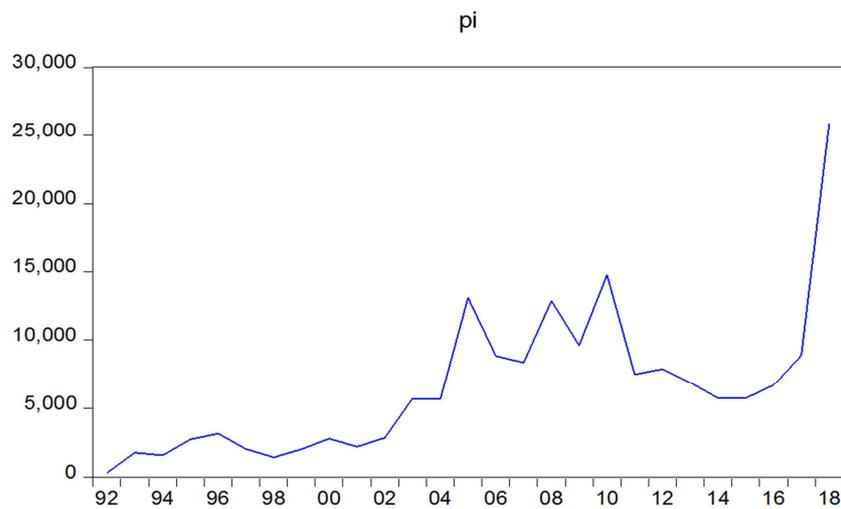
Source: Own computation, 2020

As depicted in the table 1 above, the annual average of Private investment performance during the period of 1992 to 2018 was Birr 6560.54 million. During the study period, highest Private Investment was Birr 25876.30 million that was observed in 2018 the lowest private investment performance was indicated by value of Birr 323.84 million in 1992. During the period of 1992 to 2018 and standard deviation of private investment performance during the study period was birr 5470.58 million. While Gross domestic product had a mean of Birr 8.18 million and a standard deviation of 4.48 with a minimum value of Birr -3.46 million that was observed in 1997 and a maximum value of Birr 13.57 million that was observed in 2003 for the period under study. Credit to the private sector on the other hand had a mean of 2.77% of GDP and a standard deviation of 1.79 with a minimum and maximum value of 0.61% of GDP and 7.73%

of GDP respectively. While External debt had a mean of 61.79% of GNP and a standard deviation 42.94 with a minimum 10.51% of GNP that was observed in 2008 and maximum value of 147.18% of GNP that was observed in 1994.

Trade openness had a mean of 311.86% of GNP and a standard deviation of 183.87 with a minimum and maximum value of 19.92% of GNP and 604.83% of GNP respectively. Real effective exchange rate had a mean of 119.77 and a standard deviation of 25.62 with a minimum and maximum value of 88.85 and 183.88 respectively. Interest rate had a mean of 12.12 and a standard deviation of 1.79 with a minimum value of 6.80 that was observed in 1992 and a maximum value of 15.50 that was observed in 1996 for the period under study.

4.2. Trend of Private Investment in Ethiopia



Source: Own computation, 2020

Figure 2. Trend of Private Investment in Ethiopia from 1992-2018.

As the figure depicted that private investment as percentage of GDP pass through different cyclical movements, related with macroeconomic environment. After the year 2016 onwards it shows an increasing rate, this increment results from the government of Ethiopia creates favorable environment to the private sector development and continued to perform sound economic growth. And as shown from the

figure 2 private Investment performance has declined in the year 2010 this might be due to unstable political atmosphere that of disfavor economic activities. And again starts to rises from 2016 to 2018. As a result, overall economic performance has shown a relative improvement in spite of fluctuations (due to recurrent drought, population pressure, border war, and land degradation) over the period, and the country experienced

broad-based growth across sectors.

4.3. Correlation

Correlation is The second Test of assumption of Multicollinearity An implicit assumption that if there is no relationship between the explanatory variables, they would be said to be orthogonal to one another otherwise we are in the state of multi-collinearity problem where the regression model will end up with an incorrect or erroneous result and

therefore, invalid conclusion will be prevailed Brook (2008). The simplest multi-collinearity test is conducted by testing the correlation coefficient between the independent variables. As a rule (rule of thumb), if the correlation coefficient is above 0.75, we should suspect of multi-collinearity problems among independent variables Gujarati, (2004). In this study the Correlation values for all the regressors, as reported in Table 2 are lower than 0.75 these results suggest that multicollinearity is not a problem in the estimated model.

Table 2. Correlations.

	Gdpg	lnABC	lnEXD	lnTO	lnREER	IRL
Gdpg	1.0000					
lnABC	0.2647	1.0000				
lnEXD	-0.4631	-0.5103	1.0000			
lnTO	0.2349	0.6837	-0.6588	1.0000		
lnREER	0.2189	0.4092	-0.1057	-0.1122	1.0000	
IRL	-0.4775	0.2838	0.3067	0.0380	0.0640	1.0000

(Source: Own computation, 2020)

4.4. Stability Test

The Model stability is confirmed when Ramsey RESET Test F-statistic and Log likelihood ratios are greater than 5%. The researcher would test the model stability with the help of Ramsey RESET Test as stable. The test for stability checks the Probability-value of F- statistic and T- statistic both greater than 5%.

Table 3. Ramsey RESET Test stability test.

	Value	Df	Probability
t-statistic	0.030003	16	0.9764
F-statistic	0.000900	(1, 16)	0.9764

(Source: Eview 10 Own computation, 2020)

4.5. Long Run and Short Run Dynamics Behaviors

This study was conducted with an objective of identifying

Table 4. Long Run Dynamics.

ARDL Long Run Form of regression					
Variable	Coefficient	Std. Error	t-Statistic	Prob.	
GDPG	0.045628	0.018629	2.449298	0.0254	
LNABC	0.682319	0.197806	3.449437	0.0031	
LNEXD	-0.324893	0.125448	-2.589862	0.0191	
LNREER	-2.690165	0.650893	-4.133038	0.0007	
LNTO	-0.729542	0.189257	-3.854776	0.0013	
IR	0.124132	0.084397	1.470811	0.1596	
C	10.94493	2.893646	3.782402	0.0015	
EC = LNPI - (0.0456*GDPG + 0.6823*LNABC -0.3249*LNEXD -2.6902*LNREER -0.7295*LNTO + 0.1241*IRL + 10.9449)					

Source: Own Eview 10 computation, 2020

(i). Impact of Growth GDP on Private Investment Performance

As presented in table 4 above, long run association between Private Investment and growth GDP that the coefficient is positive, the coefficient of 0.045628 suggests

effect of Growth GDP, access of domestic credit, External debt stock, Trade openness, real effective exchange rate and interest rate on Private Investment performance in Ethiopia. The study intends to examine both short-run and long-run association between these variables. After ensuring that the study variables are stationary at first difference, the ARDL (Autoregressive Distributive Lag Model) method was employed to investigate the existence of co-integration both in long and short run.

4.5.1. Long Run Estimation

The other objective this study is to examine the long run relationship between private investment performance and growth GDP, access of domestic credit, External debt stock, Trade openness, real effective exchange rate and interest rate in Ethiopia during the period of 1992 to 2018. The result of long run estimation is presented in table below.

that 1 percent increase in growth GDP result on 4.56 percent increase in private Investment during the period of 1992 to 2018. This association is statistically significant at significance level of 5% that indicates very strong association between Private Investment and growth GDP in long run. Therefore, this study can accept the null hypothesis that

growth GDP and private investment have statistically significant and positive relationship during the period of 1992 to 2018 in long run and reject the alternative hypothesis. The result can be supported by fixed accelerator model and neoclassical model. This assumes that investment as a linear proportion of changes in output. GDP growth can serve as source of increase in aggregate and effective demand thus motivate firms to invest more due to higher sales volume and profitability. This result also supported by the finding [29, 20, 10, 25, 6, 17]. About the positive and significant impact of gross domestic product in the growth private investment. Whereas this study contradicts the finding [24], their finding were private investment is negatively affected by GDP growth.

(ii). Impact of Domestic Credit Availability on Private Investment Performance

From table 4 above, long run association between Private Investment and Domestic credit is statistically significant and positive. The coefficient of 0.682319 suggests that 1% increase in Domestic credit result on 0.682319% increases in private Investment during the period this association is statistically significant at significance level of 5% that indicates very strong association between Private Investment and Domestic credit in long run. Therefore, this study can accept the null hypothesis that Access of Domestic credit and private investment have statistically significant and positive relationship during the period of 1992 to 2018 in long run and reject the alternative hypothesis. The result can be supported by the flexible accelerator model and Keynesian model which assumes Access to domestic credit is one of the explanatory variables which are expected to have a positive influence in the growth of private investment. Since bank credit is relevant to avail access to working capital for investors where there is capital shortage, the prevalence of good and efficient credit facilities has a positive role to promote private investment. This finding is supported by the study [27, 15, 10, 2, 9] among the others and contradict the findings [19].

(iii). Impact of Effective Exchange Rate on Private Investment Performance

From regression result real effective exchange rate has a negative sign and significant relationship with Private investment growth in the long run. The Coefficient of Real effective exchange rate is -2.690165 which is negative. The respective sign is as per the researcher expectation; this show that real effective exchange rate has statistical significant this means holding other explanatory variables constant, one percent increase in real effective exchange rate causes 2.69 percent decreases in private investment in the study period. This result is consistent with the findings [9, 2, 19]. In developing countries import a large amount of good for investment; depreciation of the nation's currency leads to raise the cost of these imported goods and consequently lowers the domestic private investment activity in the country. Likewise, real exchange rate appreciation in the time of higher export capacity causes to lose external

competitiveness; and affects the rate of domestic private investments negatively.

(iv). Impact of Trade Openness on Private Investment Performance

Terms of trade: fluctuation of terms of trade exhibits a negative impact with a 5% level of statistical significance in influencing private investment rates in Ethiopia in the long run. Therefore, this study can reject the null hypothesis that Trade openness and private investment have statistically significant and positive relationship during the period of 1992 to 2018 in long run and accept the alternative hypothesis. It might as trade of one country that have less developed economy becomes more open the infant domestic investment can be negatively affected. Besides this It might have linked with export capacity of the country depends on the primary commodities. Less of export earnings in relative to cost imports of goods and services have negative impact on the level of private investments through deteriorating the current account deficit. This result is consistent with Esubalew [10], Pesaran, M. H., Shin, Y., & Smith, R. J. [20] but contradict with Bello and Lawanson [6], Frinmpong and Marbuah [12].

(v). Impact of External Debt on Private Investment Performance

As presents in table 4 above, long run association between Private Investment and External debt that the coefficient is negative, the coefficient of -0.324893 suggests that 1 percent increase in External debt stock result on 0.324893 percent decreases in private Investment during the period of 1992 to 2018. This association is statistically significant at significance level of 5% that indicates very strong association between Private Investment and External debt stock in long run. Therefore, this study can accept the null hypothesis that External debt stock and private investment have statistically significant and negative relationship during the period of 1992 to 2018 in long run and reject the alternative hypothesis. This result supported by many empirical papers Bello and Lawanson [6], *Asante*. [2] but the result is contradict with Adugna [1] Frinmpong and Marbuah [14] Thus, this external debt creates uncertainty in the macroeconomic environment and 'crowding-out' credits allocated for private investment where large debt service payment has involved and may face liquidity constraints in global capital markets because of large sum of unpaid debt service obligations. As 'debt overhang' explains large amount of debt eliminates the incentive for investors because returns from investors used for reimburse the existing debt an [9] puts pressure on current and future tax burden on private investors.

(vi). Impact of Interest Rate on Private Investment Performance

A high interest rate level raises the real cost of capital and therefore dampens the private investment level. On the other side, poorly developed financial markets in less developed countries and inadequate access to foreign financing for most private projects, both imply that private investment is

constrained largely by domestic savings. These, in theory, are expected to respond positively to higher real interest rates. For this reason, private investment could, on balance, be positively related to interest rates in developing countries Greene and Villanueva, (1990). From regression result the relationship between Private Investment and interest rate is positive and insignificant in the long run. Since interest rate has no statistical significant in this model, it is not further

explained. The result is Contradict finding [13].

4.5.2. Short Run Dynamics and ECM Regression

Short run behavior of economic variables is captured through dynamic modeling. If there is long run relationship among the variables, an error correction model can be formulated that portray both the dynamic and long run interaction between the variables.

Table 5. Short Run Dynamics and ECM Regression.

ECM Regression				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	10.74888	3.868361	2.778665	0.0129
LNPI(-1)	-0.982087	0.189158	-5.191893	0.0001
GDPG	0.044811	0.018118	2.473300	0.0242
LNABC	0.670097	0.223059	3.004126	0.0080
LNEXD	-0.319073	0.139733	-2.283455	0.0355
LNREER(-1)	-2.641977	0.968972	-2.726578	0.0144
LNT0	-0.716473	0.184709	-3.878934	0.0012
IR	0.121909	0.092606	1.316426	0.2055
D(LNREER)	-3.912143	0.523057	-7.479376	0.0000
CointEq(-1)	-0.982087	0.12 544	-7.885451	0.0000
R-squared	0.771573	Mean dependent var		0.068541
Adjusted R-squared	0.762056	S.D. dependent var		0.528477
S.E. of regression	0.257789	Akaike info criterion		0.200449
Sum squared resid	1.594918	Schwarz criterion		0.297226
Log likelihood	-0.605840	Hannan-Quinn criter.		0.228317
Durbin-Watson stat	1.305522			

Source: Own Eview 10 computation, 2020

Similar to the results under the estimated long-run model, the coefficient of growth GDP in the short-run has a positive sign and statistically significant at 5% levels confirming economic theory that economic growth positively affects private investment. in The short run private Investment and access of domestic credit is positive and significant at 5% This suggests that access of domestic credit has positive effect on private investment in short-run,

From regression result under the estimated long-run model, the coefficient of External debt stock in the short-run has a negative sign and statistically significant at 5% levels confirming economic theory that external debt negatively affects private investment in the short run. The relationship between Private Investment and interest rate is positive and insignificant in the short run. Since interest rate has no statistical significant in this model, it is not further explained.

$$\Delta \ln PI_t = \alpha_0 + \sum \beta_1 \ln PI_{t-1} + \sum \beta_2 GDPG_{t-1} + \sum \beta_3 LNEXD_{t-1} + \sum \beta_4 LNABC_{t-1} + \sum \beta_5 LNT0_{t-1} + \sum \beta_6 LNREER_{t-1} + \sum \beta_7 IR_{t-1} + \Omega ECT_{t-1} + \theta W + \mu$$

μ is the error term and Ω is the coefficient of the error correction term (ECT_{t-1}). The ECT captures the speed of adjustment to restore equilibrium in the dynamic model. The ECT coefficient should be statistically significant with a negative sign.

The error-correction term (ECT) coefficient term is estimated of back adjustment speed to the long-run equilibrium relationship. The (ECT) should have a negative sign and significantly different from zero. The negative sign of (ECT) means that the deviation event between actual and long-run equilibrium level would be adjusted back to the

The result is Contradict finding [12, 22].

Trade openness fluctuation of trade openness exhibits a negative impact with a 5% level of statistical significance in influencing private investment rates in the Ethiopia. It might have linked with export capacity of the countries depends on the primary commodities. Less of export earnings in relative to cost imports of goods and services have negative impact on the level of private investments through deteriorating the current account deficit. From regression result Unstable exchange rate movement affects private investment rates negatively in the short run. Real devaluation of exchange rate affects private investment negatively through raising the real cost of imported goods.

To capture the speed of adjustment, the following dynamic error correction model is estimated as depicted by the equation bellow:

long-run relationship in the current periods to clear this discrepancy. As it can be seen from the above table, the value of ECM is -0.982087 which is within the acceptable range in magnitude and appropriate in sign, the coefficient of ECM shows that short run deviation of private investment is corrected/adjusted to long run equilibrium very fast at a rate of 98.2% each year. The negative sign shows that the short run private investment dynamics is below the long run equilibrium level.

5. Coefficient, (R2) and Adjusted R2 Determination

The constant has a positive significant coefficient of 10.9449 with a P- value of 0.0129 hence in our case significant at 5% confidence level. Holding all independent variables constant, or there is no other activities, Private investment will be increases by 10.94493% in Ethiopia. The estimated results show that R2 and adjusted R2 of 0.771573 and 0.762056 respectively. This signifies that 76.21 percent of the variations in private investment are explained by the independent variables. High value of adjusted R2 indicated that the independent variables (growth GDP, domestic credit, Interest rate, Trade openness, External debt and real effective exchange rate) succeed to explain the private investment performance.

6. Summary, Conclusion and Recommendation

6.1. Summary of Findings

Primary objectives of the study were; investigation of determinants of private sector investment performance and the effect of the determinant factors using a time series data from 1992-2018. The study used secondary data, sourced from EIC MOFED, NBE, and World Bank data basis.

The coefficients of growth GDP, access to domestic credit, trade openness, real effective exchange rate, external debt found to be statistically significant in the long run, and the variables explain changes in private investment in the study period. Further, the study found that coefficient of interest rate is insignificant in short run and long run therefore; the variables could not explain changes in private investment in short run and in the long run in the study period in Ethiopia.

6.2. Conclusion

The major objective of this paper was to identify the determinants of private investment performance in Ethiopia. To fulfill this objective, the researcher have reviewed theoretical explanations and empirical literature regarding to the main determinants of private investment the context of developing countries and in order to identify the trend and characteristic of private investment in Ethiopia the study have evaluated various reports. In addition to the theoretical and empirical literature, the empirical analysis that is conducted by using ARDL econometrics technique identifies the determinants factors in Ethiopia. The major findings that are obtained through empirical analysis can be concluded as follows:

The study found out that growth GDP and access to domestic credit have positive significant effect on private investment in Ethiopia and explaining variations in private investment during the study period. However, the study found out that trade openness, External debt and real effective exchange have negative effect on private investment during the study period. Interest rate has no statically significant effect on explaining private investment

in the short run and long run.

6.3. Recommendation

1. From the analysis of the determinants of private investment performance in Ethiopia, the study recommends that; since gross domestic product is an important variable that determine private investment in the Ethiopia economy, it is necessary for policy makers to first seek to understand these factors that the study have found are important in the country.
2. For sufficient gross of private investment and sustainability of Ethiopian's economy, the government needs to promote access to domestic credit for private investor is which is found to have positive and significant impact for private investment to grow, thus address the need to extend the operation of financial institutions such as commercial banks even in remote areas the government should strive to expand and distribute financial institutions such as banks and micro finance institution towards rural and remote areas to promote saving mobilization and credit availability to the growth of private investor.
3. ARDL results show that economic openness negatively affect private investment growth in Ethiopia during review period. Since economic openness had a negative impact on the private investment growth, and this is related to fact that as trade of one country becomes more open the infent domestic investment can be negatively affected. Besides this our imports are more significant than exports, it hence recommended that there is need for the government to sustain the current efforts of diversifying of the economy to achieve export-led type of economic growth. For example, the agricultural sectors and manufacturing industries should be given priority to produce more in such a way that the country can produce a surplus for exports and not only to produce consumption goods and trade liberalization of the country make optimal.

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