

DETERMINANTS OF PRIVATE INVESTMENT IN ETHIOPIA



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ABSTRACT

Private investment is viewed as a powerful tool for creating innovation, to growth economic output and poverty reduction. For this reason, the Ethiopian government is taking steps to smooth the way for the private sector through various policies to increase their investment levels. Hence, this study seeks to focus on the various factors that determine private investment in Ethiopia. Using OLS time series data from 1990 to 2018 the study would employed explanatory analysis and econometrics analysis using augmented dickey fuller (ADF) test to check the stationary variables.

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ACRONOMY

ADF	Augmented Dickey-Fuller
AIC	Akaike Information Criterion
ECM	Error Correction Model
GDP	Gross Domestic Product
IFC	International Finance Corporation
IMF	International Monetary Fund
INFR	Inflation Rate
MOFED	Ministry of Finance and Economic Development
MS	Money Supply
NBE	National Bank of Ethiopia
NPI	Net Private Investment
ODA	Official Development Assistance
RGDP	Real Gross Domestic Product
SSA	Sub-Sahara Africa
WB	World Bank

CHAPTER ONE

INTRODUCTION

1.1 Back ground of the study

The role of investment in the economic growth of nations has been one of the most crucial issues for development related discussion among policy makers, researcher, donors, scholars as well as various economic and financial institutions in developing as well as developed nations. This view originates mainly from the fact that investment plays a central role in economic development in every country. Investment is taken as one of crucial determinants of the rate of physical accumulation and productive capacity of an economy by raising the productivity of factors of production through the use of new techniques of production and promotion of technological progress. It is argued that investment is the major foundation of enhancement in the level of literacy, improvement in technology and increase in the capital stock and Gross domestic investment boosts economic growth by increasing physical capital directly and indirectly through technological spill over (Khan & Reinhart, 1990). The investment sector has the significant contribution to the economic growth through creating an employment opportunities, enhancing technical progress and introducing new techniques of production. in developing countries during the year 1980s, decline in economic progress of countries was directly linked with the decline in gross capital formation (Greene and Villanueva ,1991).

The investment can be defined as expenditure on real capital goods. It is the amount by which the stock of capital of a firm or economy increase and It is a crucial macroeconomic variable which paves the way for achievement of growth and development. Investment is one of the major contributors to economic growth and development in both developed and developing countries. This is because through investment, new technology can be adopted, employment opportunity can be created, incomes can grow and living conditions of the people can improve and also investment is an essential factor in bringing an economy out of the sludge.

A good investment climate provides opportunities and incentives for investors to invest profitably, create jobs, and expand national output thereby increasing private investment and

economic growth (World Bank, 2004). This Report notes that improvements in the investment climate in developing countries are key to increasing the flow of investments and, consequently, a higher level of economic growth and development. However, in the poorest developing countries, such as Ethiopia, businesses frequently operate in investment climates that undermine their incentive to invest and grow, thus undermining the performance of trade (UN, 2005). In line with this environment, Ethiopian investors complain about poor infrastructure, particularly power shortages; poor transport; poor telecom connectivity of business locations and lack of efficient tax administration (Mima and David, 2012; World Bank, 2004). Ethiopia ranked 124th out of 148 countries in terms of the infrastructure in the 2013/14 global competitiveness report.

Keeping the need for investment in the mind, there is growing realization by many governments that the complex tasks of development cannot be achieved through an exclusive reliance of public sector and that the potential of private sector should be utilized more fully to meet the development needs of a society. Thus, private investment plays a significant role to the economic growth and development than the public one, because private investment is more efficient in resource mobilization and less closely associated with corruption and also it is because of private investment is led by market forces keeping social and political actors aside. Khan and Reinhart Sub-Saharan Africa (SSA) is generally described as the poorest region of the world one that is getting poorer in the face of sustained growth and significant improvement of living standard in the rest of the world, (World Bank, 2005). This general characteristic of the region almost implies uniform and wide spread poverty naturally such an implied uniform and deteriorating welfare can only assume homogeneous and stagnant economic growth at investment and capital accumulation the driving force to growth show a marked difference across countries the differences are significant at aggregate level. But also, when total investment function is further disaggregated to capture the dynamic of public and private accumulation Seyoum (2006).

Since Ethiopia is one of the sub-Saharan African countries, private investment rate is very low still in 1960s as well in 1980's compared with other developing countries. The Ethiopian private investment performance has been weak for long period of time. It had stagnantly low until the end of socialist regime. In spite of little improvement in the post-socialist era, the

share of private investment in GDP has never been above 6 percent even until 2006 (Beferadu, 2007).

But, now a day private investments play a crucial role in economic growth and development. This because it has a leading role in job creation, generating income and profit for reinvestment and tax for governments private investment also although a very important factor bringing economic development its working or efficiency is determined by different socio economic factor which may have varying effect on private investment. the importance of this study is to determine the factors that affect private investment and recommend the policy that help to enhance the private investment and economic growth entails identifying factor that affect private investment in Ethiopia (Esubalew, 2011).

1.2 Statement of the Problem

Private investment is an engine for creating innovation, to growth economic output and poverty reduction. The growth of an economic output can be attributed to high investment ratio's Empirical studies have shown that investment plays a very important role in the growth of both developed and the underdeveloped economies. As noted by Muluberhan (2006). As mentioned in a number of researches Ethiopia is one of the least developed countries in the world by any economic measurement. To come out of this miserable economic situation a sound investments play a decisive role. However, the need for promote economic growth and bring about development has severely been constrained by weak performance of private sectors (Muluberhan,2006).

According to Ethiopian Investment Agency (2014), Ethiopia has great potential for investments for several reasons, among the top performing economies with an average GDP growth of 11% per annum since 2004 (MOFED),stable political environment, government actively promoting private sector investment with attractive incentive packages, large domestic market as the second most populous country in Sub-Saharan Africa, located in the crossroads between Africa, the Middle East and Asia, Preferred access to many international markets, projected national investments of \$73 billion to upgrade hard and soft infrastructure(GTPI), access to low cost electricity due to investments in hydroelectric power.

To attain a sustained rate of economic growth, it is now widely accepted that Expansion of private investment should be the main source of economic growth in many less developed countries including Ethiopia. This growth strategy stems from the dissatisfaction with public sector dominated investment program, which in most cases were observed to be inefficient – Beferadu (2002). He has been argued that marginal productivity of private investment is higher and thus plays a more important role in growth process than does public investment. After post socialist Ethiopia is now in the process of reorientation toward more liberalized economy with opportunity for private investment. Despite this fact however, role of private investment did not grow significantly as it was expected.

Many factors have role to lead low level of private investment growth in Ethiopia understanding the Ethiopian investment process is important as its economy still remain agrarian. But, to the best of my knowledge the Ethiopian investment and its constraints have not been well studied. Therefore, this study will have try to contribute to the investigation of the trends and main determinants of private investment in Ethiopia, tries to address the question of what measure should be taken to promote private investment in Ethiopia.

Many researchers had been studied on the private investment and factor that determine it. From those, (Ashebir,1994), (Melaku, 2011), (Esubalew, 1999), (Mignot, 2009) ,(Ambachew ,2007) studied with gross domestic product, interest rate, and real exchange rate as major determinant of private investment. But, these papers will focus on money supply, public investment and government policies as determinant of private investment in Ethiopia. And also, the study will try to extend the time to recent period of time using descriptive and time series econometric method.

1.3 The Objective of the Study

1.3.1 General Objective

The main objective of the study is to examine the determinant of private investment in Ethiopia

1.3.2 The specific objective includes as:

The researchers want to emphasis on the following specific objectives:

- To examine the impact of public investment on private investment in Ethiopia

- To examine the impact of interest rate on private investment.
- To examine the effect of broad money supply on private investment
- To examine the impact of real gross product on the private investment
- To examine the impact of inflation rate on the private investment

1.4 The research hypothesis

In order to evaluate and identify the determinants of private investment in Ethiopia the following hypothesis would be tested

H1: Real gross domestic product has a positive impact on private investment

H2: Public investment positively influence the private investment

H3: Inflation rate has a negative impact on private investment

H4: Interest rate has a negative impact on private investment

H5: Broad money supply positively influence the private investment

1.5. Significance of the Study

It is not new for all that private investment would provide an important role for countries economic growth which further leads to development. Since private investment is the basic instrument for the development, it is very important to study factor that affect private investment in Ethiopia to enhance it. This paper would have its own importance for policy makers to improve the level of private investment. In addition to this; the paper would consider as basis for further research literature in this area and help students as base for their study.

1.6 Scope of the study

Ethiopia has large number of population but has lowest private investment in the economy. Since private investment is the basic instrument for the job creation, it is very important to study factor that affect private investment in Ethiopia to enhance it. Because of these the study would focus on the examining of private investment in Ethiopia from 1990 to 2018 by using the explanatory variables(public investment, inflation rate,interest rate ,board money supply ,gross domestic product).

1.7 Organization of the Study

This study would be organized into five chapters. Chapter one contain an introduction , background of study and statement of problem. Chapter two contain the theoretical and empirical literatures. Chapter three presents methodology of the study. Chapter four discusses descriptive analysis with trend of private investment and econometric analysis. Last chapter includes conclusions and recommendation based on the result of the study

CHAPTER: TWO

REVIEW LITERATURE

2.1. Theoretical literature review

2.1.1. Basic Concepts of Investment

An investment is simply any vehicle in to which funds can be placed with the expectation that they would generate positive income or that their value would be preserved or increased. The reward or returns, from investing are received in either of two basic forms current income increased value. For example, money invested in a bank saving account provides current income in the form of periodic interest payments; similarly, buying apiece of raw land is an investment, because. The land is expected to increase in value between the time it is purchased and the time it is sold. In short investment funds placed within the expectation value the time between purchasing and sold. (Michael D. Joe bonk, 1998).

Investment broadly, defined as a flow of expenditure devoted to product, producing goods and services, which are mostly not intended for immediate consumption where this project may take the form of adding to both physical and human capital as well as investors. (Dictionary of modern economics).

The relevance of investment to economic growth in developing countries has received a particular attention among researchers and policy makers only after 1990s. While the government to concentrate on improving to social over heads capital and poverty alleviating goals is based on two reasons. First there has been growing empirical evidence the relative efficiency of private over public investment in the productive sector. Second, there is physical complementary between private and public investment (world development report,2005).

Given the above fact proposition we can understand that investment is one of critical element which determines the level and pace of economic growth. Investment helps to introduce technology change and the quality of resource, which in turn improving productivity (Ethiopian economic association, 2005/06).

Investment in the Keynesian system defined in desired business investment, expenditure were one of the major factors that Keynes through were responsible for change in income. Keynes believed that consumption was a stable function of disposable income, consumption was primary induced expending; meaning expenditure that depends directly on income that be lived that investment was the most highly variable of the autonomous components of aggregate demand believed that variable investment spending was primary responsible for income instability (Foreign, 2005).

According to the classical economists, investment is interest elastic, this important from the point of view of monetary policy because if this the case investment could be increased sufficiently enough by increasing the money supply particularly in a slump, a resource to the easy money policy would have been sufficient to review the economy and ensure full employment. Keynes. challenged this faulty classical view which held that the investment was influenced more by income rather than by interest rate except marginally. During depression when the marginal efficiency of capital suffers a near collapse, no amount of lowering of the interested rate would help review the investment in the economy (Vals,2006).

2.1.2. Importance of investment

Individual investor can participate in the growth and prosperity of the country, by investing the security market more importantly even small investors can share the growth investing small amount of money over long period of time. If you are for a long term intensified group of societies, you will proper financially and which help economic system work even better long term investment helps to create new jobs and new economic opportunities (Mankiw, 1994).

2.1.3. An overview of investment theory

The theories of investment date back to Keynes (1936), who first called attention to the existence of an independent investment function in the economy. A central feature of the Keynesian analysis is the observation that although savings and investment must be identical ex-post, savings and investment decisions are, in general, taken by different decision makers and there is no reason why ex-ante savings should equal ex-ante investment. The next phase in the evolution of investment theory gave rise to the accelerator theory, which makes investment a linear proportion of changes in output. In the accelerator model, expectations,

profitability and capital costs play no role. Keynesian theory has traditionally favored the accelerator theory of investment while disregarding the role of factor costs. A more general form of the accelerator model is the flexible accelerator model. The basic notion behind this model is that the larger the gap between the existing capital stock and the desired capital stock, the greater a firm's rate of investment. The hypothesis is that, firms plan to close a fraction of the gap between the desired capital stock, K^* , and the actual capital stock, K , in each period. This gives rise to a net investment equation of the form of:

$$I = \delta (K^* - K-1) \dots \dots \dots (1)$$

Where I = net investment, K^* = desired capital stock, $K-1$ = last period's capital stock, and δ = partial adjustment coefficient. Within the framework of the flexible accelerator model, output, internal funds, cost of external financing and other variables may be included as determinants of K^* . The flexible accelerator mechanism may be transformed into a theory of investment behavior by adding a specification of K^* and a theory of replacement investment. Alternative econometric models of investment behavior differ in the determinants of K^* , the characterization of the time structure of the investment process and the treatment of replacement investment. In the flexible accelerator model, K^* is proportional to output, but in alternative models, K^* depends on capacity utilization, internal funds, the cost of external finance and other variables.

Jorgenson (1971) and others have formulated the neoclassical approach, which is a version of the flexible accelerator model. In this approach, the desired or optimal capital stock is proportional to output and the user cost of capital (which in turn depends on the price of capital goods, the real rate of interest, the rate of depreciation and the tax structure). In the "Q" theory of investment (which is also in the neoclassical framework) associated with Tobin (1969), the ratio of the market value of the existing capital stock to its replacement cost (the "Q" ratio) is the main force driving investment. Tobin argues that delivery lags and increasing marginal cost of investment are the reasons why Q would differ from unity. Another approach known as "neoliberal" emphasizes the importance of financial deepening and high interest rates in stimulating growth. The proponents of this approach are McKinnon (1973); The core of his argument rests on the claim that developing countries suffer from financial repression (which is generally equated with controls on interest rates in a downward

direction) and that if these countries were liberated from their repressive conditions, this would induce savings, investment and growth. Not only will liberalization increase savings and loan able funds, it will result in a more efficient allocation of these funds, both contributing to a higher economic growth. In the neoliberal view, investment is positively related to the real rate of interest in contrast with the neoclassical theory. The reason for this is that a rise in interest rates increases the volume of financial savings through financial intermediaries and thereby raises investible funds, a phenomenon that (McKinnon, 1993) calls the “conduit effect”. Thus, while it may be true that demand for investment declines with the rise in the real rate of interest, realized investment actually increases because of the greater availability of funds. This conclusion applies only when the capital market is in disequilibrium with the demand for funds exceeding supply.

Rostow argued that advanced countries had all passed the stage of “take off”. In to self-sustain growth and under developed countries where still in either the traditional society or the “precondition” stage had only to follow a certain set of developments to take off in their turn in to self-sustain economic growth. The principal strategies of development necessary for only take off was the mobilization of domestic and foreign saving in order to generate sufficient investment to accelerate economic growth (Todaro, 2000)

2.1.4. Historical development of investment policy in Ethiopia

According to the document of the Ethiopian investment agency, there are many reforms, investment condition, and exemption of various duties. These have radically changed the Ethiopia’s investment today. 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; Ethiopia's investment code prohibits foreign investment in banking, insurance, and financial services. The remaining state-controlled sectors include telecommunications, power transmission and distribution, and postal services with the exception of courier services. Manufacturing of weapons and ammunition can only be undertaken as joint ventures with the government.

Other areas of investment reserved for Ethiopian nationals include: broadcasting; air transport services; travel agency services, forwarding and shipping agencies; retail trade and brokerage; wholesale trade (excluding supply of petroleum and its by-products as well as

wholesale by foreign investors of their locally-produced products); most import trade; capital goods rentals; export trade of raw coffee, chat, oilseeds, pulses, hides and skins bought from the market; live sheep, goats and cattle not raised or fattened by the investor; construction companies excluding those designated as grade 1; tanning of hides and skins up to crust level; hotels (excluding star-designated hotels); restaurants and bars (excluding international and specialized restaurants); trade auxiliary and ticket selling services; transport services; bakery products and pastries for the domestic market; grinding mills; hair salons; clothing workshops (except garment factories); building and vehicle maintenance; saw milling and timber production; custom clearance services; museums, theaters and cinema hall operations; and printing industries. However, the GOE has indicated an interest in bringing foreign private sector expertise to some of the above sectors. Ethiopian-Americans can obtain a local resident card from the Ministry of Foreign Affairs that allows them to invest in many sectors closed to foreigners. Foreign firms can supply goods and services to Ethiopian firms in the closed sectors.

The 2012 amendment to Ethiopia's investment proclamation introduced provisions for the establishment of industrial development zones, both state-run and private, with favorable investment, tax, and infrastructure incentives. The amendment also raised the minimum capital requirement to US\$200,000 per project for wholly-owned foreign investments and US\$150,000 for joint investments with domestic investors (or US\$100,000/US\$50,000 respectively in the areas of engineering, architectural, accounting and auditing services, business and management consultancy services, and publishing). A foreign investor reinvesting profits/dividends may not be required to allocate minimum capital.

2.1.5. Private Investment Development

The mobilization of private investment is essential for development, while public expenditure whether by developing countries government or through official development assistance (ODA) provided by developed countries governments is requires it has become clear that the demand for finance out strips that which the public sector can provide. Report on international conference on financing for development (UN, 2002).

The Monterey consensus, recognized that a substantial increase in ODA and other resource including private investment will be required if developing countries are to achieve the international agreed development goal and objectives. Including those contained in the United Nations Millennium Declaration. Mobilizing investment in developing countries can contribute directly to economic growth. The challenge for developing countries and their development partners is to identify the best way to influence the conditions that lead to increased levels of private investment. This guidance document focuses on the role of ODA that can play in helping developing countries to mobilize private investment. However, on handling private investment should not focus on attracting foreign direct investment (FDI) alone. While FDI to developing countries has increased significantly in the last 20 years, the bulk of investment is domestic (World Bank, 2004 E.C.).

Profitable private investments, where they do not rely on protection, generally contribute to economic development, through the productive use of capital. In addition, they may contribute to environmental, social, or corporate governance improvements. Traditionally, this contribution to these key components of sustainable development has been through the use of minimum environmental and social standards. The International Finance Corporation (IFC), as part of the World Bank Group, has invested considerably in the development of such standards. They have become an intrinsic part of the contribution significantly of the understanding of environmental and social influence and the processes through which the adverse impact can be minimized (McKinnon (1973)).

2.1.6. Private Sector Development

There are different perspectives on how private sector development might contribute to poverty reduction and sustainable economic growth. The private sector was considered to play a crucial role, creating opportunities for employment and income generating, with emphasis then on the policy needed to make market expansion (work,) the process of structural adjustment sought to restrain the re-orient government intervention in the markets to ensure that the private sector ranging from small farmer cooperatives to larger national and multinational companies operated more freely (Foster and Weston 2006).

Private sector development, the performance of private sector activities, is now seen as crucial to economic growth and poverty deduction (reduction) in developing countries. It is there for important to understand how donors think they can promote a vibrant private sector. There have been various discussions in policy circles, including among donors. Where and how to support private sector development in developing countries Regulate, structure and Implement of competition law (Tempo and Willemetvelde, 2008).

The main obstacle to private sector development in transition economies is the shortage of private business capital. The formal private sector only gradually absorbs workers released from the state sector is that it takes time for entrepreneurs to create productive new private businesses and for the competitive economy to select highly productive businesses through national selection on the other hand, once the entrepreneur find a productive business activates opportunities, he can immediately attain the optimal size of the business. There is no limitation on the growth of the businesses for the individual entrepreneur. In the individual entrepreneur often faces partialities not only in finding a highly productive business opportunity but also in financing the businesses investment (Brixiorat and Kiyotaki, 1979).

2.1.7 Determinates of private investment in Developing countries

The relevance of privet investment developing countries has received particular emphases among researchers and policy makers in the 1990s. this leads growth strategy, towards base the private sector a leading role while allowing the government to concentrate on improving social overhead capital and poverty alleviation goals is based on two reasons, first there has been growing empirical evidence on the relative efficiently of private over public investment in the in the productive sector. Second there is physical complementary between private investment and public infrastructural investment. Nevertheless, promoting private investment is a complex task because the factors affecting it are intricate and delicate, the specification of the private investment and saving determinates can be drawn from empirical literature on investment behavior or with appropriate consideration of the structural features of an economy among these are direst focal policy. Such as tax, public investment, and financial variables such as interest rate and credit how. Hence the term work for private investment combines not classical investment determinates with borrowing constraints, public

infrastructure and uncertainty variable, the foreign debt to output ratio and political and business regulations. (Yasaba, 2003 E.C).

A) Inflation

Inflation, has significant role in affecting the level of domestic investment as well as private investment from its very definition, inflation is the rise of all or almost average price of goods and services, or put the other way around, if it is the fall of the general purchasing power of the monetary unit's economic literatures emphasized on stable price level as a goal of economic policy (Mishkin, 1998).

Real estate and other tangible investments, including gold, other precious Metals and collectibles such as art work and antiques. are generally more responsible to the rate of inflation than to any Thing ales, housing prices and the price of commodities like coffee, oil, meat, corn and sugar are component of consumer price index when consumer price starts to rise the return on real estate and other tangible investment starts to rises as well as, but when inflation comes back down to more normal level, returns on real estate and other tangible investment also decaling. (Lawrence and Michael, 2008).

B) Interest rate

The real interest rate measures the opportunity cost of holding inventories. When the real interest rate rises, holding inventories becomes costlier, so rental firms try to reduce their stock therefore, an increase in the real interest rate depresses inventory investment. The real interest rates that prevailed during most of this decade are one possible explanation for this change in business strategy (Mankiw, 2000).

Bond and other forms of fixed income security; preferred stock and bond fund are highly sensitive to movements in interest rate, infarct interest rate is the single most important variable in determining the bond price behavior and return to investors. Because interest rate and bond price move in opposite direction, so interest rate are unfavorable for outstanding bonds already held in an investor portfolio. Of course, high interest rate enhances the attractiveness of new bonds be causes they offer high returns. (Lawrence and Michael, 2008).

C) Availability of finance

Firms face financing constraints limit on the amount they can raise in financial markets. Financing constraints can prevent firms from undertaking profitable investment, when a firm is unable to raise funds in financial market, the amount can spend on new capital goods is limited to the amount if it is currently earning financing constraints influence the investment behavior of firms just as borrowing constraints influence the consumption behavior of households, borrowing constraints caused households to determine their consumption on the basis of current rather than permanent income, financing constrains cause firms to determine their investment on the basis of their current cash flow rather than expected profitability. (Mankiw, 2000).

D) Real Gross domestic product RGDP

Real GDP is one of the most commonly used variables as explanatory variable, to measure its effect on private investment. It represents the total value of all goods and services produced over a specific time period and therefore play an important role in economy. According to Fielding (1997), explain that private investments positively related to real GDP growth rate of a given country. This is because countries with higher income level inclined to allocate more of their wealth to domestic saving, which could be then used to help in financing private investment.

E) Broad money supply

The ratio of broad money supply to GDP is conventionally used as a measure of financial sector development (Nnanna, 2006. An increased in the money supply will ease the financing conditions of households and firms, which is reflected in lower lending rates and ultimately availability of credit to private investors which spurs investment. Thus a priori, the coefficient of broad money supply in private investment equation is expected to have positive sign

F) Public investment

Public investment may either crowd out or crowd in private investment. In case of the former public investment may adversely affect private investment by increasing the cost of capital through competition of scarce resources by both the government and the private investors. However, public investment may crowd in to act as a catalyst through the provision of key infrastructure to complete private investment. The expectation of Public investment in this study is therefore ambiguous and will be determined in the model

2.2. Empirical literature reviews

(Thomas, 1997) in his study of 86 developing countries examined data on terms of trade, real exchange rates, property rights and civil liberties and concluded that while factors including credit, availability and the quality of physical and human infrastructure are important influences, uncertainty in the investment environment was negatively related to private investment in sub-Saharan countries. Employing the variability in real exchange rates as an explanatory variable in regression analysis, in his cross-country study on the macroeconomic environment and private investment in six Pacific Island countries observed a statistically significant negative relationship between the variability in the real exchange rate and private investment.

(Duncan *et al*, 1999) argued that although variability in the real exchange rate is a reasonable proxy for instability in major economic variables as fluctuations in inflation and productivity. Generally, fiscal and monetary management are reflected in the real exchange rate, which is not a good measure of the uncertainty attached to policy or the insecurity of property rights and enforcement of contracts or the level of corruption. It has been observed that these non-economic factors appear to have significant influence on investment in the Pacific Island countries. However, admitted that no quantitative or qualitative evidence is available of their size or their impact. In the absence of such evidence, any study on private investment is to be necessarily restricted to the conventional variables. It has been observed by many researchers that monetary, fiscal and exchange rate policies for correcting unsustainable macroeconomic imbalances are bound to affect private investment. There are two ways by which restrictive monetary and credit policies included in stabilization packages affect investment. These are the rise in the real cost of bank credit and the opportunity cost of retained earnings from higher interest rates. The user cost of capital is increased by both mechanisms, leading to a reduction in investment.

(TunWai and Wong ,1991) incorporated features of the neoclassical model into investment models for developing countries. Their approaches take into account the relevant data problems and structural features Journal of Economics and Sustainable Development. That caused a gap between the modern theory of investment and the models that were specified for developing countries.

(Blejer & Khan, 1992) focused on the role of government policy and derived an explicit functional relationship between the principal policy instruments and private capital formation. Using the model, they were able to assess the extent of any “crowding out”. The second extension that did was to make a distinction between government investment that is related to the development of infrastructure and government investment of other kinds. Those researchers found a positive relationship between the share of private investment in total investment and the ratio of total investment to income. They also found that the larger the share of private investment, the higher the average growth rate of the economy. These patterns indicate the relevance of private investment behavior in developing countries and call for the testing of formal models of private capital formation in individual countries.

(Asante, 2000) estimated a private investment equation that tried to assess the determinants of private investment in Ghana. Among the independent variables were the incremental capital output ratio, the lending rate, the exchange rate, credit to the private sector and public investment. His preliminary results showed among other things a “crowding out” effect of public investment.

Ariyo and Raheem’s (1991) country estimation of the determinants of investment consisted of public investment rate of growth of GDP, domestic credit to the private sector and interest rate as arguments in the private investment function. “Their results show that all variables were statistically significant and evidence of the existence of crowding in”.

Bazoumana (2004) analyzed the determinants of private investment in general. He found a significant relationship between private investment and its explanatory variables. Public infrastructure investment was found to be positively related with private investment GDP, credit to the private sectors and terms of trade has a significant negative impact in private investment.

Khan and Reinhart (1990) carried out a study on private investment and economic growth in developing countries. The conclusion from their study was that both private investment and public investment have different effects on the long-run economic growth rate. Private investment was seen to play a much more -significant role in the growth process than domestic public investment. The only shortcoming in this study is that it failed to consider the

complementary effects of public investment on private investment. Such public expenditures like construction of roads, building of schools, electricity and telecommunication do have a strong effect on private investment.

Asante, Y. (2000) studied the Determinants of Private Investment Behavior in Ghana using data for the period 1970 to 1992. This study revealed that public investment as a ratio of GDP, growth rate of real credit to the private sector, the real exchange rate, the real interest rate, lagged private investment as a ratio of GDP; all have positive and significant impact on private investment. Public investment, growth rate of real credit to the private sector, the real exchange rate, is all significant at the 1% level. On the contrary, measure of macroeconomic instability, political instability represented by coup dummy, and inflation all has a negative impact on private investment in Ghana. The main strength of this study is that, it incorporated many macroeconomic variables that are expected to affect private investment in the context of a developing country. The only weakness of the study is that it used a short time period coupled with the many explanatory variables. Given the short period of the study and the many explanatory in the model, the degree of freedom will be very low and that may impose constraints in the model estimation process.

Zerfu, D. (2001) carried out a study on the Macroeconomic determinants of private investment in Ethiopia using time series data for the period 1965-1999. The result from this study indicated that GDP, public investment on infrastructure and foreign exchange availability all have positive effects on private investment. On the contrary, inflation rate and external debt to GDP ratio showed a negative effect on private investment.

Garnet (1992) carried out a study on the determinants of private investment in Ethiopia using annual data for the period 1970-1989. His findings indicated a negative relationship between public investment and private investment. This result demonstrated a crowding out of public investment on private sector activities. However, on estimating a reduced form of the investment equation, public investment turned out to be insignificant. Furthermore, real GNP growth was seen to have a negative effect on private investment. This result may not seem plausible, as it is inconsistent with the theoretical economic a priori.

In another attempt to investigate the determinants and constraints of private investment in Ethiopia, Mitiku, W. (1996) carried out a study using both time series data for the period 1975-1994, and survey results of investors/ enterprises which have acquired investment certificates from 1992- 1995. The results based on the time series data indicated that private investment in Ethiopia is determined by the availability of finance, the real exchange rate, investment policy (private investment policy), debt-service payment and debt-overhang. On the contrary, real interest rate, growth of GDP per capita, public investment and changes in terms of trade did not affect private investment during the period of study. Results based on the survey data pointed out that bureaucratic procedure, lack of infrastructure and access to finance are the main constraints for entry, operation and expansion. Wisdom, A. (1997) carried out a study on the determinants of private investment in Ghana using data spanning from 1970 to 1994. His study identified real GDP, real lending rate, public investment and credit availability to the private sector as the main determinants of private investment in Ghana. The regression result based on OLS revealed that real GDP and credit availability have a positive impact on private investment. On the contrary, public investment was seen to have a negative effect on private investment. This negative effect of public investment on the private sector suggests the “crowding out” of public investment on the private sector in Ghana.

2.2.1 Ethiopian Context

(Ambachew,2007) attempted to examine the effect of macro-economic factors on private investment in Ethiopia for the period 1965-2005 the found that economic growth, foreign exchange availability and trade inflows stimulate private investment both in short run and long run the positive effect of foreign exchange availability is found to relatively strong in supporting the argument that private investment in developing countries is externally constrained. The study also suggests that public investment on economic and social infrastructure has a crowding in effect and its effects are observed in the long run. Moreover, domestic inflation rate appears to stimulate private investment in the short run.

(Melaku, 2011) studies the determinants of private investment in Ethiopia in using both descriptive and regression method of analysis. He found that the real government investment year GDP. Real private sector credit has a positive impact on private investment in both short

and long run. Leading interest rate discourage private investment through increasing user cost of capital. Domestic inflation as measure of uncertainty stimulates private investment positively in short run for a short period of time.(Mignot Tesfaye,2009) attempted to investigate the determinants of private investment in Ethiopian economy using correlations of quantitative analysis. He found that the GDP affecting private investment positively whereas the inflation has negative affect on private investment in Ethiopian economy in long run-Real change rate indicates the negative impact of devaluation on private investment.

(Ashebir, 1994), studied the determinants and constraint of private investment in Ethiopia using descriptive method and he found that GDP have positive impact on private investment also the real domestic sector credit also has positive relation with private investment but lending interest rate has negative impact on private investment.

(Melaku,2011) conducted a study on determinants of private investment in Ethiopia by applying time series techniques for the period (1992-2010). He found that real GDP has positive and significant impact on private investment both in short run and long run. Inflation rate in the other hand has a significant negative effect on private investment both in short and long run. At the same time the real private sector credit (RPSC), real effective exchange rate (REER) and Real lending interest rate (RLIR) have a significant effect both in short run and long run whereas terms of trade has a insignificant positive effect in the long run, but it has significant negative effect in the short run. It is also irrelevant to affect private investment. However, these studies do not include Money supply, public investment and dummy variable between military regime and democratic govern

2.2.2 Research gap

Many researchers had been studied on the private investment and factors that determinantit.Fromthose,(Ashebir,1994),(melaku,2011),(Esubalew,1999),(Mignot,2009), (Ambachew,2007) studied with gross domestic products, interest rate and real exchange rate as determinant of private investment but these paper will try to investigate other variable's that determine private investment in addition to above variable that determine private investment. those, are money supply, public investment and government policy as influential factors that affect private investment.

CHAPTER: THREE

3. METHODOLOGY OF THE STUDY

3.1. Research design

The study would be used quantitative approach which is in line with the research problem. This is because, in quantitative research approach it possible to analyze the cause and effect of explanatory variables and empirically test the research hypotheses in order to examine determinants of private investment and draw conclusions based on the research findings. Moreover, quantitative research approach helped the study to examine whether the measurement is reliable, valid, and generalizable in its clear prediction of cause and effect (Casella and Symon, 1994).

3.1.2 Source and types of data

The study would be conducted basically using secondary data. An attempt would be made to gather data of 28 years (i.e. from 1990 to 2018) on some important variables. The data was gathered from various sources such as IMF and WB data basis, and from other relevant and reliable sources.

3.2. Method of data analysis

3.2.1 Explanatory Analysis

To show the effect of different factor on private investment a explanatory analysis would uses (i.e. from 1990 to 2018) by using secondary data. In order to describe the effects of those factors under different policy frame work and to show what kind of trend exist between them and private investment graphs will have use.

3.2.2 Econometric Analysis

The methodology would have use in an attempt to learn more about the determinants of private investment activities in the country, is econometric regression using OLS method over the period 1990 to 2018. This model is selected for its simplicity, and is also expected to fulfill the assumptions of efficiency, consistency and unbiased.

3.3. Model specification

This paper use econometric analysis in to its way to achieve the target objective because econometric method of analysis is responsible to identify the main economic determinant at private investment. The model for private investment lies specifies in such a way that it captures the effects of different economic variables. The regression equation for private investment is specified as: $PRI_t = \beta_1 + \beta_2RGDP_t + \beta_3INFR_t + \beta_4MS_t + \beta_5PUI_t$

$+ \beta_6IR_t + E_t$

PRI = Private investment

RGDP = Real Gross Domestic product

INFR= Inflation rate

MS = Money supply (M2)

IR= Interest rate

PUI = Public Investment

3.4. Description of variables

Private investment is the proxy for the performance of private sector in the economy, and it is dependent variable, which depend on some explanatory variables for our case.

Real Gross domestic product RGDP

Real GDP is one of the most commonly used variables as explanatory variable, to measure its effect on private investment. It represents the total value of all goods and services produced over a specific time period and therefore play an important role in economy. According to Fielding (1997), explain that private investments positively related to real GDP growth rate of a given country. This is because countries with higher income level inclined to allocate more of their wealth to domestic saving, which could be then used to help in financing private investment.

Inflation rate

Models like the Tobin-Mundell model argues that higher anticipated inflation lower the real interest rate which then causes to be made portfolio adjustment away from real money balance to real capital which then expected higher inflation to raises real investment (Ghura& Goodwin,

2000). Based on this the coefficient of inflation rates in private investment equation is expected to have negative sign.

Broad money supply

The ratio of broad money supply to GDP is conventionally used as a measure of financial sector development (Nnanna, 2006). An increase in the money supply will ease the financing conditions of households and firms, which is reflected in lower lending rates and ultimately availability of credit to private investors which spurs investment. Thus a priori, the coefficient of broad money supply in private investment equation is expected to have positive sign.

Public investment

Public investment may either crowd out or crowd in private investment. In case of the former public investment may adversely affect private investment by increasing the cost of capital through competition of scarce resources by both the government and the private investors. However, public investment may crowd in to act as a catalyst through the provision of key infrastructure to complete private investment. The expectation of Public investment in this study is therefore ambiguous and will be determined in the model.

3.5 Some testing tools to be used in the study

3.5.1 Classical linear regression model assumptions

The study was tested the classical linear regression model test such as normality test, autocorrelation, multicollinearity and heteroscedasticity test.

3.5.2 Normality Test

The model assumes that the random variable u has a normality distributed. symbolically: $U_n(0, 2u)$, which reads as: u is normally distributed around zero mean and constant variance $2u$. This means that small values of u 's have a higher probability to be observed than large values. This assumption is necessary for constructing confidence intervals. If the assumption of normality is violated, the estimates of parameters are still unbiased but the statistical reliability by the classical tests of significance of the parameters cannot be assessed because these tests are based on the assumption of normal distribution of the u . The normality test adopted Shapiro-Wilk test for normal distribution. This test computes the Skewness and kurtosis measures of the OLS residuals and it follows the chi square distribution (Gujarati, 2004).

3.5.3 Autocorrelation test.

Autocorrelation are explained the relation between dependent and independent variable. If dependent variable tends to increase, when independent variable increases, the spearman correlation coefficient is positive. If dependent variables tend to decrease, and independent variables increases, the spearman correlation coefficient is negative. A spearman correlation coefficient of zero indicates that there is no tendency for dependent variable to either increases or decreases, when independent variable increases. (Gujarati, 2003)

3.5.4 Multicollinearity

It is necessary to test multicollinearity problem among continuous variables and check association's discrete variables, which seriously affects the parameter estimates. As Gujarati (2003) among puts it, multicollinearity refers to a situation where it becomes difficult to identify the separate effect of independent variables on the dependent variable because of the existing strong relationship among them.

In other words, multicollinearity is a situation where explanatory variables are highly correlated. Variance Inflation Factor (VIF) is a measure that is often suggested to test the existence of /multicollinearity. Thus, in the present study too, variance inflation factor (VIF) was used to check multicollinearity of explanatory variables. As R² increase towards 1, it is a collinearity of explanatory variables.

3.5.5 Heteroskedasticity Test

Heteroskedasticity test: It is created when the distribution of u_i (error term) around the explanatory variables is not constant (no constant variance). It signifies that the individual variance of the disturbance term around the independent variable may be different (Wooldridge, 2000). In the presence of heteroskedasticity, the variance of OLS estimators are not provided by the usual OLS formulas, the t and F tests based on them can be highly misleading, resulting in erroneous conclusion.

Table 3.1 summary of independent variables

No	Factors	Variables	expected sign
1	private investment	Dependent	
2	Public investment	Independent	+
3	Inflation rate	Independent	-
4	Interest rate	Independent	-
5	Broad money supply	Independent	+
6	Gross domestic product	Independent	+

CHAPTER 4

DESCRIPTIVE AND ECONOMETRICS ANALYSIS

4.1. Introduction

The previous chapter discussed the research methodology employed to achieve the overall objectives of the study. In this chapter, the study analyzes the collected data using statistical tool, present the result and discussions accordingly. The main objective of this paper was to show the impact of education on Ethiopia's economic growth, over the period between 1990 – 2018. The data was obtained from National Bank of Ethiopia (NBE), Central Statistical Agency (CSA), Ministry of Finance and Economic Cooperation (MoFED) and different publications from Eweiw 8output

4.2 Descriptive analysis

Descriptive analysis is the first step in this part of the study. The descriptive statistics gives a broader picture that the residuals from the regression using these variables were expected to follow a normal distribution for efficient and unbiased estimators. It includes mean, median, maximum, minimum, standard deviation and others. The outcome of descriptive statics and its overall description about data used in the model was presented. The table below shows the descriptive statistics of the variables used in the model and its interpretations are presented as follows.

Table 4.1 Descriptive Statistics of dependent and independent variables

	PRI	INFR	IR	MS	PU	RGDP
Mean	8.4315.62	10.58496	0.998724	12.6397.6	5.71309.9	4.50305.8
Median	5.7784.00	7.466853	1.053000	3.4655.87	2.77243.7	2.43233.5
Maximum	18.9734.0	5.524131	1.978000	7.40572.9	62.43143.	18.34066.

Minimum	16.754.00	-10.77339	0.176000	6.708.200	13.452.80	13.0177.0
Std. Dev.	6.0540.05	14.42892	0.575905	1.87677.8	1.148253.	4.69232.1
Skewness	0.753346	1.537741	0.196213	1.943183	4.334996	2.039642
Kurtosis	2.020139	5.464159	1.839678	5.946382	22.04572	6.033318
Jarque-Bera	3.903220	18.76622	1.812918	28.74022	529.1391	31.22524
Probability	0.142045	0.000084	0.403952	0.000001	0.000000	0.000000
Sum	2445153.	306.9639	28.96300	3665532.	16567988	13058869
Sum Sq. Dev.	1.03E+11	5829.428	9.286678	9.86E+11	3.69E+13	6.17E+12
Observations	29	29	29	29	29	29

From Table 4.1, private investment in Ethiopia for the period under study had a mean of 8.43 and a standard deviation of 6.054 with a minimum and maximum of 16.754 and 18.973 respectively. Real GDP had a mean of 4.5 and a standard deviation of 4.96 with a minimum value of 13.01 and a maximum value 18.34. Lending interest rate had a mean of 0.998 and a standard deviation of 0.575 with a minimum and maximum value of 0.176 and 1.798 respectively while inflation had a mean of 10.58 and a standard deviation of 14.42 with a minimum and maximum value of -10.77 and 5.52 respectively. Finally, the mean of public investment was 5.71 and a standard deviation of 1.14 with a minimum and maximum value of 13.42 and 62.43 respectively for the period under study.

The standard deviation shows how much dispersion exists from the average value. Except inflation a low standard deviation indicates that the data point tend to be very close to the mean, whereas inflation has high standard deviation indicates that the data point are spread out over a large range of values. As shown in the summary statistics, all have low standard deviation (except inflation). This shows stability in the long run relationship between Private investment and its determinant factors.

4.3 Diagnostic Tests Results

4.3.1 Test of assumption of Multicollinearity

An implicit assumption that is made when using the OLS estimation method is that the explanatory variables are not correlated with one another. 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-co linearity problem where the regression model will end up with an incorrect or erroneous result and therefore, invalid conclusion will be prevailed Brooks(2008). The simplest multi-co linearity 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-co linearity problems among independent variables

Table 4-2 Correlation result between independent variables

	PU	RGDP	MS	IR	INFR
PU	1				
RGDP	0.2297955 886881078	1			
MS	0.2113874 351872447	0.0974136 003176695 6	1		
IR	0.3122759 876996171	0.0806250 208416124 4	0.0812382 117171207 7	1	
INFR	- 0.0080311 512346663 15	0.0960197 110894937 8	0.0960714 485006671 8	0.1597544 380795376	1

Source; Eviews 8 out put

4.3.2 Test of assumption of Heteroscedasticity

It is assumed that the variance of the errors is constant, σ^2 this is known as the assumption of homoscedasticity. If the errors do not have a constant variance, they are said to be Heteroscedasticity. The study uses Breusch-Pagan-Godfrey test for Heteroscedasticity. The null hypothesis of this test is homoscedasticity or constant variance. With the level of significant 5%, the p-value should be greater than 5% to conclude that there is no Heteroscedasticity problem. As per the results of the test stat all of the three tests are greater than 5% hence we don't reject the null hypothesis of the constant variance of the residual

heteroscedasticity Test: White

	4.09636			
F-statistic	7	Prob. F(20,8)		0.233
	26.4201	Prob.	Chi-	
Obs*R-squared	4	Square(20)		0.1524
Scaled explained SS	14.8002	Prob.	Chi-	
	2	Square(20)		0.7877

Source; Eviews 8 output

4.3.3 Test for Autocorrelation

This assumption requires that the errors are linearly independent of one another (uncorrelated with one another). ($Cov(u_i, u_j) = 0$.) Covariance between the error terms over time is zero. If the errors are correlated with one another, it is stated that they are auto correlated. Brooks (2008) noted that the test for the existence of autocorrelation is made using the Durbin-Watson (DW) test and Breusch-Godfrey test.

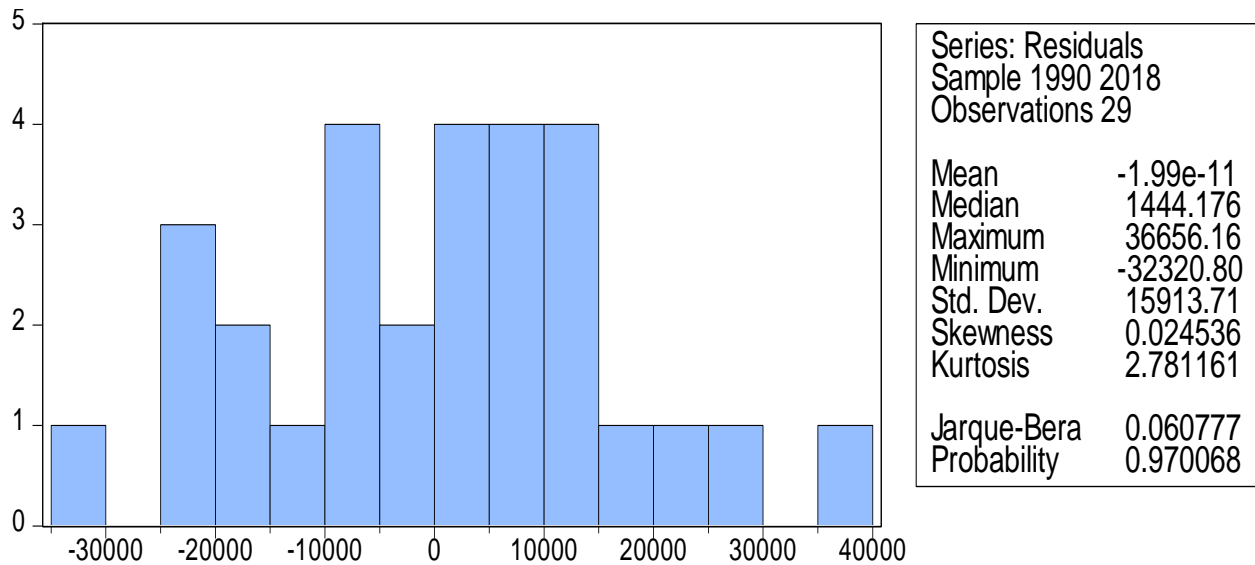
Breusch-Godfrey Serial Correlation LM Test:

F-statistic	0.016347	Prob. F(2,21)	0.9838
Obs*R-squared	0.045077	Prob. Chi-Square(2)	0.9777

Source; Eviews 8 out put

4.3.4 Test for Normality

According to Brooks (2008), if the residuals are normally distributed, the histogram should be bell-shaped and the Bera-Jarque statistic would not be significant. This means that the p-value given at the bottom of the normality test screen should be greater than 0.05. For normality test to be valid the value of skinless



Source; Eviews 8 out put

Figure 4.1: Normality Test Result

The above diagram witnesses that normality assumption holds, i.e., the coefficient of kurtosis was close to 2.78 and the Bera-Jarque statistic has a P-value of more than 5% implying that the data were consistent with a normal distribution assumption.

4.3.5 CORRELATION BETWEEN VARIABLES

Correlation is a way to index the degree to which two or more variables are associated with or related to each other. The most widely used bi-variant correlation statistics is the Pearson product-movement coefficient, commonly called the Pearson correlation which is used in this study.

	PRI	PU	RGDP	MS	IR	INFR
PRI	1					
PU	0.2006746 98618091	1				
RGDP	0.0562659 873626135	0.2297955 886881078	1			

	1					
MS	0.0480285 704760870 5	0.2113874 351872447	0.2741360 031766956	1		
IR	0.176235667 2429411	0.312275987 6996171	0.062502084 161244	0.123821171 712077	1	
INFR	0.091773127 6492705	- 0.008031151 234666315	0.096019711 08949378	0.096071448 50066718	0.159754438 0795376	1

Source; Eviews 8 out put

4.3.6 REGRESSION RESULTS

This sub section presents the empirical findings from the econometric output on determinants of the sample insurance companies' profitability in Ethiopia. Table 4.4 below reports regression results between the dependent variable (PRI) and explanatory variables. Under the following regression outputs the beta coefficient may be negative or positive; beta indicates that each variable's level of influence on the dependent variable. P-value indicates at what percentage or precession level of each variable is significant.

Dependent Variable: PRI

Method: Least Squares

Date: 12/30/20 Time: 06:52

Sample: 1990 2018

Included observations: 29

Variable	Coefficien			
	t	Std. Error	t-Statistic	Prob.
C	6735.680	8.791.966	0.766118	0.4514
INFR	-1.39.8864	2.33.8822	0.598106	0.5556
IR	-7.2790.26	1.0357.35	7.027884	0.0620
MS	0.263270	0.080366	3.275870	0.0033
PU	0.3083	0.003068	1.004687	0.0255
RGDP	2.070254	0.031607	-2.222741	0.0363
R-squared	0.930903	Mean dependent var		84315.62
Adjusted R-squared	0.915882	S.D. dependent var		60540.05
S.E. of regression	17558.47	Akaike info criterion		22.56645
Sum squared resid	7.09E+09	Schwarz criterion		22.84934
Log likelihood	-321.2136	Hannan-Quinn criter.		22.65505
F-statistic	61.97334	Durbin-Watson stat		0.712358
Prob(F-statistic)	0.000000			

The impact of real GDP on private investment is found to be positive and statistically significantly. Coefficient of real GDP is 2.07, this shows that holding other explanatory variables constant, one percent increase in real GDP causes 2.07 percent increase in private investment in the same period.

Impact of Inflation on private investment Inflation has a negative sign and insignificant relationship with Private investment growth. The probability value of t-statistics for inflation is 0.5556 which higher than 5 % level of significant. The respective sign is as per the researcher's expectation, since inflation has no statistical significant.

Impact of Lending Rate (LNIR) on private investment Lending rate has a negative relationship with Private Investment. The probability value of t-statistics for lending interest rate

is 0.062 which means holding other variables constant, a one percent increase of in annual lending rate causes a 0.062 percent decrease the growth of in Private Investment. Private investment is negatively associated with the real interest rate. In line with neoclassical assumption of the increase in cost of debt leads to higher users cost of capital which in turn leads to lower rate of investment

Impact of public investment on private investment

The impact of real public investment on private investment is found to be positive and statically significant. Coefficient of public investment is 0.308. This shows that one percent increase in public investment will increase the growth of private investment by 0.308%. This finding confirms the hypothesized argument about the positive effect of public physical and social infrastructure investment on the private investment. The result is consistent with the findings of some scholars such as Asante (2000), Adugna (2013), Sakr (1993), Fimpong et.al(2010), Kazeem et.al (2012), Siraj (2014) among others, who have conducted research in a similar topic in various developing countries.

In Ethiopia, public investment is primarily concentrated on the development of basic economic infrastructures (such as road, telephone, power, irrigation canals, etc), and social infrastructures (like schools, universities, health centers etc.) Such investments obviously create favourable effect on private investment.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMENDATION

5.1 Introduction

The previous chapter presented the analysis of the findings, while this chapter deals with the conclusions and recommendations provided based on the findings of the study. Accordingly this

chapter is organized into two subsections. The first section presents the conclusions whereas the second section presents the recommendations

5.2 Summary of Findings

Primary objectives of the study were; investigation of determinants of private sector investment and the effect of the determinant factors using a time series data from 1990-2018. The study used secondary data, sourced from MOFEC, NBE, NPC, EIC and World Bank data basis. And OLS econometric technique was employed in data analysis to help in addressing the objectives. The study investigated the determinants of private investment in Ethiopia the relevance of understanding the determinants of private investment lies in the fact that private investment has been the main engine of growth for countries over the decades.

The study examined the trending behaviour of real GDP, lending interest rate, public investment, national monetary reserve and inflation. The coefficients of Real GDP, interest rate and public investment found to be statistically significant, the variables explain changes in private investment in the study period. Further, the study found that coefficients of inflation is insignificant therefore, the variables could not explain changes in private investment in the study period in Ethiopia

5.3 Conclusion

The major objective of this paper was to identify the determinants of private investment 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 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 econometrics technique identifies the determinants factors in Ethiopia. The major findings that are obtained through empirical analysis

The study found out that real gross domestic product, public investment, and money supply 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 lending interest rate inflation have negative effect on private investment during the study period but Inflation have no statically significant effect on explaining private investment .The other factors that were sought

to be determinants of private sector investment in Ethiopia turned out not to be contrary to what most empirical studies suggested. This implies that the Ethiopian economy is unique in the way it runs its activities internationally and domestically.

5.4 Recommendation

From the analysis of the determinants of private investment in Ethiopia, the study recommends the following policy implications; 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. In other words making huge investment on infrastructure such as road telecom service and power improve private investment.

For sufficient economic growth and sustainability of Ethiopian 's economy, the government needs to promote access to 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.

The impacts of economic growth in the private investment are found to be positive and significant in the study period which implies that economic growth is crucial to the growth of private investment which addresses the need to enhance further the growth of the economy. The result confirm the validity of the accelerator principle that suggest the quantity of domestic output should be expanded as it will increase the profitability of firms , especially those that produce tradable goods. The rationale behind the positive and significant role in economic growth to the growth of private investment is because of the fact that economic growth boosts the demand for produced goods and services of private investment activities and with the increase in the purchasing power of the societies that resulted from the grown income and increase in the effective demand.

References

Ambachew (2003) "Determinant of private investment in Ethiopia" school of Economics University of Kenta Enberg.

Asante (2006) "Determinants of Private Investment in Ghana.

Asante, Y. (2000). Determinants of Private Investment Behavior, AERC Research Paper No.100, Nairobi: AERC.

Bezoumana, O (2004) "Modeling the long run determinants of private investment in Senegal" .

CSA, Central statistical agency annual report of various years. Addis Ababa Ethiopia.

Esubalew (1999) "Determinant of private investment in Ethiopia" Addis Ababa University.

Frederik (2000) "Determinants and Constraint of Private Investment "The case of Kenya.

Getnet (1992) "Distribution of private investment in Ethiopia. "Addis Ababa University.

Ghumi (2011), "Determinants of Private Investment in Ethiopia" Addis Ababa University.

Gujarat P (2004) "Basic econometrics" 4th edition, the McGraw Hill companies, New York.

Keynes, J (1936) "The general theory of Employment interest and money "Harcourt Brace Jovanovich, Reprinted, 1957, New York.

Khan and Rinehart (1996), private investment and economic growth in developing countries, World development.

Mankiw' s 1992) "Macroeconomics" 6th edition.

McKinnon, R.I. 1973. Money and Capital in Economic Development. Washington D.C. The Brookings Institute.

Melaku (2011) “Performance and problem of private investment in Ethiopia” “Addis Ababa, Ethiopia.

Mignot (2009) “Determinant of private investment in Ethiopia.

Ministry of finances and economic development (DOFED) annual report of various years, Addis Ababa, Ethiopia.

Mishkin, (1998). Monetary economics, 7th edition.

Mulubirhan.A (2006), Econometric Determinants of Private Investment in case of Ethiopia.MA Thesis Addis Ababa University.

Seyoum, A (2007), “Effects of macroeconomic factors on private investment” MSc thesis, Addis Ababa.

Thomas, R. L. (1997). Modern Econometrics, An introduction, Sydney: Addison Wesley.

Tobin, J. (1969). A General Equilibrium Approach to Monetary Theory. Journal of money, credit and banking 1:15-29.

TunWai, U., and Chorng - Huey Wong. 1982.Determinants of Private Investment in Developing Countries. Journal of Development Studies. (London, Vol.19

Workie (1997) “Determinants of private investment in Ethiopia” Ethiopia journal economics October, 1999.

