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REVIEW OF LITERATURE

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STATEMENT OF THE PROBLEM

OBJECTIVES

HYPOTHESES

RESEARCH METHODOLOGY

RESULTS & DISCUSSION

FINDINGS

RECOMMENDATIONS/SUGGESTIONS

CONCLUSIONS

SCOPE FOR FURTHER RESEARCH

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APPENDIX/ANNEXURE

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DETERMINANTS OF DOMESTIC PRIVATE INVESTMENT FIRM GROWTH IN ETHIOPIA: A CASE STUDY IN MEKELLE CITY, TIGRAY

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ABSTRACT

The main objective of this study was to identify and analyze the determinants of domestic private investment growth in Mekelle City, Tigray. For this purpose Ordinary Least Square (OLS) regression model was employed for estimating the determinants of growth of domestic private investment. The study used primary data by taking systematic random sampling from domestic private investment firms in operation. The study revealed that tax rate, investment incentives, access to finance, and firm age have been negatively influenceing; interest rate, infrasturacture access, economic condition, and market access were positive and signfcant determinants on growth interms of employees size. On the other hand, firm size and market acces were negative; and economic condition was positive and significant determinant factors on growth of domestic private investment in terms capital size. Mekelle investment office should facilitate growth of domestic private investment via identifying and announcing the potential investment areas in the City, enhancing motivational supports such as incentives, avoiding corruption, necessary infrastructural access to the identified potential investment areas, making regular communication with the existing investment firms, and build strong linkage and collaboration with infrastructure processors. This study mainly focused on domestic private investment firms' growth in Mekelle City (which were in operation) and does not represent the investments in other different phases but valuable findings may come up by taking data from different Zonal Cities in the region. Also, sector specific investigation is recommended.

KEYWORDS

Determinats, Domestic, Growth, Investment, Operation.

1. INTRODUCTION

The act of investment involves the acquisition of goods, which are destined not to be consumed or entirely used up in the current period. It is, therefore, a means by which individuals or groups can attempt to influence their own well being by the sacrifice of current consumption. Investment by individuals may take the form of direct purchase of capital assets, which are either intangible such as education, or tangible such as house, training for their employees, knowledge by research and development, and investment in fixed capital stock (asset). This last form of investment is the most crucial for both individual firm and the short and long term economic future of the country in which the firm operates (Antonakis, 2008).

Investment can be classified as public and private investments. Private investment can also be classified as domestic private investment and foreign direct investment types of private investments (Ndikumana & Verick, 2007).

Public investment is an investment mostly spent by the public (government) like investments in capital projects such as infrastructures (roads, telecom service projects, schools, universities, health centers and hospitals, power etc.) and their purpose is not for profit. FDI (foreign direct investments) are private investments which are partly or wholly owned by non residential potential investors and their objective is mostly for profit and risk diversification. Domestic private investment refers to the private investments wholly owned by residential potential investors and operating in the country domestically.

Different studies have shown that private investment's effect on growth is greater than government (Public) investment (Ghura & Hadjimichael, 1996, as cited in Beddies, 1999). Besides, According to Bouton and Sumlinski (1998) though, theoretical development models developed in the economics literature makes no difference between private and public investment, there is an emerging pleasure that private investment is more efficient and creative than public investment. Evidence from empirical studies suggested that private investment has a stronger relationship with long run economic growth than public investment.

According to Access Capital (2011/12) investments assessment report, the ratio of private investment to GDP in Ethiopia between 2001and 2012 has been averaging between 5.8% and 10%. This percentage (ratio) is below the levels being experienced in successful economies, which is required to spur economic growth needed for employment creation and poverty reduction. The ratio of private investment to GDP is 16% in Latin America, 18% in advanced countries and 16.5% in newly industrialized countries in Asia (Hernandezcata, 2000), as cited in Seruvatu and Jayarman (2001).

Private investment contributes to economic growth and development, plays a vital role in growth generating process and leads to growth of incomes, adoption of new technology, and creation of employment opportunities and improvement of living conditions of citizens. Long-term solutions to technology deficiency, unemployment and poverty in developing countries can be created through private investment. Investment plays a very important and positive role for the progress and prosperity of any country (Haroon & Nasr, 2011).

According to Haroon and Nasr (2011), some of the advantages of private investment are increases the level of employment opportunities, increases individual income, improves standard of living, helps to reduce the poverty in the country, helps to increase the per capital income of country, pushes up the growth rate of GDP and GNP, and helps to attract foreign investors to invest in the country, especially Diasporas living and working abroad.

Many countries rely on investment to solve their economic problems such as poverty and unemployment. Developing countries like Ethiopia are trying to learn from each other how to attract and encourage private investors because proper investment in proper economic sectors can change their economic conditions quickly. These days, Ethiopia as a developing country is intensively working at improving socioeconomic development of its citizens. Since private sector is the engine of industrial growth, the government of Ethiopia has been promoting and supporting the private sector in order to enhance their contribution for the economic growth and industrialization endeavor. Particularly, the private sector has been encouraged to invest in activities that link manufacturing and agricultural sectors (GTP annual progress report, 2010/11).

Due to this reason, Government of the Federal Democratic Republic of Ethiopia has recognized and paid due attention to the promotion and development of private investment including working a lot to attract private investors for investment in different sectors of the economy and is taking many major steps such as expanding infrastructural access, providing investment incentives, and facilitating financial access to encourage private investment in order to increase the pace of economic development in the country. Therefore, the purpose of this study was to assess the determinants of domestic private investment growth in Mekelle City.

2. RELATED LITERATURE REVIEW

In Ethiopian context investment is expenditure of capital in cash or in kind or in both by an investor to establish a new enterprise or to expand or upgrade one that already exists (FDRE investment proclamation, 2012).

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Investment can be classified as public and private investments. Private investment can also be classified as domestic private investment and foreign direct investment types of private investments (Ndikumana & Verick, 2007).

According to Haroon and Nasr (2011) some of the advantages of private investment are: it increases the level of employment in the country and it increases the individual income as a result their standard of living would improve; it helps to reduce the poverty in the country, it helps to increase the per capita income in the country and it pushes up the growth rate of GDP and GNP. It also helps to attract foreign investors to invest in the country especially Diasporas living and working abroad.

Generally speaking, it is widely accepted that economic growth is one of the prime indicators of the development of nations. Countries which have diversified and strong economic base are more likely to succeed on meeting the social and economic needs of their societies. The development history of the developed world shows that the mystery of their economic strength mostly comes from their strong investment base. Most of the development gap between the developing and developed nations widely lies on the success and failure of this investment sector.

Therefore, promoting investment in Ethiopia is more than necessary to sustainably succeed in the development of this least developed nation. This can be achieved partly through formulating comprehensive investment policy, improving the investment climate, and making sound policy interventions. The result from this research can contribute to the endeavors of the region in the sphere of sound policy selection and evaluation of the existing policy interventions to promote domestic private investment in the region in general and in Mekelle City in particular. Reviewing the existing empirical evidence is critical to rationally conduct the study and to support or argue based on the empirical findings.

Empirical results by Salahuddina, Rabiul, and Abdullah (2009) suggested that the lagged investment, growth rate of per capita real GDP, domestic savings, trade openness and institutional development have positive significant effect on investment. In addition, foreign aid and private sector credit are found to have significant positive impact on investment but not robust. According to the authors, foreign debt servicing has consistent negative effect on investment. Other variables such as, inflation rate, lending rate, human capital and population growth have been found to have no significant effect on investment.

According to Gupta (2008), the major determinant factors of domestic private investment are expected output, profitability of investment, cost of capital (nominal interest rate, depreciation rate, capital loss or gain), wage rate of employees, Tobin's Q (market value of installed capital divided by replacement cost of installed capital), tax law of the country, financing constraints (firm's balance sheet), technology up gradation, improved business confidence (stock market behavior), and government investment projects (other fiscal monetary policies).

As empirical investigation by Adedamola, Felix, Kayode, and Kehinde (2012) showed growth in private investment is best explained by changes in political situation as represented by a dummy variable representing investment climate. The authors mentioned that the overall measure of macroeconomic instability and political situation serves as hindrance to private investment. Private sector output, gross domestic product, and credit to the private sector have all been significant determinants of private investment growth.

Gregory (2010) argued that all types of investment spending are inversely related to the real interest rate. A higher interest rate raises the cost of capital for firms that invest in plant and equipment, raises the cost of borrowing for home buyers, and raises the cost of holding inventories. There are various causes of shifts in the investment condition. The most improvement causes are the available technology, an increase in the population, raises the demand for housing and raises residential investment, various economic policies; such as changes in the investment tax credit and the corporate income tax, incentives to investment, volatility of the business cycle, the output of the economy, higher employment size, output level, level profits, the financing constraints, income level of the society are the determinants of private investment.

Magnus and Marbuah (2010) concluded that private investment is strongly minded in the short run by public investment, inflation, real interest rate, openness, real exchange rate and a regime of constitutional rule, while real output, inflation, external debt, real interest rate, openness and real exchange rate significantly influenced private investment response in the long run.

Study results by Afonso and Tovar (2011) has showed a positive effect accredited to total government expenditures and to public investment in fostering private investment, and negative effects of government expenditure on wages and government consumption spending on private investment. Interest payments and subsidies have a negative effect on both private and public types of investment (particularly in the emerging economies sub-group). Social security spending has a negative effect on private investment for the full and OECD samples, whereas government health spending has a positive and significant impact on private investment.

Demand contraction, availability of capital funds, access to credit, output growth, real private credit, business opportunity and investment costs, the existence of spare capacity, role of government in promoting private investment mainly through creating conducive investment climate, tax, and interest are the factors that can hinder the growth private investment (Jongwanich & Kohpaiboon, 2006).

In the case of investment behavior of individual firms, it is reasonable to assert that both current and expected levels of demand and relative factor prices are likely to affect and determine the current level of investment. It is reasonable to assert that taxation imposed on business income must be taken into account and therefore the present value of the income stream of the firm. In addition it is reasonable to argue that firms are profit maximizes (in the static or dynamic sense) (Antonakis, 2008).

Empirical findings of Guimaraes and Unteroberdoerster (2006) in Malaysia showed that in the long run, the level of private investment has been closely related to real GDP, even though there is also evidence of sustained overinvestment, in particular in the property sector; private investment is unlikely and unnecessary from a growth perspective to return to its original level once crises is happening; besides macroeconomic conditions, a shift in investors' perceptions, which may have been triggered by prolonged overinvestment, appears to have contributed to the pointed decline in private investment in recent years; at the firm level, profitability is the main determinant of investment across all sectors; and, while firm size also generally matters, other factors, notably financing constraints, seem to affect investment, in particular for smaller firms and those who are engaged in the services sector.

Lesotlho (2006) took interest rates, output growth, public investment, and bank credit to the private sector, inflation, real exchange rate, and the level of trade as private investment determinants and co-integration and Error Correction Model of Engle and Granger (1987) was used to test their determination. His empirical investigation revealed that public investment, bank credit to the private sector and the real interest rate affect private investment level in the short run, while GDP growth and real exchange rate affect private investment in the long time.

Another researcher of investment Bbale (2011), incorporated foreign direct investment, public investment, GDP per capita growth, trade openness, bank credit to the private sector, inflation rate and urban population, institutions such as democratic accountability as determinate factors of private investment and uses flexible accelerator model put forward that foreign direct investment crowds out domestic private investment, government institutions appear not directly significant in determining domestic private investment in Sub Saharan Africa (SSA), this does not mean that government indicators are not important at all. Government indicators may help domestic private investment indirectly through the provision of public goods in the form of security, roads, and other telecommunication net works.

Though aggregate financial liberalization and more prominently domestic financial liberalization produced an environment conducive for investment, it could not succeed in creating a sustained increase in capital formation in the post reform period. In other words, firms consider the demand factor, internal liquidity position and past investment decisions etc as the major indicators for future investment. Only index shows strong positive association with corporate investment is index of money market liberalization. It also found that there is significant negative association between index of capital account liberalization and corporate investment. The negative and significant relationship with index of capital account liberalization and investment raises many concerns over the credibility of external (international) financial reforms (Prabhakaran, 2005).

Ouattara (2004) considered public investment, real income and foreign aid, credit to private sector and terms of trade as the major determinant factors of private investment tested his recorded data by bounds test approach as proposed by Pesaran et al. (2001) and co- integration techniques. Finally, he concluded

that public investment, real income and foreign aid flows affect positively private investment, at the same time as the impact of credit to private sector and terms of trade was negative.
According to Kazi and Wasow (1992), the main determinants of private investment were availability of credit, availability of foreign exchange, real exchange rate, stock of public infrastructure capital and macroeconomic instability.
The empirical study of Abuka, Egesa, Atai, and Obwona (2006) declared aggregates for a number of firms that responded their types and their levels of investment, capacity utilization, size, age, and form of financing, turnover, the age structure of new capital and evidence of any technological improvement. Some of the factors investigated included and were not limited to capacity utilization, nature and source of investment finance, public capital and role of risk. In regard to these issues, the study found that turnover; profit and credit are significant determinants of firm level investment. The large significant effect of profits on investment suggests that credit constraints are still present among firms. Size remains a significant determinant of investment. Firms within manufacturing tended to invest less over time compared to firms within agriculture and services.
The empirical results of Pattillo (1998) indicated that uncertainty has a negative effect on investment levels and that the effect is significantly greater for firms with more irreversible investment likewise profitability, size of the firm, firm age, expected average demand growth, variation of reversibility, capital/ output, access of employment are determinants of domestic private investment.
A study conducted by Michaelides, Milios, and Roboli (2005) revealed that there is appositive relationship between investment and output, investment and profitability, and negative relation between investment and interest rate.
Uncertainty about the profitability and economic condition of any investment area has created a high cost environment which deters investment, access to finance is limited and this prevents firms investing, investment can be low because of limited growth (Teal, 1999).
Macroeconomic instability and uncertainty deteriorates private investment especially for agriculture by creating uncertain current and future environment (Ahmad & Qayyum, 2008).
Grenier, McKay, and Morrissey (2000) concluded that large firms are more likely to export than other firms, and more large firms sustain their investments than smaller firms. They also found that, independent of this relationship to size, firms that sustain investment are more likely to export than those which do not sustain investment.
Empirical results by Bleaney, Guncavdi, and Mckay (2008) demonstrated that the important role of credit constraints in the determination of private investment firm expenditure was subject to capital market imperfections, borrowing constraints, and capital adjustment costs are the most significant.
Poncet, Steingress, and Vandenbussche (2008) investigated the determinant factors of private investment in China and they demonstrated their finding as firstly, private firms are credit constrained while State-owned firms and foreign-owned firms in are not; secondly, the geographical and sectoral presence of foreign capital alleviates credit constraints faced by private firms. Thirdly, geographical and sectoral presence of state firms aggravates financial constraints for private firms (crowding out).
Infrastructure poses some of the most severe obstacles facing firms. Electricity problems plague, corruption was pervasive, firms view regulation as a serious problem, finance appears to be a looming problem, and small- and medium-size private investment firms were disproportionately affected by all these problems (World Bank, 2003).
Firm level factors such as firm size, dividend payout ratio, and effective cost of borrowing, cash flow ratio and growth in value of production are significant in determining corporate investment decisions. At macro level, capital market developments and real effective exchange rate were significant in influencing corporate investment decisions, whereas, inflation and non-food credit growth were not significant in predicting corporate investment decisions (Jangili & Kumar, 2010).
Blanke, Iarossi, Marilou, and Ondiege (2009) showed that access to finance (availability and cost); access to land; business licensing and permits; corruption; courts; crime, theft, and disorder; customs and trade regulations; electricity; inadequately educated workforce; labor regulations; political instability; competitors' practices in the informal sector; tax administration; tax rates, transportation cost, supplies, and inputs.
Taxes imposed by the government have negative impact on private investment growth because the country which levy highest tax rate on profit of the private investment discourages the expansion as well as interring to the industry as new investor (Haroon & Nasr, 2011).
Empirical study of Aggrey, Mukasa, Ochai, and Ogwal (2012) analyzed firm's perception about the hard infrastructure (telecom, electricity, transportation) and soft infrastructure (problems in tax administration, custom clearance, business regulations, corruption), borrowing interest rates, days to clear customs for exports and imports, number of days of power out ages per year, days to get power connection and days to get telephone connection once all the application found that firm size, firm age, and average education are the main determinants of private investment firm growth in a sample of Ugandan manufacturing private investment firms. These results have important policy prescriptions to affect firm growth.
Private investment investigations of Thu and Van (2008) showed that changes in real private investment in Nigeria were best explained by changes in political trend by a dummy variable representing political instability, macroeconomic instability and poor infrastructure.
Agbontaen and Donwa (2010) made study in Nigeria their result sowed that; past outcome of domestic investment strongly influence the present levels of investment. They were also observed that market fundamentals do not encourage domestic investment, previous values of the rates of exchange had stronger effects on the levels of domestic investment and that macroeconomic and political conditions reveal reasonable levels of instability that inhibits the progress of domestic investment in the economy both on the long and short term basis.
According to the study made by Oriavwote and Oyovwi (2013) significance of government size provides justification for the huge money spent by government in generating the desired infrastructure so as to improve private investment that means huge government expenditure on infrastructure has been make beneficial to private investors. These also indicate the existence of good service delivery and good expenditure pattern. The negatively signed inflation rate is an indication of the detrimental impact of high prices on private investment. The study also indicated that private investment has been influenced by the international competitiveness.
According to Siriwardana (2009), technology, infrastructure, human capital, gross domestic product, domestic credit to the private sector, interest rate, effective exchange rate, public investment, openness of the economy, security situation, and other structural factors that determine the efficiency of the economy are the main determinants of domestic private investment. The areas identified as requiring urgent attention include the maintenance of a sound macroeconomic environment, resolution of infrastructure bottlenecks, seeking of an early solution to end the civil conflict and achievement of a lasting peace, and encouragement and facilitation of the private sector to undertake major projects under public private partnerships to reduce the pressure on the government budget.
In addition, the efforts to implement the identified reforms, while strengthening governance, have to be intensified to create a stronger and a more resilient economy which is conducive for higher level of private investment. Promoting investment in newly liberated areas, public private partnerships, environment for doing business, labor market rigidities and labor laws, structural reforms, higher domestic resources, financial sector, incentive regime are the key determinants of investment (Siriwardana, 2009).
Khan, Rehman, and Arshad (2007) classified factors those affect investment into two broad categories; as economic factors and noneconomic factors. By citing study by Servén and Solimano (1992), they described economic factors that affect private investment especially in developing countries, as level of domestic output, the real interest rate, public investment, and credit available for investment, size of the external debt, the exchange rate, and macroeconomic stability, demand levels, credit constraint, irreversible nature of investment in capital goods. According to scholars in the above; in addition to economic factors stated above, there are some other factors that are important for the rapid private sector investment growth. These include the good governance, quality of institutions and entrepreneurial skills for the private sector to make big investment decisions based on a rational assessment of risks and potential pay offs.
Empirical finding of Khan and Tariq (2008) viewed that private sector output, net capital inflows to the private sector, total sources of funds and past capital stock have all been significant determinants of domestic private investment growth rate, while changes in the volume of bank credit also has a positive effect. It also suggested that if the sector is squeezed for credit there will be a reduction in the level of private investment with adverse impacts on the long term productive capacity of the private sector. Moreover, the result suggested that over all relationship of public and private investment was one of substitutability. It

means there was a crowding out effect indicating that most of the physical and financial resources are utilized by public sector, there by exerts a negative influence on private investment.

Asiedu and Freeman (2008) found that the effect of corruption on investments varies significantly across regions: corruption has a negative and significant effect on investment growth for firms in transition countries. Furthermore, among the variables included in their regressions (firm size, firm ownership, trade orientation, industry, GDP growth, inflation and openness to trade) corruption is the most important determinant of investment growth for transition countries.

Empirical results of Luintel and Mavrotas (2005) suggested that the parameters of private investment functions are country specific and they systematically depend on the country specific macroeconomic conditions such as the levels of real income, inflation, real interest rate, and the levels of financial development. Their result also confirmed that real income and income growth on private investment is closely linked to the levels of income, real interest rate and inflation of the country concerned; and hence these parameters are country specific.

Bigsten, Lundvall, and Soderbom (1998) made study in Kenya and their finding revealed that firms are to a small extent relied on external finance when they invest. The fact that most firms do not want loans suggested that it is other factors than restricted accesses to credit that explained this modest degree of investment, for instance the cost of external capital, or the increased bankruptcy risk that follows with formal borrowing. They have found a statistically significant role for cash-flow, although its point estimate implied that investments are not overly sensitive to changes in liquidity; and considerably more important role for productivity, with the estimated elasticity being as high as unity for a subset of firms.

Since the growth and productivity of domestic private investment variable is composition of factors, other than capital and labor, that affect the output value, this means that firms, which manage to exploit profitable opportunities, undertake more investments. The policy implication of these findings was that increased credit access will have a limited effect on investments, unless this is accompanied with a general improvement of the profitability opportunities of the firms. A stagnating manufacturing sector will not start to grow unless there exist profitable projects. Profitable projects as such cannot, indeed should not be accomplished or identified by policy makers. What required is a policy that enables the firms to exploit profitable opportunities (Bigsten, Lundvall, & Soderbom, 1998).

The empirical study made by Charles et al. (2006) found that turnover, profit, and access to credit were significant determinants of firm level investment. The large significant effect of profits on investment suggested that credit constraints are still present among firms. The results also confirmed that the profit effect is larger for small and medium sized enterprises compared to the large firms. However contrary to their expectation credit was not a significant factor on investment for small and medium sized private investment firms. In their estimation, simple regression and correlation analysis model of econometrics were employed.

The empirical results of Acosta and Loza (2005) suggested that investment decisions seem to be determined, in the short run, by shocks in returns (exchange rate, trade liberalization) and in aggregate demand. Besides, there is evidence of a crowding out effect of public investment. In the long run, the capital accumulation path seems to be closely dependent on both well-developed financial and credit markets and on perspectives of fiscal sustainability.

Empirical result of Udah (2010) revealed that credit to the private sector was a significant factor in stimulating private investment in Nigeria. In addition, interest rate, political stability and external debt were significant factors. The paper recommends the need to urgently strengthen the budget preparation and execution process in Nigeria. This, in the opinion of the author, would substantially improved service delivery and efficiency of government expenditure.

Le (2004) reported that socio-political instability characterized by nonviolent protests promotes private investment while violent uprisings hinder private investment; regime change instability characterized by constitutional government change promotes private investment while unconstitutional government change hinders private investment; and policy uncertainty characterized by variability of contract enforcement rights promotes private investment while variability of government political capacity hinders private investment.

Study made by Ninh, Hermes, and Lanjouw (2001) has showed the relationship between investment and uncertainty is influenced by the extent to which investments are irreversible. In particular, the results indicate that when the degree of irreversibility increases, this increases the negative association between uncertainty and investment.

Prudent government financing that attenuates deficits, financial credit channels form government to the private sector, taming inflation, infrastructure, political and economic instability, external debt burden of the country, political and civil liberties, risk level of the investment, and level of profitability are the determinants of private investment (Kwasi, Mlambo, & Oshikoya, 2001).

According to Sinha and Fiestas (2011), investment climate constraints can be grouped into five broad categories:

- Macro environment constraints, such as macro level stability, crime and corruption.
- Institutional constraints, including business regulations, legal and tax systems.
- Financial constraints, such as access to credit and cost of finance.
- Infrastructure constraints, including electricity and roads.
- Micro-level constraints, such as technology transfer and quality of management

The survey made by World Bank (2004) revealed three pivotal features of the Ethiopian private investment sectors by taking manufacturing sector as a sample. First, labor costs in Ethiopia are very low compared with those of potential competitors in and outside Africa (for example, labor costs in Ethiopia are almost one-third of those in China. Second, despite this huge cost advantage, exporting Ethiopian firms account for less than 8 percent of the population of firms, this is very small by any standard. Third, the Ethiopian manufacturing is also dominated by small private firms, which suggests limited firm growth. To explain these stylized facts about the manufacturing sector in Ethiopia, their analysis was focused on the concept of "value added per worker," which provides a measure of labor productivity (net of labor cost). Moreover, the study also found several constraints to doing business as private of them such as tax rates and tax administration as constituting the most serious impediments in all regions of the country. Another factor that firms identified as a major business impediment, again with noticeable regional variation, is access to land. Their results also showed that access to and reliability of infrastructure services (power and telecommunications) have been among the other major business obstacles, as indicated by the long waiting time to get connected and frequent interruptions once connected. A fourth set of constraints was banks' cumbersome credit procedures, perceived corruption in their credit allocation, and stringent collateral coverage requirements (World Bank, 2004).

In Ethiopia even though Massive public investments are set to deliver a wide range of public goods roads, railways, power plants, schools, and clinics while simultaneously propping up thousands of private companies involved in building and maintaining these brand new facilities; high inflation has been and remains a major weakness of economic policy, and poses serious threats to the business environment by discouraging savings and distorting investment decisions. Abrupt and challenging regulatory changes have also brought additional pressures to businesses in the areas of licensing, registration, taxation, retailing, land acquisition, real estate, and banking are the major overwhelming pressures in Ethiopia's current economic climate and are putting strains on private business and could potentially denote the country's positive growth prospects (Access Capital, 2011/12).

Major problems of private investment in Ethiopia were: weak infrastructure, lack of skilled workers, high transportation costs, delay of privatization, restrictions on international investment, and difficulty in access to finance, lack of financial services, and lack of information on investment/market (Embassy of Japan, 2008).

Empirical investigation of Wondmagegn (2011) has reported the critical challenges of domestic private investment as infrastructures and religious condition, location factors, social factors, administrative factors, environmental factor, consumer growth factor, marketing factors, factor related with financial institutions, technological factors, regulatory factors, taxation factor, factors related with illegal trade, financial factors, and inflationary factors.

On the other hand, empirical study conducted in Ethiopia by Tamirat (2005) revealed that the major challenges/ determining factors of domestic private investments were lack of start-up capital, limited access to land, weak marketing infrastructure, long bureaucratic procedures, limited access to credit, and corruption.

The most serious factors that affect private investment were lack of bank loan, foreign exchange control, infrastructure, profitability and affordability of initial capital, access to finance, previous business experience and skill of managers (Dawit, 2010).

Collateral requirement of banks; interest rate, foreign exchange and land issue, access to credit, infrastructure situation, custom services, legal system, road facility, telecommunication, electricity, water, financial and economic policies, tax administration, skilled labor, theft & disorder, labor policy, government encouragement, incentives, access to market, political stability, access to raw materials, access to labor, and existing technological were the key determinants for private investment development and growth (Mehabaw, 2011).

Despite much opportunity, significant challenges to business operations remain. Ethiopia is a landlocked country and, consequently, transportation for imports and exports, while mostly dependable, can be slow. Some government agencies still suffer from bureaucratic inefficiencies; power supply can be erratic; and the land-acquisition process can be complex and time-consuming (Cannon, 2009).

Micro level study by Kefay (2005) and Kenzu (2012) showed that education, access to land, access to credit, infrastructure facilities, investment incentives, corruption and bureaucratic red tape were the most important determinants of private investment in the study areas. Moreover, the micro level study result indicated education, access to land, access to credit, infrastructure facilities, and investment incentives were positively and significantly related with private investment. Corruption and bureaucratic red tape were negatively and significantly associated with private investment.

From the above reviewed empirical evidences, the explanatory variables considered in this study to analyze domestic private investment growth were: business tax rate, interest rate of formal financial institutions, educational level of the manager or operator, firm size in terms of employees size, access to adequate market, access to land, age of the firm, corruption, type of the investment firm, investment incentives, practice of competitors, access to finance, and access to infrastructure. Even though all the determinant factors reviewed in this chapter have a positive or negative impacts on the growth of domestic private investment globally as well as locally, depending on the given time and budget the researcher believes that the selected variables seem to be especially relevant to the selected study area.

3. STATEMENT OF THE PROBLEM

A key challenge facing Mekelle City has been identifying the major factors affecting the domestic private investment and come up with policies that would help raise private investment in order to stimulate and sustain economic growth (Tigray Investment Agency, 2013). Therefore, it is important and timely to identify the determinants of private investment growth and their effect on the private investment in the city.

Moreover, since the concept and determinant factors of domestic private investment are dynamic and broad in nature, the previous research findings of other countries and regions in Ethiopia may not represent the selected area in this study. On top of that as the main focus of most previous studies conducted in Ethiopia was on the macro level determinant factors using secondary time series data for the whole private investment (domestic as well as foreign), the main determinant factors of the domestic private investment sector at firm level has been overseen and not yet investigated in Mekelle City. Thus, the study has examined the domestic private investment growth in Mekelle City.

4. OBJECTIVE OF THE STUDY

The objective of the study was to identify and analyze the determinants of domestic private investment firm growth in Mekelle City.

5. RESEARCH METHODOLOGY

The total number of private investment registered in Mekelle Investment Office in the year up to 2013 were 1,631; out of this total private investment, 406 domestic private investment projects (firms) were fully in operation and the remaining were in pre-implementation and implementation phase. The distribution of the private investment to each economic sector as well as the stage of the project as whether in pre- implementation, implementation or operations phase are shown below (Table 1).

TABLE 1: MEKELLE CITY'S DOMESTIC PRIVATE INVESTMENT STATUS

Economic sector of investment	Actual status (phase)	Number of projects
Manufacturing	Pre-implementation	248
	Implementation	175
	Operation	154
	Total	**577**
Agriculture	Pre-implementation	43
	Implementation	15
	Operation	26
	Total	**84**
Construction	Pre-implementation	552
	Implementation	27
	Operation	125
	Total	**704**
Service	Pre-implementation	94
	Implementation	65
	Operation	90
	Total	**249**
Trade	Pre-implementation	5
	Implementation	1
	Operation	11
	Total	**15**
Total		**1631**

Source: Mekelle City Investment Office (2013)

5.1. STUDY DESIGN

The study employed an explanatory research design. The major purpose of explanatory research is to determine the cause and effects of dependent and independent variables. It is the most appropriate design for identifying the relationships between the growth of domestic private investment and its explanatory variables. Furthermore, the study used cross-sectional data. The reason for preferring a cross-sectional study was due to the limitation of enough and well recorded time series data. A quantitative research approach was also used.

5.2. DATA SOURCES AND COLLECTION TECHNIQUES

The study collected data from primary sources. The primary data was obtained through semi-structured questionnaire. The operators/owners of the domestic private investment firms completed the questionnaire.

5.3. SAMPLING TECHNIQUE

Systematic random sampling type of probability sampling was employed in selecting each element of the sample size, where every element in the population has the same chance of being selected. It involves selection of every k^{th} element in the sampling frame where k is the ratio between number of elements in the population and the sample size.

5.4. SAMPLE SIZE

This study was conducted in Mekelle City. According to Table 1 above, the total numbers of private investments registered in Mekelle City Investment Office were 1,631; out of this, 406 domestic private investments were fully in operation and the remaining was in pre-implementation and implementation phase. The 406 domestic private investments which were in operation were the population of this study. 136 sample respondents were sampled at 7% error term by using the formula provided by Yamane (1967) and each 3rd domestic private investment was selected from the lists of 406 firms in operation until 136 investment firms were reached.

5.5. METHODS OF DATA ANALYSIS AND PRESENTATION

Data was edited in order to identify error and omissions, coded, classified, and entered in to STATA for further analysis. After the data processing, the primary data collected via questionnaire was analyzed by using an econometric model called OLS (Ordinary Least Square) regression model to test the relationships between and among variables.

5.6. LITERATURE DERIVEN HYPOTHESIS

Hypotheses were formulated with an intent to determine whether a relationship exists between the dependent and independent (explanatory) variables, that is supported by literature, in the selected study area. The following 14 explanatory variables were considered for analysis.

Hypothesis 1: The higher the rate of taxes for domestic private investment firm, the higher the possibility to growth.
Hypothesis 2: Investment incentives have a possible negative relationship with domestic private investment growth.
Hypothesis 3: Domestic private investment growth has a negative relationship with access to finance.
Hypothesis 4: Size of the firm and domestic private investment growth have negative relationship.
Hypothesis 5: Interest rate has a positive impact on domestic private investment growth.
Hypothesis 6: Access to infrastructure has a negative association with domestic private investment growth.
Hypothesis 7: Corruption has positive impact on the growth of domestic private investment.
Hypothesis 8: Firm age and domestic private investment growth have a negative relationship.
Hypothesis 9: Types of investment is not determinant factor for the growth of domestic private investment.
Hypothesis 10: Manager /owner's level of education and domestic private investment growth has a possible negative relationship.
Hypothesis 11: Access to adequate market and domestic private investment growth has a negative relationship.
Hypothesis 12: Practice of competitors has no impact on the growth of domestic private investment.
Hypothesis 13: Access to land has a negative impact on the growth of domestic private investment.
Hypothesis 14: Economic instability has no impact on domestic private investment growth.

5.7. MODEL SPECIFICATION

OLS model was used to examine the relationship between the independent (explanatory) variables and dependent variable (growth of domestic private investment firm), and the effect of the explanatory variables on the domestic private investment growth. Based on the review of the theoretical and empirical literature, discussed above the following functional model was used for this study:

DPRIFG = ƒ(Tax, INCE, FIN, FIRMsz, INTR, INFR, CORR, ECOC, FIRMage, TYPinv, EDUlev, MKT, COMPUT, LND). And depending on this functional model, the following ordinary least square (OLS) model was constructed:

$$DPRIFG = \beta_0 + \beta_1 Tax + \beta_2 INCE + \beta_3 FIN + \beta_4 FIRMsz + \beta_5 INTR + \beta_6 INFR + \beta_7 CORR + \beta_8 ECOC + \beta_9 FIRMage + \beta_{10} TYPinv + \beta_{11} EDUlev + \beta_{12} MKT + \beta_{13} COMPUT + \beta_{14} LND + \acute{e} \quad \ldots\ldots(1)$$

Where DPRIFG = Domestic private investment firm growth; Tax = existing current business tax condition; INCE = Incentive provided for domestic private investment by the government; FIN = access to finance; FIRMsz = size of the private investment firm expressed in terms of number of employees; INTR = existing interest rate of loan (users cost of capital); INFR = condition of the existing infrastructure; CORR = influence of corruption on growth; ECOC = economic condition; FIRMage = age of the firm; COMPUT=Practice of competitors; MKT = market condition in terms of access; EDUlev= Educational level of the firms manager/owner; TYPinv = type of investment(service, manufacturing, agriculture, trade, construction); LND = Access to land and $\acute{e}$ random error term.

Finally, the explanatory (independent) variables, variable type, measurement scale, method of econometrics used to analyze and expected signs are summarized below.

TABLE 2: SUMMARY OF INDEPENDENT VARIABLES FOR DESCRIPTIVE ANALYSIS

No	Name of the Independent Variable	Variable Type	Measurement Scale (to describe)	Expected Sign (alternative hypothesis)
1	Educational level	Categorical	1 = 1-8 years of formal education, 2 = 9-12 high school, 3 = vocational training and diploma holders, 4 = first degree, 5 = second degree and above	Negative
2	Age of the firm	Continuous (in terms of years)	Interval (grouped) scale	Negative
3	Firm size	Continuous (number of employees and capital size)	Continuous	Negative
4	Investment type	Dummy	1 = Manufacturing, 2 = Agriculture, 3= Construction, 4 = Service , and 5 = Trade	
5	Tax rate	Categorical	1 = prevailing tax rate is low, 2 = medium, and 3 = high	Positive
6	Interest rate	Categorical	1 = prevailing interest rate is low, 2 = medium, and 3 = high	Positive
7	Access to finance	Categorical	1 = existing financial accessibility has no effect on their investment growth, 2 = moderate effect, 3 = significant effect	Negative
8	Investment incentive	Categorical	1, 2, 3, 4 & 5 if respondents benefited from investment incentives was very low, low, moderate, high, and very high influence on their investment growth respectively,	Negative
9	Economic condition	Categorical	1 = existing economic condition has no effect on their investment growth, 2 = moderate effect, 3 = significant effect	
10	Infrastructure access	Categorical	1 = existing level of infrastructure has no effect on their investment growth, 2 = moderate effect, 3 = significant effect	Negative
11	Market access	Categorical	1 = existing level of market condition has no effect on their investment growth, 2 = moderate effect, 3 = significant effect	Negative
12	Practice of competitors	Categorical	1 = existing practice of competitors has no effect on their investment growth, 2 = lower effect, 3 = moderate effect, 4 = significant effect	Neither
13	Corruption	Categorical	1 = existing level of corruption has no effect on their investment growth, 2 = moderate effect, 3 = significant effect	Positive
14	Land	Categorical	1 = access of land has no effect on their investment growth, 2 = moderate effect, and 3 = significant effect respectively.	Negative

Source: Own Design (2013)

5.8. MODEL TESTS

OVERALL MODEL FITNESS

If the p-value of F-test is greater than the degree of freedom 0.1(10% as a rule of thumb), the model could not fulfill the overall fitness requirement (Black, 2010; Carlson, Newbold, & Thorne, 2010; Wooldridge, 2009). Thus, in this study the overall significance of the multiple regression model was tested an analogous test for significance of F statistic and the P-value was 0.0000 which is less than 5%. Hence the requirement for fitness of model was safely fulfilled.

HETEROSKEDASTICITY TEST

According to Colin and Trivedi (2009) and Wooldridge (2009), such problems can be checked by using Breusch–Pagan test for Heteroscedasticity (BP test) test. If the BP test results in a small enough P-value that is below the chosen significance level, i.e., 1% or 5% or 10 %, then the null hypothesis of homoskedasticity is rejected and correction measures should be taken. One possibility is to just use Heteroscedasticity robust standard errors estimator of the OLS estimator.

In this study, the model was checked via BP Heteroscedasticity (hettest); the test result showed P-value of 0.1845 (18.45%), which is greater than the significance level (1%, 5%, and 10%). Thus, the result indicated that there is equal variance among the error terms. Therefore, there was no serious problem of Heteroscedasticity in the process of model specification and the model was well fitted.

MULTICOLLINEARITY TEST

The problem of multicollinearity arises when the inter correlation between predictor variables is high. Multicollinearity problem could be checked via variable inflation factor (VIF). Rule of thumb for a multicollinearity test of the model states that an explanatory variable whose values are greater than 10 or whose 1/VIF values are less than 0.10 (10%) indicate the possible and intolerable problem of multicollinearity (Greene, 2003). Therefore, in this study, the test result showed that there was no value greater than 10, all values of variance inflation factors were less than 1.97. Hence, the model employed in this study has no serious problem of multicollinearity.

CORRELATION TEST

If the correlation between each variable is greater than or equal 0.5 or -0.5, results could show the existence of perfect positive or negative (serious problem) of correlation (Greene, 2003). This study tested the model for checking such correlation problem using pair wise correlation test and the result showed that the pair wise correlation of all variables were different from 0.5 as well as -0.5 (i.e., between 0.4 and -0.3). Thus, based on the given result and its justification, there was no intolerable problem of correlation.

COEFFICIENT OF DETERMINATION TEST

A widely used measure of fit for regression models is the coefficient of determination, or R^2. Even though there is no absolute base in terms of values one normally encounters in cross sections, an R^2 of 0.50 is relatively high (Greene, 2003). Having this fact, the model was checked for the level of coefficient of determination and the result was 0.5658 (56.58%), which means 56.58 percent of the domestic private investment growth variable could be explained by the considered explanatory variables. Thus, the coefficient of determination was more than the minimum requirement. So, the OLS regression model used in this research study was preferably relevant and appropriate (i.e., fit).

OMITTED VARIABLES

The link test and Ramsey RESET test for omitted variables are commonly used methods in the test. As a decision rule according to Ramsey **RESET** test, a model specification is fit for regression analysis if the p-value stated in P>F is greater than the chosen level of significances, i.e., 1%, 5% and 10%. In this study the model was tested via Ramsey RESET **estat ov (omitted variable) test**. Accordingly, the result indicated that the model had no relevant omitted variables since the test failed to reject the hypothesis, i.e., Prob.>F of 0.1200 is found greater than any of the significance levels of the specified model of the study.

6. RESULTS AND DISCUSSIONS

This section of the study presents the results and discussions of the econometrics/regression analysis. The regression model was developed in order to investigate the relationship between domestic private investment growth (dependent variable) and the hypothesized determinant factors (independent variables). Besides, in order to further investigate the effect of the explanatory variables on domestic private investment growth, two cross sectional linear regression models analysis of determinant factors of domestic private investment growth in terms of employment size, and capital size (for comparison) were employed.

TABLE 3: OLS REGRESSION RESULT OF DETERMINANTS OF DOMESTIC PRIVATE INVESTMENT FIRM GROWTH IN TERMS OF EMPLOYMENT SIZE

Variable	Coefficient	Standard error	t t	P>|t|	[95%confidence interval]	
Tax rate	-.2854828	.1120184	-2.55	0.007*	-.5074329	-.0635326
Investment incentives	-.1564001	.0399213	-3.92	0.000*	-.235499	-.0773012
Access to finance	-.2290259	.0986093	-2.32	0.022**	-.4244075	-.0336442
Firm size	-.0000506	.0000596	-0.85	0.398	-.0001686	.0000675
Interest rate	.2583537	.0987274	2.62	0.010*	.0627381	.4539693
Access to infrastructure	.1197238	.0556814	2.15	0.034**	.0093983	.2300492
Corruption	.1967366	.0658811	0.15	0.881	-.120643	.1404267
Firm age	-.0885684	.0180513	-4.91	0.000*	-.1243348	-.0528019
Educational level Managers (owners)	.0185418	.0230224	0.81	0.422	-.0270742	.0641578
Access to adequate market	.1477785	.0862785	1.71	0.090***	-.0231713	.3187284
Practice of competitors	.0455585	.0776313	0.59	0.558	-.108258	.199375
Access of land	.0878421	.0665315	1.32	0.189	-.0439814	.2196657
Economic condition	.1627067	.0905343	1.80	0.075***	-.0166754	.3420889
Construction	-.0371089	.0408558	-0.91	0.366	-.1180595	.0438416
Agriculture	-.0769297	.0392586	-1.96	0.053 **	-.1547156	.0008562
Service	-.1042261	.0301364	-3.46	0.001*	-.1639375	-.0445147
Trade	-.1800409	.0493263	-3.65	0.000 *	-.2777746	-.0823073
Constant	1.190352	.4106994	2.90	0.005	.3766039	2.0041

Note:
* represents statistically significant at 1% level
** represents statistically significant at 5% level
*** represents statistically significant at 10% level

Source: STATA output of own survey (2013)

As it is summarized in Table 3 above, the explanatory power of the variables used in this model, from the R-squared values was equal to 56.58%. This implies that 56.58% of the changes in domestic private investment growth were successfully explained by the variables incorporated in this model. However, the remaining 43.42% of the changes in domestic private investment growth were caused by other factors that were not included in the models of this study. These results indicated the overall goodness-of-fit of the models used in this study. Moreover, the overall significance of the model when measured by their respective F- statistics of 10.25 with P-values of 0.0000 indicated that this models were well fitted at 1% level of significance. It can be inferred from the results of R-squared and F-statistics that the implemented model was well fitted, that is the determinant factors of domestic private investment growth have a

significant effect on domestic private investment growth. Therefore, the following part of the analysis discusses the identified determinant factors of domestic private investment growth and analyzes the way (direction of relationship) the dependent variables are related with independent variables.

HYPOTHESES TESTING

HYPOTHESIS 1: THE HIGHER THE RATE OF TAXES FOR DOMESTIC PRIVATE INVESTMENT FIRM, THE HIGHER THE POSSIBILITY TO GROWTH.

The business tax rate variable has a coefficient estimate of about -0.29, and it is statistically significant at 1% level of significance. This implies that growth of domestic private investment was negatively related with the increase in business tax rate for domestic private investment. In other words, the higher the business tax rate in domestic private investment, the lower their investment growth and expansion achievement, and vice versa. Therefore, the current level of business tax rate negatively determined the growth of domestic private investment in the city during the period. As long as it is an attitude of the private investment owners (managers), the limitation of internal measure of tax rate data are likely to be influenced by firm specific attributes such as firm size and firm age. For example, investment tax ratings provided by large firm may be different from the tax ratings provided by smaller firms. The level of tax rate for domestic private investment may also be over reported as most respondents are reluctant to pay tax and some feelings are obvious while raising questions about providing answers to perception.

HYPOTHESIS 2: INVESTMENT INCENTIVES HAVE A POSSIBLE NEGATIVE RELATIONSHIP WITH DOMESTIC PRIVATE INVESTMENT GROWTH.

The existing incentive for domestic private investment variable has a coefficient estimate of about -0.16; and it is statistically significant at 1% level of significance. It implies that growth of domestic private investment was negatively related with the given level of incentive. In other words, as the investment incentive in domestic private investment increases by one unit, the domestic private investment growth declines by about 16% and vice versa. This inconsistency may happened due to the limitation of internal measure of incentive data are likely to be influenced by firm specific attributes such as firm size, firm age, and level of priorities of the national as well as regional governments. For example, investment incentive ratings provided by large firm may be different from the ratings provided by smaller firms; ratings provided by manufacturing type of investment may be different from incentive ratings provided by service and trade type of domestic private investment. Another possible reason for inconsistency of the result may also be the fact that incentive of domestic private investment may be under reported as the respondents might have been unforthcoming about providing answers to the perception related questions provided in the questionnaire.

HYPOTHESIS 3: DOMESTIC PRIVATE INVESTMENT GROWTH HAS A NEGATIVE RELATIONSHIP WITH ACCESS TO FINANCE.

The variable representing the presence of financial access constraint has coefficient estimate of about -0.23 it is statistically significant at 5 percent level of significance. The coefficient implies that growth of domestic private investment was negatively related with the level of financial constraint. In other words, other things remain constant one unit increase in financial constraint decreases the domestic private investment by about 23%, or the higher the financial constraint in domestic private investment, the lower the investment growth and expansion achievement were and vice versa. Therefore the existing financial access constraint negatively and significantly determined domestic private investment growth in the study area.

HYPOTHESIS 5: INTEREST RATE HAS A POSITIVE IMPACT ON DOMESTIC PRIVATE INVESTMENT GROWTH.

The formal financial institution loan interest rate variable has coefficient estimate of about 0.26 and it is statistically significant at 5 percent level of significance. The coefficient of borrowing interest rate variable implies that growth of domestic private investment was positively related with the level of financial institutions loan interest rate. In other words, one unit increment of interest rate in financial institutions loan, increases the domestic private investment growth and expansion achievement and vice versa. Hence, the result reveals that growth of the domestic private investment was positively determined by formal financial institutions loan interest rate.

HYPOTHESIS 6: ACCESS TO INFRASTRUCTURE HAS A NEGATIVE ASSOCIATION WITH DOMESTIC PRIVATE INVESTMENT GROWTH.

The infrastructural access representing variable has coefficient estimate of 0.12 and it is statistically significant at 5 percent level of significance. The coefficient implies that growth of domestic private investment was positively related with the level of infrastructural access for the investors. In other words, one unit increase in the infrastructure access increases domestic private investment growth and expansion achievement opportunity by about 12% and vice versa. Therefore infrastructural access was positively influencing the growth of domestic private investment in the study area. Recently, the national as well as regional governments have paid due attention to take on the main and enormous infrastructural projects in the region. These infrastructural projects have dual advantages for the domestic private investment growth; (1) by reducing transportation cost, saving time, facilitating and shortening market chain for products produced by domestic private investment for example the road, telecommunications, and power projects and (2) by creating market opportunity for the domestic private investment themselves for example construction type of investment may participate in construction of infrastructure as contractors or consultants, manufacturing type of domestic investment may sell their products as inputs for the infrastructural projects and so on.

HYPOTHESIS 8: FIRM AGE AND DOMESTIC PRIVATE INVESTMENT GROWTH HAVE A NEGATIVE RELATIONSHIP.

The relationship between firm age and domestic private investment growth is expressed by the coefficient estimate of -0.09, which is statistically significant at 1 percent level of significance. This value of coefficient implies that year increase in age of the firm decreases growth of domestic private investment by about 9% and vice versa. Therefore growth of the domestic private investment was negatively related with the age of the firm concerned. In other words, age of the firm negatively determined investment growth and expansion achieving opportunity and vice versa.

HYPOTHESIS 9: TYPES OF INVESTMENT IS NOT DETERMINANT FACTOR FOR THE GROWTH OF DOMESTIC PRIVATE INVESTMENT.

In order to analysis the variation among the different investment sectors operating in the city a dummy variable "type of investment" was established in the regression model and the sectors were evaluated taking the manufacturing sector as a base for comparison. The manufacturing sector was selected as a base because this sector has been relatively growing better than the other sectors in the city and it reasonable to consider it a point of reference in this study. Accordingly the study result is presented below.

The relationship between the agriculture type of domestic private investment variable and manufacturing type of domestic private investment growth has coefficient estimate -7.69. This was statistically significant at 10 percent level of significance. This coefficient implies that the two stated variables were negatively related in the period of study. In other words, the agricultural type of domestic private investment has been growing by about 7.69 percent less than the manufacturing type of domestic private investment or to put it differently, the manufacturing type of domestic private investment has been growing by about 7.69 percent greater than the agricultural type of domestic private investment in the city.

On the other hand the service type of domestic private investment has coefficient estimate of -10.42 in relation to the manufacturing type of domestic private investment growth, and the estimate was statistically significant at 1 percent level of significance. The value of this coefficient implies that the service type of domestic private investment growth was negatively related to the manufacturing sector growth. To be specific the service type of domestic private investment has been growing by about 10.42 percent less than the manufacturing type of domestic private investment or the manufacturing type of domestic private investment has been growing by about 10.42 percent greater than the service type of domestic private investment in the city.

When we see the link between the trade type of domestic private investment and manufacturing type of domestic private investment growth, we observe that the coefficient estimate is about -18 percent and it is statistically significant at 1 percent level of significance. This coefficient suggests that the two variables were negatively related. In other words, the trade sector of domestic private investment has been growing by about 18 percent less than the manufacturing type of domestic private investment or putting it differently, the manufacturing type of domestic private investment has been growing by about 18 percent greater than the trade type of domestic private investment in the city.

Finally the correlation between construction type of domestic private investment and manufacturing type of domestic private investment growth was determined and the coefficient estimate was -3.71 percent which is statistically insignificant at all. Even though the value of the coefficient was insignificant, the relationship between the concerned variables was negative. In other words, the construction type of domestic private investment has been growing by about 3.71 percent less than the manufacturing type of domestic private investment or the manufacturing type of domestic private investment has been growing by about 3.71 percent greater than the construction type of domestic private investment in the city.

HYPOTHESIS 11: ACCESS TO ADEQUATE MARKET AND DOMESTIC PRIVATE INVESTMENT GROWTH HAS A NEGATIVE RELATIONSHIP.

The coefficient estimate of the relationship between the current market access and domestic private investment growth was about 14.7 percent and it was statistically significant at 5 percent level of significance. This positive coefficient indicates that the two variables were positively related with each other. In other words, the present market access positively determined the domestic private investment growth, and expansion opportunity in the city and vice versa.

HYPOTHESIS 14: ECONOMIC INSTABILITY HAS NO IMPACT ON DOMESTIC PRIVATE INVESTMENT GROWTH.

The economic condition variable has coefficient estimate of 0.16 and it was statistically significant at 10 percent level of significance. The coefficient implies that growth of domestic private investment was positively related with the present economic condition. This indicates that an increase one unit in conducive economic condition increases domestic private investment growth and expansion by about 16% and vice versa. So, the existing economic condition has positively determined the growth of domestic private investment in the city. The rationale behind this fact, the country is at progressive economic development and growth. Of course the existing inflationary condition may have its own negative effect on the growth. But, as long as different measures were taken by the regional and national governments to address the inflation, the influence of the existed economic condition was overall positive.

HYPOTHESIS 4: SIZE OF THE FIRM AND DOMESTIC PRIVATE INVESTMENT GROWTH HAVE NEGATIVE RELATIONSHIP.

HYPOTHESIS 7: CORRUPTION HAS POSITIVE IMPACT ON THE GROWTH OF DOMESTIC PRIVATE INVESTMENT.

HYPOTHESIS 10: MANAGER /OWNER'S LEVEL OF EDUCATION AND DOMESTIC PRIVATE INVESTMENT GROWTH HAS A POSSIBLE NEGATIVE RELATIONSHIP.

HYPOTHESIS 12: PRACTICE OF COMPETITORS HAS NO IMPACT ON THE GROWTH OF DOMESTIC PRIVATE INVESTMENT.

HYPOTHESIS 13: ACCESS TO LAND HAS A NEGATIVE IMPACT ON THE GROWTH OF DOMESTIC PRIVATE INVESTMENT.

The relation between level of corruption, firm size, and educational level of the owner (manager), computation method of competitors, and land access and domestic private investment growth has coefficient estimates about 19.7%, 0%, 1.9%, 4.6% and 8.8%, respectively but they were statistically insignificant. The coefficient of corruption level, firm size, educational level, computation method of competitors, and land access in relation to domestic private investment growth implies that growth of domestic private investment was positively related with educational level of the manager (owner), computation method of competitors, land access for investment; and negatively related with firm size even though their relation was statistically insignificant. In other words educational level of the manager (owner), computation method of competitors, land access for investment, of the investment has positively determined the domestic private investment growth, expansion achievement opportunity and vice versa with statistically insignificant.

The level of corruption in domestic private investment growth has coefficient estimates of about 19.7 percent it was statistically insignificant. The coefficients of existed level of corruption in domestic private investment imply that growth of domestic private investment was positively related with the level of corruption in domestic private investment. In other words, the level of corruption in the domestic private investment has insignificant effect on domestic private investment growth and expansion achievement opportunity. This insignificancy may be due to the limitation of internal measure of corruption data are likely to be influenced by firm specific attributes such as firm size. For example, corruption ratings provided by large firm may be different from the ratings provided by smaller firms. Another possible reason for insignificance of this determinant variable is that corruption may be under reported as respondents may be reserved about providing answers to sensitive questions like corruption.

The variable Owners (managers) level of education showed a positive determination but statistically insignificant. The determinant factor of domestic private investment land access showed a positive but statistically insignificant. The variable firm size showed a negative but statistically insignificant.

The computation methods used by each competitor have positive and statistically insignificant.

In summary the OLS result shown in Table 3 above revealed that level of investment tax, investment incentives, financial constraint, and firm age negatively and significantly determined the domestic private investment growth in Mekelle City. But level of interest rate for loan, infrastructural access, economic condition and market access in the City positively and significantly determined the domestic private investment growth in the City. The remaining proposed determinant factors of the domestic private investment viz. land access, compotators practice, educational level of the owners (managers) and corruption level were positively and insignificantly determined the investment growth but firm size exceptionally showed negative and insignificant impact on the domestic private investment growth in Mekelle City.

TABLE 4: OLS REGRESSION ESTIMATION RESULT OF DETERMINANTS OF DOMESTIC PRIVATE INVESTMENT GROWTH IN CAPITAL SIZE

Variable	Coefficient	Standard error	t t	P>|t|	[95%confidence interval]	
Tax rate	.1447543	.2436353	0.59	0.554	-.3379778	.6274864
Investment incentives	.0336506	.0997854	0.34	0.737	-.1640614	.2313626
Access to finance	.0182217	.200187	0.09	0.928	-.3784231	.4148665
Firm size	-.0001852	.0000837	-2.21	0.029**	-.0003511	-.0000194
Interest rate	.1130381	.2540133	0.45	0.657	-.3902566	.6163328
Access to infrastructure	.1507595	.1682116	0.90	0.372	-.1825302	.4840493
Corruption	-.0513604	.1276872	-0.40	0.688	-.3043562	.2016354
Firm age	.0313488	.0462681	0.68	0.499	-.0603256	.1230232
Educational level Managers (owners)	.0740455	.0617267	1.20	0.233	-.048258	.1963489
Access to adequate market	-.5425248	.2387682	-2.27	0.025**	-1.015613	-.0694361
Practice of competitors	-.0709106	.169193	-0.42	0.676	-.4061448	.2643236
Access of land	.244809	.2043016	1.20	0.233	-.1599885	.6496065
Economic condition	.4880422	.2540967	1.92	0.057***	-.0154177	.9915022
Construction	-.1237541	.1062351	-1.16	0.247	-.3342453	.0867371
Agriculture	-.1638469	.0689524	-2.38	0.019**	-.3004672	-.0272265
Service	.3961748	.0956457	4.14	0.000*	.206665	.5856846
Trade	.0244698	.1159007	0.21	0.833	-.2051725	.2541121
Constant	-1.738804	1.153811	-1.51	0.135	-4.024934	.5473249

Note:
* represents statistically significant at 1% level
** represents statistically significant at 5% level
*** represents statistically significant at 10% level

Source: STATA output of own survey (2013)

As it is summarized in Table 4 above, the explanatory power of the variables used in this model, from the R-squared values were equal to 20.25 percent. This implies that 20.25 percent of the changes in domestic private investment growth were successfully explained by the variables incorporated in this model of this study. However, the remaining 79.75 percent of the changes in domestic private investment growth were caused by other factors that are not included in the models of this study. These results indicated that overall goodness-of-fit of the models used in this study.

Moreover, the overall significance of the model, when measured by their respective F- statistics of 85.60 with P-values of 0.0000; indicates that this models was well fitted at 1 percent level of significance. Here one can infer from the results of R-squared and F-statistics that the implemented model of this research was well fitted that determinant factors of domestic private investment growth have a significant effects on domestic private investment growth even though it was not as strong as in the case of emplacement size. Therefore, the following part of the analysis enables the researcher to identify the possible determinant factors of domestic private investment growth that affect domestic private investment growth and to analyze the way (direction of relationship) in which dependent variable was related with independent variables.

The relation between the firm size and domestic private investment growth has coefficient estimates of -0.0001852; it was statistically significant at 5 percent level of significance. The coefficient of market access in relation to domestic private investment growth implies that growth of domestic private investment was negatively related with the existed market access. In other words, the capital size of the investment has negatively determined the domestic private investment growth, expansion achievement opportunity was and vice versa.

The relation between the existed economic condition and domestic private investment growth has coefficient estimates of about 48.8% it was statistically significant at 10 percent level of significance. The coefficient of economic condition in relation to domestic private investment growth implies that growth of domestic private investment was positively related with the existed economic condition. In other words, the existed economic condition of the investment has positively determined the domestic private investment growth, expansion achievement opportunity and vice versa.

The relation between the existed market access and domestic private investment growth has coefficient estimates of -54.3 percent it was statistically significant at 5 percent level of significance. The coefficient of market access in relation to domestic private investment growth implies that growth of domestic private investment was negatively related with the existed market access while it measures in terms of capital. In other words, the existed market access of the investment has negatively determined the domestic private investment growth, expansion achievement opportunity and vice versa.

The relation between existed business tax, investment incentive, financial constraint, interest rate of loan, infrastructure, firm age, land access, level of corruption, computation method of competitors and domestic private investment growth in terms of capital size has coefficient estimates of about 14.5, 3.4, 1.8, 11.3, 15.1, 3.13, 7.4, 2.45, -5.13, -7.09 percents respectively but they were statistically insignificant. The coefficient of business tax, investment incentive, financial constraint, interest rate of loan, infrastructure, firm age, and land access in relation to domestic private investment growth implies that growth of domestic private investment was positively related with business tax, investment incentive, financial constraint, interest rate of loan, infrastructure, firm age, land access, and negatively related with level of corruption and computation method of competitors even though their relation was statistically insignificant. In other words existed business tax, investment incentive, financial constraint, interest rate of loan, infrastructure, firm age, land access,, of the investment has positively determined the domestic private investment growth, but level of corruption, computation method of competitors were negatively determined the domestic private investment growth expansion achievement opportunity and vice versa with statistically insignificant.

In order to analyze the dummy variable, the manufacturing investment was chosen as a base because this sector was given higher priority by the government of the Tigray regional state as well as national government, due to this reason this sector was relatively growing better than the other sectors in the city. Based on this reason the result was provided as shown below.

The relation between agriculture and manufacturing types of domestic private investment growth has coefficient estimates of -16.4 percent it was statistically significant at 5 percent level of significance. The coefficient of agriculture type of domestic private investment growth in relation to manufacturing type of domestic private investment growth implies negative relation. In other words, the agriculture type of domestic private investment was grown 16.4 percent less than manufacturing type of domestic private investment or manufacturing type of domestic private investment was grown 16.4 percent greater than agriculture type of domestic private investment.

The relation between service and manufacturing types of domestic private investment growth has coefficient estimates of about 39.6 percent it was statistically significant at 1 percent level of significance. The coefficient of service type of domestic private investment growth in relation to manufacturing type of domestic private investment growth implies positive relation. In other words, the service type of domestic private investment was grown about 39.6 percent greater than manufacturing type of domestic private investment or manufacturing type of domestic private investment was grown about 39.6 percent less than service type of domestic private investment.

Generally, the result shown in Table 4 above revealed that firm size and market access were negatively and significantly determined the domestic private investment in Mekelle City; but economic condition of the City was positively and significantly determined the domestic private investment in the City. The remaining proposed determinant factors of the domestic private investment which were land access, computation condition, educational level of the owners (managers), tax rate, investment incentive, financial constraint, interest rate of loan, infrastructural access, and firm age were positively and insignificantly determined but firm corruption and computation approach of competitors were shown negative and insignificantly influencing the domestic private investment growth in the City. Moreover, construction and agriculture types of domestic private investments were grown less than manufacturing but service and trade types of domestic private investments were grown better than of manufacturing type of domestic private investment in the City in terms capital size.

TABLE 5: SUMMARY OF HYPOTHESIZED RESULTS AND THEIR STATISTICAL SIGNIFICANCE LEVEL

Variable	Growth in terms of employees size		Significance level	Growth in terms of capital size		Significance level
	Expected sign	Accept (reject)		Expected sign	Accept (reject)	
Tax rate	positive	reject	1%	positive	accept	-
Investment incentives	negative	accept	1%	negative	reject	-
Access to finance	negative	accept	5%	negative	reject	-
Firm size	negative	accept	1%	negative	accept	5%
Interest rate	positive	accept	5%	positive	accept	-
Access to infrastructure	Negative	reject	5%	Negative	reject	-
Corruption	positive	accept	-	positive	reject	-
Firm age	negative	accept	1%	negative	reject	-
Type of investment	Dummy		dummy	Dummy		dummy
Educational level Managers (owners)	negative	reject	-	negative	reject	-
Access to adequate market	negative	reject	10%	negative	accept	5%
Practice of competitors	Neither	positive	-	Neither	positive	-
Access of land	negative	reject	-	negative	reject	-
Economic condition	Neither	positive	10%	Neither	positive	10%
Accept means accepting (supporting) alternative hypothesis and rejecting the null hypothesis Reject in this case means rejecting alternative hypothesis and accepting null hypothesis						

Source: Own survey (2013)

7. CONCLUSIONS AND RECOMMENDATIONS

CONCLUSIONS

The aim of this study was to identify and analyze the determinant factors for the domestic private investment firm growth by using OLS regression model. The study result was based on the primary cross sectional data of the year 2013 of Mekelle City that was collected by using systematic random sampling techniques. Primary data was collected from 130 domestic private investment firms' operators/owners. The study used annual employment size and annual capita size (for comparison) growth rate (compound) to determine the status of the domestic private investment growth.

The OLS regression results showed that tax rate, domestic private investment incentives, access of finance, interest rate, infrasturacture access, economic condition, firm age, and market access were signfcantly influencing domestic private investment growth measured in terms of employement size. However, firm size, level of corruption, educational level of managers/ owners, practice of competitors, and access of land were insignificant detrminants on the growth of domestic private investment measured in terms of employee's size. Details of each significant variables are summarised as follows:

- The level of existed domestic private investments tax rate, existed domestic private investments incentive, and firm age were negatively influencing the growth level of domestic private investments at 1% level of significance; access to finance was negatively influencing the growth of domestic private investment at 5% level of significance.
- The level of existed domestic private investment borrowing (loan) interest rate at 1%, access of infrastructures at 5%, access of adequate market and economic conditions at 10% levels of significance levels were positively influencing the growth of domestic private investment in terms of employee's size.

In the case of investment type; agriculture, service, and trade types of domestic private investment were grown less than by about 7.69%, 10.42% and 18%, respectively, compared to the manufacturing type of domestic private investment growth measured interms of employment size. Furthermore construction type of domestic private investment was grown by about 3.71% less than that of manufacturing type of domestic private investment measured in terms of employees size.

Moreover, firm size, economic condition and market access were found significant determinant factors while the growth of domestic private investment was measured in terms of capital size. On the contrary tax rate, investment incentives, access of finance, interest rate, infratructure access, firm age, firm size , level of existed corruption, educational level of the owners (managers), practice of competitor and land access were found insignificant determinant factors in the growth of domestic private investment while their growth was measured in terms of capital size.

Investment type was also found to be the significant detrminant factor of domestic private investment in both capital and employees size. When they measured in terms of capital size, agriculture and trade types of domestic private investments were grown by about 16.4%, and 2.45%, respectively, less than that of the manufacturing type of domestic private investment; and service type of domestic private investment was grown by about 39.6 % greater than that of the manufacturing type of domestic private investment. Moreover, construction type of domestic private investment was grown by about 12.40% less than that of the manufacturing type of domestic private investment as they measured in terms of capital size.

Economic condition and market access were found significant determinants of the domestic private investment growth in both employees and capital size even though there was difference in the sign of market access in both emplyee's and capital size growths. In addition level of corruption, edducational level, practice of competitors, and access of land were insignificant determinant factors of the domestic private investment growth in both employee's and capital sizes.

RECOMMENDATIONS

On the basis of the above findings and conclusions, the following recommendations are forwarded in order to realize the domestic private investment growth both interms of employees and capital size. Mekelle investment office in collaboration with the government of Tigray should promote and facilitate growth of domestic private investment via (1) identifying and transparently announcing the potential investment areas in the City, (2) motivational supports such as providing incentives, avoiding corruption in public institutions, smoothing the bureaucratic obstacles at the time of registration as well as other necessary services needed by domestic private investors, (3) providing necessary infrastructural access to the identified potential investment areas, (4) taking appropriate measures on those who are illegally running their investment and motivating the developmental investors, (5) making regular communication with the existed investment firms and discussing on over all issues and problems facing by domestic private investors as well as their solutions and then taking shares of the solutions by the government and investors themselves, and (6) regular follow up of all the identified problems and solutions by the office, investors and government.

The City's investment office has to make strong linkage and collaboration with infrastructure processors such as Ethiopian electric power corporation, telecommunication and communication, Medias, Ethiopian road construction authority and other respective stakeholders to speed up these infrastructural expansions in progress, attract and promote the existed investment opportunities for new domestic private investors as well as solve the problems of infrastructural access for those are in operation.

Financial constraint was negatively influencing the domestic private investment growth in terms of employee's size but the reverse was true for capital size. The labor intensive domestic private investments were facing financial shortage for expansion and growth. So, the respective body should see this gap and solve it in collaboration with the financial institutions such as Banks and Microfinance institutions. The stakeholders should also collaborate with the respective bodies in encouraging the domestic private investment by improving its working and saving culture. If this problem is solved, it will have dual advantage, i.e., (1) solving the problem of domestic private investment growth constraint, and (2) solving unemployment in the City and region. Investment incentives were negatively and significantly determined the growth of domestic private investment growth in terms of employee's size; and positive but insignificant in terms of capital size. This is may be due to inconsistence with the government incentive priorities to motivate domestic private investment. So, the government and investment office should revisit the practical application of incentives given to encourage domestic private investments as compared with the policy of investment and take corrective measures accordingly.

Growth of agriculture type of domestic private investment showed significantly lower as compared with manufacturing type of domestic private investment. So, as long as agriculture is the backbone and leader of the region's economy, the investment office in collaboration with the government should give attention to encouraging urban agriculture investment by identifying preferential areas and promoting the potential investment opportunities in the City; and providing encouraging incentives including making the indentified investment areas conducive in terms of infrastructural facilities in order to easily accessed by potential domestic private investors who are interested in agricultural type of domestic investment**.**

8. LIMITATION AND SUGGESTION FOR FURTHER RESEARCH

- This study used a sample respondents selected from a single City and this may not represent the condition of domestic private investments across the region and generalization at the region level or ccountry level is difficult.
- This study was only applied to domestic private investment growth in Mekelle City, but a valuable finding may come up by taking data from different Zonal Cities in the region.
- This study was mainly focused on domestic private investment firms which were in operation. The domestic private investments which were in pre-implementation and implementations were not included. So, further researcher can be done by including these domestic private investment firms in different stage in order to come up with valuable findings.
- This study used the employee's size to measure the growth and for comparison the capital size. But, if it is studied by using level of saving growth and growth of contribution to GDP, different or similar finding may come up.
- Sector specific investigation is recommended because the determination level of the selected variables may not equally influence for each economic sectors (manufacturing, agriculture, service, construction, and trade types) of the domestic private investment.

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