



## A STUDY ON DETERMINANTS OF PRIVATE INVESTMENT ACTIVITY

### A CASE STUDY OF DEBRE TABOR TOWN -ETHIOPIA

### WITH REFERENCE TO ETHIOPIAN INVESTMENT AUTHORITY

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#### **Abstract:**

*A good investment climate fosters productive private investment, and it is the engine for growth and poverty reduction. It creates opportunities and jobs for people. It expands the variety of goods and services available and reduces their cost, to the benefit of consumers. This paper focuses on to identify on determinants of private investment in Debre Tabor town. The study was employed by using both descriptive and explanatory research design with quantitative and qualitative methods. The total population of the study are 103 of this the researcher select 82 samples for the study since the population is not homogeneous stratified sampling is used. The quantitative aspect of the data focused on description of socio- economic variables, investment and business related variables and analysis of relationship among the dependent and explanatory variables of the authority. Explanatory research study is most appropriate because it is more efficient, economical and flexible enough to minimize bias and maximize reliability of the collected data. From this study it is found that the determinants regarding the investment activity in the town are the expected return on the investment, business confidence, internal unrest, interest rate, corruption, and tax, level of saving, finance, and infrastructural development. And the model shows that in such a way that: -relationship among the dependent and independent variables are significant.*

**Keywords:** Ethiopian investment agency, determinants of investment, regression model, Debre Tabor Town, and Debre Tabor Town investment office,

#### **Introduction:**

An investment is the current commitment of dollars for a period of time in order to drive future payments that will compensate the investor for the time the funds will committed, the expected rate of inflation, and uncertainty of future payment (Frank Reilly and Keith Brown page 1). Investment is an act of current spending for expected future return. It expands the productive capacity of a nation and plays a crucial role in economic growth and development process.



Investment has been regarded as one of the primary engines of growth (wade, 1989 p.71 UNCTAD, 2001, P. 1).

A good investment climate fosters productive private investment, and it is the engine for growth and poverty reduction. It creates opportunities and jobs for people. It expands the variety of goods and services available and reduces their cost, to the benefit of consumers. It supports a sustainable source of tax revenues to fund other important social goals. And many features of a good investment climate including efficient infrastructure, courts, and finance markets, improve the lives of people directly, whether they work or engage in entrepreneurial activities or not. Improving the investment climate the opportunities and incentives for firms to invest productively, create jobs, and expand is the key to sustainable progress in attacking poverty and improving living standards.

## **Objectives**

### **General Objective**

The general objective of the study was to identify the determinants of private investment activity at Debre Tabor Town.

### **Specific Objectives**

The specific objectives of the study are:

1. To identify the factors that affects the investment.
2. To examine the impact of poor investment activity for development of economy.
3. To overcome practical solution to the problems attributed to the town.

### **1.4 Research questions**

In the light of the above general and specific objectives, the study was the following questions:

1. What are the basic determinants of investment?
2. What are the basic factors that affect investment?
3. What are the impacts of poor investment activity for development of economy growth?
4. What practical solutions and what are the possible remedies do you suggest for the problem?

### **Scope,**

The scope of the study covers the conceptual, geographical and the time scope.

**Conceptual Scope** - the study was focus on examining issues related to identify on determinants of private investment activity in Debre Tabor Town with reference to Ethiopian investment agency.



**Geographical Scope** -the research was carried out geographically Debre Tabor Town, Ethiopia.

**Time Scope** - The study used the most recent year data from the fiscally year of 2006 up to 2012 Ethiopia calendar.

### **Research Gap**

The review of literature has shown some theoretical and empirical gaps that necessitate this study are the Ethiopian journal of Economics vol XIX, No. 1 April 2010 in the attempt to identify the main determinants among the variable considered, investment is evidenced to be affected favorably by the growth of domestic market, return on investment, government policy, and infrastructure. Also Ambachew Mekonen Ethiopian journal of Economics Volume XIX, No. 1, April 2010 determinants of private investment in Ethiopia a time serious study the result shows according to the estimation result, private investment in Ethiopia is influenced by domestic market, return to capital, trade openness and liberalization measures and infrastructure facilities and FDI. Tesfaye Eresso Gofe International Journal of Research - Granthaalayah, 6(11), 366-383. <https://doi.org/10.5281/zenodo.2228386>. Assessments of the determinants of investment activities in Nekemte town some of the main findings of the study were difficulties of finance and lack of credits when they started their business and low encouragement from the investment offices are the major findings of this study. as per the researcher knowledge from the above empirical findings this study is different in the variables like interest rate, corruption, level of saving, internal unrest and also the methodology as well as even the areas of study is quite different.

### **Research Design**

The study was employed by using both descriptive and explanatory research design with quantitative and qualitative methods. The quantitative aspect of the data focused on description of socio- economic variables, investment and related variables, and business related variables and analysis of relationship among the dependent and explanatory variables of the authority.

### **Population and Sampling Technique;**

Currently the number of investors registered and invested in Debre Tabour Town investment office has reached 103 (Data from office 2012)



| Stratified sampling design  |   |                  |
|-----------------------------|---|------------------|
| Type of investment activity | Total population in the investment area | Sample size      |
| Agriculture                 | 14                                      | 11               |
| Market center               | 3                                       | 2                |
| Education                   | 9                                       | 7                |
| Fuel and petroleum          | 5                                       | 4                |
| Hotel and tourism           | 13                                      | 11               |
| <b>Construction</b>         | 59                                      | 47               |
| <b>Total</b>                | <b><u>103</u></b>                       | <b><u>82</u></b> |

Table 1:- Stratified sampling for business taxpayers

Out of this 103 of the investors 82 are selected randomly from all categories of investment activities for the study. The type of sampling techniques applied is Stratified sampling, which is used to select sample investors since the population is not homogeneous, and then stratified sampling technique is applied so as to obtain a representative sample. It involves dividing the population into homogeneous subgroups and then taking a simple random sample from each groups of investment activity exist in the Debre Tabor town. There are 82 investors the researcher was used Yemen's 1963 formula. The formula to determine the sample size of the target population is shown below.

$$n = \frac{N}{1 + N(e^2)}$$

$$(1 + N(e^2))$$

$$n = 103 / 1 + 103(0.05)^2$$

$$\underline{n = 82}$$

#### Where:

- ✓ **n** is the size of samples,
- ✓ **N** = the size of the population and
- ✓ **E** is the margin of error which ranges from 3 percent to 5 percent.

Therefore, 82 investors are selected

RR = ratio sample size to total population RR =  $n/N$

$$= 82/103$$

$$= 0.796$$

$$\underline{\underline{= 80\%}}$$



- Agriculture =  $14 \times 80 / 100 = 11$
- Market center =  $3 \times 80 / 100 = 2$
- Education =  $9 \times 80 / 100 = 7$
- Fuel and petroleum =  $5 \times 80 / 100 = 4$
- Hotel and tourism =  $13 \times 80 / 100 = 11$
- Construction =  $59 \times 80 / 100 = 47$  ..... Total 82

To distribute the questionnaires to this respondents (82 investors), the study was be further conducted proportionate stratified random sampling (investors was classified into strata and respondents was selected randomly from each strata according to the proportionate sample calculated).

### **Methods of Data Collection**

Data was collected using primary data gathering tools of questionnaire, personal interview, and the researcher's onsite observation. Questionnaires that contain both open and closed ended questions are prepared and distributed to staff members and to tax payers selected randomly. Interview is also prepared and administered again to both employees and managers.

**Primary data:** This is system of data collection tool that was directly from the field. It was collected using questionnaires and interview guides. And **Secondary data:** The researcher was read related literature relevant to the subject before and during the study (determinants of private investment) obtained from previous studies, text books, internet, journals and reports from the authority itself.

### **Methods of data collection and instruments**

An administered interview was given to a selected sample of the authority staff and questionnaires to the investors regarding to what are the determinants of private investment in the town. Questionnaires ensured increased response rate due to their clarity and simplicity. The study collected data from a cross-section of respondents using a combination of study instruments.

### **Data Analysis Method:**

Data from the field was carefully collected, classified, edited, and basing on clarity, completeness, accuracy and consistence to ensure reliability. Data analysis was based on the objectives of the study and done by use of Statistical Package for Social Sciences on collected data to draw meaningful interpretation and conclusion to give findings and suggestions findings, which reflect a high magnitude of the problem, were selected from interview, observation and questionnaires. And, the raw data are analyzed, presented, and interpreted to give solutions for the research problem. Some of the data were summarized and presented in tables and graphs. Percentages for these data are calculated in order to facilitate the analysis and to make it presentable for the readers. Since the data collected is more of qualitative in its nature; it is

presented by using descriptive analysis. The model's description was fashioned to capture the relationship between the dependent and independent variables as stated below.

**Investment** = f (Return, internal unrest, IRT, corruption, corporate tax, L. saving, financial institution, and infrastructural development)..... (1)

$$= f (X_1 + X_2 + X_3 + X_4 + X_5 + X_6 + X_7 + X_8)$$

$$= f (\beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \beta_8 X_8)$$

| Operational definition of variables |   |
|-------------------------------------|---|
| Symbol                              | Variable  |
| Y                                   | A Constant term   |
| IN                                  | Investment  |
| $\beta_1 X_1$                       | return on the investment  |
| $\beta_2 X_2$                       | Internal unrest   |
| $\beta_3 X_3$                       | Interest rate   |
| $\beta_4 X_4$                       | Corruption  |
| $\beta_5 X_5$                       | Corporate tax rate  |
| $\beta_6 X_6$                       | The level of saving   |
| $\beta_7 X_7$                       | Existence of financial institutions (bank, credit union, insurance)               |
| $\beta_8 X_8$                       | Infrastructural development (water, electricity power, road, & telecommunication) |
| E                                   | Error term normally distributed about a mean of 0                                 |
| T                                   | Period between 2006 to 2010   |

Table 2:- Operational definition of variables

$$Y_t = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \beta_8 X_8 + UI \dots \dots \dots (2)$$

**Where:-**

**Investment:-**

**$\beta_1 X_1$ :** - The expected return on the investment: - Investment is a sacrifice, which involves taking risks. In terms of the whole economy, the amount of business profits is a good indication of the potential reward for investment.

**$\beta_2 X_2$ :** internal unrest: - is not only for investment rather for all human beings life peaceful coexistence is mandatory.

**$\beta_3 X_3$ :** Interest rates: -Investment is inversely related to interest rates, which are the cost of borrowing and the reward to lending. Investment is inversely related to interest rates for two main reasons. **Interest rate stability** – a desirable economic objective because volatility in



interest rates creates uncertainty about the future and this can adversely impact on business and consumer investment decisions (such as the purchase of a house). Expected higher interest rate levels deter investment because they reduce the present value of future cash flows to investors and increase the cost of finance for borrowers.

**B<sub>4</sub>X<sub>4</sub>:- corruption:** - good governance is one important criterion for a democratic system. Corruptions are highly affecting the level of investment in one country and have an indirect relationship to that of investment.

**B<sub>5</sub>X<sub>5</sub>:** Corporation taxfirms pay corporation tax on their profits, so a reduction in tax increases the profits they retain after tax is paid, and this acts as an incentive to invest. The current rate of corporate tax is 30 % in Ethiopia.

**B<sub>6</sub>X<sub>6</sub>:** -level of saving: - saving and investment have a direct relationship but all things remain constant. The higher level of saving investors can get loan from financial institutions and the reverse is true if the level of saving habit is low. The level of savingshousehold and corporate savings provides a flow of funds into the financial sector, which means that funds are available for investment. Increased saving may reduce interest rates and stimulate corporate borrowing and investment.

**B<sub>7</sub>X<sub>7</sub>:** - Existence of financial institutions (bank, credit union, insurance) since they are intermediary between deficit spending unit and surplus spending unit the role of existence of financial institutions (bank, credit union, insurance) is very high.

**B<sub>8</sub>X<sub>8</sub>:** - Infrastructural development (water, electricity power, road, & telecommunication)

### **Description of the model**

Many of the individual enjoyed their own business in different investment areas (like manufacturing, merchandize and service) not all of but business are according to the Ethiopian government some investment areas for the owners exempt from paying of tax. For the good investment activity must have different opportunity like internal peaceful coexistence, interest rate, good governance, good corporate income tax rate, return, level of saving, existence of financial institutions, and infrastructure development. Generally the above listed important determinant's of investment then the government must be solve by establishing appropriate rules and mechanisms that must address the problems stated above. That is why this pepper tries to assess the determinant's of investment.

### **Analysis and discussion:**

This paper focuses to identify on determinants of investment in Debre Tabor town,Ethiopia with reference investment agency. According to the respondents replay what kind of service problems that they face in the organization is sometimes the existing land offered by the government is not





clear from third party, discrimination, inefficient system, corrupt practice, are some of them. And also the respondents further replay that the main determinants of investment in Debre Tabor town is that return, level of saving, existence of financial institutions, and infrastructure development hence influence investment activity in Debre Tabor Town is positive. The major factor that faces or affects the investment in Debre Tabor town is internal unrest (robbery), interest rate (higher amount when investors are taking loan from financial institutions), corruption and corporate income tax negatively. According to the respondents replay what is the role of government towards the development of investment in the town is that at any level of the government must sustain the internal unrest, avoid corruption practice, adjust the interest rate, develop the different infrastructures like: water, electricity, road, different incentives and also existence of financial institutions that they offer funds depend on the amount that the investor wants to take) among the above requirements mainly electric power is the main one. because even the existing investors are did not work properly due to lack of electric power, also to buy power generators still it is difficult due to foreign currency. Again for the development of investment in the own government by itself is nothing rather the society by their own self must keep peaceful coexistence, develop their habit of saving, and must have a positive attitude for investment because it creates employment opportunity for themselves, offering low cost product for themselves, and for reducing poverty and fosters productive economic development.

What are the impacts of poor investment activity for development of economy growth under these respondents they replay that a poor investment activity fosters poverty, creates unemployment, and this in turn leads to war and unrest due to the existence of high level of unemployment.

What practical solutions and what are the possible remedies do you suggest for the problem respondents replay that the government of the country must amend the proclamations, rules and regulations that administer the investment area and make corrective actions for the sustainable development of investment for economic growth, employment opportunity and to offer low cost products to the society.

| Table 3 regression analysis |       |          |                   |                            |
|-----------------------------|-------|----------|-------------------|----------------------------|
| Model                       | R     | R Square | Adjusted R Square | Std. Error of the Estimate |
|                             | .9576 | 0.9171   | 0.9133            | 3.5814                     |

*Table 3 regression analysis*





| Table 4 Analysis of variance |           |                 |                   |                    |             |           |           |
|------------------------------|-----------|-----------------|-------------------|--------------------|-------------|-----------|-----------|
| Model                        |           | Sum of Squares  | Degree of freedom | Sum of square (ss) | Mean Square | F         | Sig.f     |
| Regression                   | 1         | 3122.775        | 5                 | 3122.775           | 3122.775    | 243.4623  | 2.21604   |
| Residual                     | 22        | 282.1835        |                   | 282.1835           | 12.82652    | NA        | NA        |
| <b>Total</b>                 | <b>23</b> | <b>3404.958</b> |                   | <b>3404.958</b>    | <b>NA</b>   | <b>NA</b> | <b>NA</b> |

Table 4 Analysis of variance

From this study it was evident that at 90% confidence level, the variables produce statistically significant values for this study (high t-values,  $p < 0.05$ ). A positive effect is reported for all the variables under study: return, level of saving, existence of financial institutions, and infrastructure development hence influence investment activity in Debre Tabor Town is positive. The major factor that faces or affects the investment in Debre Tabor town is internal unrest, interest rate, corruption and corporate income tax negatively. And the model shows that in such a way that:-

Investment = f (Return, internal unrest, IRT, corruption, Cor tax, Level of saving, financial institution, and infrastructural development)..... (1)

$$= f (X_1 + X_2 + X_3 + X_4 + X_5 + X_6 + X_7 + X_8)$$

$$= f (\beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \beta_8 X_8)$$

From this the result of regression shows that investment is affected by sum: internal unrest, interest rate, corruption and corporate income tax negatively and return, level of saving, existence of financial institutions, and infrastructure development hence influence investment activity in Debre Tabor Town is positive.

| Interpretation of the result on software |              |              |                   |                            |
|--|--------------|--------------|-------------------|----------------------------|
| Model                                    | R            | R Square     | Adjusted R Square | Std. Error of the Estimate |
|  | <b>.9576</b> | <b>.9171</b> | <b>.9133</b>      | <b>3.5814</b>              |

Table 5 Interpretation of the result on software

| Model        | Sum of Squares | Degree of freedom | Mean Square | F         | Sig.      |
|--------------|----------------|-------------------|-------------|-----------|-----------|
| Regression   | 31.22.775      | 99                | 3122.775    | 243.4623  | 2.21604   |
| Residual     | 282.1835       | 1                 | 12.82652    | NA        | NA        |
| <b>Total</b> | <b>NA</b>      | <b>100</b>        | <b>NA</b>   | <b>NA</b> | <b>NA</b> |

Table 6 Interpretation of the result on software



**An F test**, based on the probability distribution, can also be used to test for significance in regression. With only one independent variable, the F test will provide the same conclusion as the t test: that is t test indicates  $\beta_1 \neq 0$  and hence a significant relationship, the F test will also indicate a significant relationship. But with more than one independent variable, only the F test can be used to test for an overall significant relationship.

The F test used to determine whether a significant relationship exist between the dependent variable and the set of all independent variable; we will refer to the F test for over all significance. At the .01 level of significance, the F value of 41.635 indicate that the relationship is significant; Thus, we can conclude that the relationship between the investment and the four independent variables are (return, level of saving, existence of financial institutions, and infrastructure) significant; with a coefficient of determination (expressed as a percentage) of R Squared =91.71%, we see that 91.71% of the variability in the four independent variables can be explained by the linear effect of the number of tax revenue collected. This finding is fairly good, (by upcoming the independent expression of all of the independent variables in general). And: internal unrest, interest rate, corruption and corporate income tax negatively

**Residuals:** - as previously stated the values  $y - \hat{y}$  is called residuals (sometimes called the prediction errors). These values can be plotted with the x values, and the plot, called a residual plot,

$$Y = B_0 + B_1X + e$$

**The R square ( $r^2$ )** is a coefficient of determination and which is used as an indicator of the goodness of fit. It shows how many points fall on the regression line. The  $R^2$  value is calculated from the total sum of squared deviation of original data from the mean or it is usually easier to find the coefficient of determination by squaring  $r$  and converting it to a percentage.

$$\text{Therefore, } r = 0.9576, \text{ then } r^2$$

$$= 0.9576 * 0.9576, \text{ which is equivalent to } 0.91699 \text{ which is approximately } 91.71\%.$$

This result means that 91.71% of the variation in the dependent variable is accounted for by the variations in the independent variable. The rest of the variation, 0.0424, or 4.24%, is unexplained. This value is called the coefficient of non-determination and is found by subtracting the coefficient of determination from 1.

$$\text{Coefficient of non-determination} = 1 - 0.9576$$

Coefficient of non-determination = **0.0424** as the value of  $r$  approaches 0,  $r^2$  decreases more rapidly.



**The standard error** is a goodness of fit measure used in correlation and regression is the standard error of the estimate, which is an estimate of the standard deviation of the values about the predicted  $y$  values. The standard error of the estimate can be used to construct a prediction interval about a specific value point estimate  $y$  of the mean of the  $y$  values for a given value of  $x$ .

**The standard error (.867)** of the estimate is similar to the standard deviation, but the mean is not used. As we can see from the result, the standard error of the estimate is the square root of the unexplained variation—that is, the variation due to the difference of the observed values and the expected values—divided by  $n-2$ . So the closer the observed values are to the predicted values, the smaller the standard error of the estimate will be.

**A multiple regression** correlation  $r$  can also be computed to determine if a significant relationship exists between the independent variables and the dependent variable.

$$Y = a + bx$$

Where  $a$  is the  $y$ -intercept and  $b$  is the slope of the regression line. In multiple regressions, there are several independent variables and one dependent variable, and the equation is

$$Y = a + b_1x_1 + b_2x_2 + b_3x_3 + \dots + b_kx_k$$

Where  $X_1, X_2, X_3 \dots X_k$  are the independent variables.

$$INV = f(X_1 + X_2 + X_3 + X_4 + X_5 + X_6 + X_7 + X_8)$$

In addition, relationships can be multiple. That is, there can be two or more independent variables and one dependent variable. A coefficient of correlation and a regression equation can be found for multiple relationships, just as they can be found for simple relationships.

**Multiple regression analysis** is used when a researcher thinks there are several independent variables contributing to the variation of the dependent variable. This analysis then can be used to increase the accuracy of predictions for the dependent variable over one independent variable alone. Therefore, based on the values in the above values the independent variables are return, level of saving, existence of financial institutions, and development of infrastructure were strong positive relationship between to that of the dependent variable of investment activity and internal unrest, interest rate, corruption, and corporate tax rate is negatively.

**The adjusted  $R^2$  (.9133)** is smaller than  $R^2$  (.9171) and takes into account the fact that when  $n$  and  $k$  are approximately equal, the value of  $R$  may be artificially high, due to sampling error rather than a true relationship among the variables. Hence, both  $R^2$  and  $R^2$  adjusted are usually reported in a multiple regression analysis, the coefficient of determination is obtained by squaring the correlation coefficient and converting the result to a percentage.



| R Square | Adjusted R Square |
|----------|-------------------|
| .9171    | .9133             |

*Table 7 Interpretation of the result on software*

This occurs because the chance variations of all the variables are used in conjunction with one another to derive the regression equation. Even if the individual correlation coefficients for each independent variable and the dependent variable were all zero, the multiple correlation coefficients due to sampling error could be higher than zero.

## **CONCLUSION**

From the findings of the study results shows that there are a number of determinants in the investment area. Private Investment to Restore Growth Private investment in sub-Saharan Africa has lagged other regions. More private domestic and foreign investment is critical for sustainable and inclusive growth. Empirical analysis suggests that current and prospective economic activity is the main driver of private firms' decisions to invest. Moreover, growth's impact on private investment decisions is strengthened by improved regulatory and insolvency frameworks, deeper financial markets, and trade liberalization. (imf 2018 annual report)

This determinants are composed of two parts one the government hand and society side. The basic determinants of investment are Return, internal unrest, interest rate, corruption, corporate tax, level of saving, existence of financial institution, and infrastructural development.

Improving the investment climate the opportunities and incentives for firms to invest productively, create jobs, and expand is the key to sustainable progress in attacking poverty and improving living standards.

A good investment climate fosters economic growth, and it is the engine for growth and poverty reduction. It creates opportunities and jobs for people. It expands the variety of goods and services available and reduces their cost, to the benefit of consumers. It supports a sustainable source of tax revenues to fund other important social goals. Investment agency of Debre tabor town should must give investment incentives and fulfill different opportunity both financial and infrastructural facility like road, bank, access to land water and electricity. Mainly electricity is mandatory level.

Main problem faced in the overall investment activity like: lack of land free from third party, also lack of land for approved projects, imbalance between investors demand and office service, investor's use loan amount that got from bank used in another area of activity, and they did not properly use the tax advantage are some of them.



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### **Limitations of the Study:**

The researcher encountered a number of challenges related to the study & most particularly the methodology like during the process of data collection, the model specification, under constraints of finances and sampling design techniques. And some respondents were suspicious and hence giving inaccurate information.

### **References**

- Frank Reilly and Keith Brown ( ) investment analysis and portfolio management.
- TesfayeEressoGofeInternational Journal of Research - Granthaalayah, 6(11), 366-383. <https://doi.org/10.5281/zenodo.2228386>. assessments of the determinants of investment activities in Nekemte town
- (wade, 1989 p.71 UNCTAD, 2001, P. 1) and the proposed solutions to SSA economic and geographic dis advantages (sachs, 2005, P.273).
- Ethiopian Journal of Economics, Volume XIX, No. 1, April 2010
- AmbachewMekonen Ethiopian Journal of Economics, Volume XIX, No. 1, April 2010 determinants of private investment in Ethiopia a time serious study
- Chandra, P. investments analysis and portfolio management. 3<sup>rd</sup> page 15—25