PROJECT PROPOSAL PROFORMA

Candidate's Information (to be filled by the candidate)   **Date:** 13/08/2015

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Programme Code: | MEC |

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Title of the Project: "Investment, Its efficiency and Economic Growth: Trend, Prospect and Relationship in Ethiopia"

(By The Supervisor)

I hereby certify that the proposal for the project entitled "Investment, Its efficiency and Economic Growth: Trend, Prospect and Relationship in Ethiopia" by Habitamu Asifawu Tonch **has been prepared after due consultation with me. I agree to supervise the above mentioned project till its completion.**

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INDIRA GANDHI NATIONAL OPEN UNIVERSITTY

SCHOOL OF SOCIAL SCIENCES

FACULTY OF ECONOMICS

"Investment, Its efficiency and Economic Growth: Trend, Prospect and Relationship in Ethiopia"

Project Work Proposal
(MECP-001)

By

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1. Introduction

Since the political alteration in 1991, the Ethiopian economy has sustained a continuous growth for most of the years. The country is among the fastest growing countries in Africa (http://www.blog.kpmgafrica.com/africas-top-10-fastest-growing-economies/). It has been continuously recorded more than 10% growth rate (Growth and Transformational Plan I MoFED, 2010). With the aim of to be middle income country by year of 2025, it has been running through the lines of various development plans and economic policies. And the outcomes of these plans and policies are resulted in economic growth associated with increasing level of investment.

The Gross Domestic Product (GDP) of a country in expenditure approach is consists of consumption (private and government consumption expenditure), investment, and net export (export less import). The country's current GDP is much higher than years before. This can be easily notified from the movements of it components.

The percentage share of consumption expenditure (private and government) ascends from 76.2 for the year 2001/02 to 107.3 at 2007/08, and the net export section fall in absolute term. From 2000 – 2014, the shares of export and import out of GDP show 10.6% and 23.9% at lower level and 17% and 36.9% at their hill. The net export 11.8% for the year 2000/01 is move to 22.9% at 2005/06. For the succeeding years the share is lower than 20%. The investment share shows lower share of 8% for the year 2007/08 and higher share of 41.6% for the year 2001/02, and for most years the share is higher than 30%. In short, with the ups and down moves of the share of GDP components, the economy of a country grows an averagely more than 9% for the period (National Economic Accounts Statistics of Ethiopia, MoFED, 2013).

With this growth rate, different question will be raised, like the does the growth ruthless (growth that only benefits the rich, and leaves the poor in their poverty) or all inscribed? Does the growth concerns the coming generation or it is Futureless? But leaving these questions and other related issues, for the time being we are going to look the questions of, how the investment trend looks like? "Does the economy has been achieved a relatively efficient?" That is, how is the investment flow to GDP growth rate? Or how much will an additional amount of capital increase output? Thus, in this

thesis, investment, its efficiency and economic growth trend, prospect and relationship in Ethiopia will be studied.

2. Statement of the problem

Investment is among the components of gross domestic products of a country. While measuring a country's economy performance, it is included by classifying between public and private investments. It has both quantitative and qualitative parts. The quantitative part which is indicated by the amount of investment made in a given year and the qualitative part that measures the efficiency of the invested capital. As such it affects the economy move over time dually.

Therefore, this research study is going to examining the movements of investment, its efficiency and economic growth over the last fifteen years (2000-2015) (How is the movement of investment, its efficiency and economic growth for the last fifteen years?) and forecasting the future trends of investment, its efficiency and economic growth (What will be their prospect trend?). Moreover, the study will identify how far investment and its efficiency affect economic growth (How far investment and its efficiency (individual as well as jointly) affect economic growth?).

3. Objective of the Study

The main objective of this study is to see the past and future movements as well the relationship between investment, its efficiency and economic growth. Accordingly, the Study has the following specific objectives:

1. Examining the movements of investment, its efficiency and economic growth over the last fifteen years (2000-2015),
2. Forecasting the future trends of investment, its efficiency and economic growth and
3. Identifying how far investment and its efficiency (individual as well as jointly) affect economic growth.

4. Hypothesis

The Hypothesises of this study are:

H_o: Investment has significant impact on economic growth.

H_A: Investment have no significant impact on economic growth.

H_o: Investment efficiency has significant impact on economic growth.

H_A: Investment efficiency have no significant impact on economic growth.

H_o: Investment and its efficiency have significant impact on economic growth.

H_A: Investment and its efficiency have no significant impact on economic growth.

5. Methodology of the Study
5.1 The kind of data or information to be required

The kind of data required for this study is both quantitative and qualitative.

5.2 Source of data

The source of data for this study is secondary data source such as literatures, books, office publications and different official documents.

The data to be collected are those which show investment, its efficiency and economic growth progress over years, their future movements as well as relationships. To have these data, research reports, literatures, books, different offices publication (especial the publications of Ministry of Finance and Economic Development, Central Statistics Agency, National Planning Commission, National Bank and Ethiopian Investment Agency) will be reviewed.

5.3 Data Collection methods

The data collection technique to be used to conduct the Study is document review.

5.4 Methods of Data Analysis

The statistical techniques that will be used to analyze the data for this Study are:

1. **Descriptive analysis**

   1.1 Measures of central tendency: in order to present average and median of data's for the period,

   1.2 Measure of dispersion.

2. **Inferential analysis**

   2.1 Simple and Multiple Regression Analysis: to show the interdependence between:

   - Investment and economic growth,
   - Investment efficiency and economic growth, and
   - Investment, its efficiency and economic growth.

   2.2 Correlation

   2.3 Test of Regression assumptions:

   - Normality test.
   - Multicolinerity test and
   - Heteroscedasticity test.

6. Expected Outcomes of the Study

From the findings of the Study: It is possible to know the past and future trends of investment, its efficiency and economic growth. Moreover, the output of this research work will provide opportunity to see how far economic growth is affect by investment and investment efficiency (by individual as well as jointly).

7. Outline of the Study

The structure of the thesis is organized as follows, in to four chapters. Chapter one shows overall introduction of the paper. The second chapter will deal with literature review and the third contain data presentation and analysis. The final one is about conclusion and policy recommendation.

8. Literatures Review

8.1 Investment, Its Efficiency and Economic Growth R/ship (Theoretical views)

8.1.1 Investment

According to Dictionary of Economics, investment is the placing of money so that it will increase in value and produces an income (either in an asset, such as a building, or by purchasing shares, placing money on deposits, etc). Investment may be business fixed investment, residential fixed investment, and inventory investment. Business fixed investment is the purchase of new plant and equipment by firms. Residential investment is the purchase of new housing by households and landlords. Inventory investment is the increase in firms' inventories of goods (if inventories are falling, inventory investment is negative) (Mankiw, 2001).

The quantity of investment goods demanded depends on the interest rate, which measures the cost of the funds used to finance investment. For an investment project to be profitable, its return (the revenue from increased future production of goods and services) must exceed its cost (the payments for borrowed funds). If the interest rate rises, fewer investment projects are profitable, and the quantity of investment goods demanded falls. Investment may also affected by income. An increase in income raises demand and which pushes up the sales, through the way the business men induced to expand investment. In other way, a decline in income is normally accompanied by some reduction in investment (Economics Theory and Practice Second Edition, Melville J.Ulmer).

While measuring the national income, investment is among the determining components. The contribution to investment by government and or private sector combined in calculating the GDP. The higher the investment means the higher the GDP. The opposite is true for low level of investment. Thus, investment directly affects the GDP.

The relationship between investment and GDP is not limited to level effect. The investment rate has effect on future growth rate of GDP. The higher or lower investment rate will makes the GDP to grow at higher or lower rate. Again the share of investment level out of GDP also determines the level of GDP. The ratio of the share of investment to GDP growth rate provides us incremental capital output ratio (ICOR now on ward) which is the number of units of investment needed to

generate one unit of additional income each year in the future. The incremental capital output ratio is the measure of investment efficiency. Thus, the higher the share of investment and the lower the incremental capital output ratio mean the higher the GDP growth rate (http://en.wikipedia.org/wiki/Incremental_capital-output_ratio).

Hence, the GDP growth rate depends on the efficiency of investment and the efficiency of investment depends up on the incremental capital output ratio. Overall, investment size, growth rate and share can affect in one way or another way the GDP.

8.1.2 Incremental Capital Output Ratio (ICOR)

The Incremental Capital-Output Ratio (ICOR), which is about investment efficiency, is the ratio of investment to growth divided by the marginal product of capital. It is a metric that assesses the marginal amount of investment capital necessary for an entity to generate the next unit of production. This measure is used predominantly in determining a country's level of production efficiency (http://economywatch.com/economicstatistics/economicindicators/Investment_Percentage_of_GDP/).

Another issue is, knowing the standard ICOR levels may also contribute to assessing the investment efficiency and the productivity of capital stock in specific economies. In this sense, the ICOR would be an old but still new issue for economic growth theory and development planning (Hiroyuki Taguchi and Suphannada Lowhachai, A Revisit to the Incremental Capital Output Ratio: The Case of Asian Economies and Thailand).

The higher the ICOR mean, the lower the productivity of capital (the higher the incremental capital output ratio indicates the low efficiency of investment). Low ICOR values imply that investment is more efficient: Producing one unit of incremental output requires less incremental capital (Capital Flight and Poverty Reduction in Africa Janvier D. Nkurunzizapp 20/50).

Mathematical,

$$\text{incremental capital output ratio} = \frac{\Delta K}{\Delta Y} = \frac{\frac{\Delta K}{Y}}{\frac{\Delta Y}{Y}} = \frac{\frac{I}{Y}}{\frac{\Delta Y}{Y}}$$

OR $$ICOR = \frac{I}{\Delta GDP}$$

K: capital stock

Y: output (GDP)

I: net investment

According to this formula the incremental capital output ratio can be computed by dividing the **investment share of GDP** by the **rate of growth of GDP** (http://en.wikipedia.org/wiki/Incremental_capital-output_ratio).

A determinant of the ICOR is the technology used, where technology is defined as a combination of factors of production (for example, a certain ratio of capital to labour, labour to land). Countries that use technology efficiently and use capital-saving technology have lower ICOR's than countries that invest in capital-intensive industries. Overall, a higher ICOR value is not preferred because it indicates that the entity's production is inefficient.

8.1.3 Economic Growth

An increase in the capacity of an economy to produce goods and services, compared from one period of time to another. Economic growth can be measured in nominal terms, which include inflation, or in real terms, which are adjusted for inflation (http://www.investopedia.com/terms/e/economicgrowth.asp). It also shows an increase in the level of output of goods and services that is sustained over a long period of time, measured in terms of value added (Economics of growth and development, development strategies, Indira Gandhi National Open University press).

8.2 Investment, Its Efficiency and Economic Growth R/ship (Empirical Evidence)

The economic status of a country can be determined by different factors. The human capital, trade exposure, natural resource, capital accumulation, technology, population, financial institution, political conditions, etc can affect the economic positioning of the country. For the time being we are going to see some research facts that shows the relationship between investment, investment efficiency and economic growth.

Siraj Mustefa (2014) "Public and private investments have significant long run impact on economic growth of Ethiopia. Given the long run and short run positive impact of private investment. An increase in private investment ratio to real GDP is estimated to raise growth ceteris paribus by about 29 percentage points in the long run".

Hiroyuki Taguchi and Suphannada Lowhachai in their work of "A Revisit to the Incremental Capital-Output Ratio: The Case of Asian Economies and Thailand" examined the trend in the incremental capital-output ratio (ICOR) and its relationship with per capita GDP and GDP growth rate. They utilize the panel and time-series data and identified the association between ICOR and GDP per capita and GDP growth rate. In their conclusion we obtain the following sentences. "The panel data analysis confirmed that the gross ICOR had a positive correlation with per capita GDP and a negative association with GDP growth rate as expected in a theoretical model. The time-series analysis verified that the net ICOR was positively correlated with per capita GDP".

Abdul Khaliq and Ilan Noy (2007) concluded that, leaving aside the sectorial level, at aggregate level, FDI have a positive effect on economic growth for Indonesian economy.
Thus, economic growth of a given country is also affected by investment and investment efficiency.

9. Research work schedule and research cost breakdown

9.1 Work plan

No	Activities	Duration
1	Literature Review	May 1- June 15/2015
2	Secondary Data Collection	July 1 - July 31/2015
3	Data Organizing	August 1- August 15/2015
4	Data Processing and Analysis	August 16 - August 31/2015
5	Thesis Writing	September 1- September 30/2015
6	Refinement and Submission of the first Draft	October 1 – October 20/2015
7	Final Submission of thesis report	October 21 – November 5/2015
8	Thesis defence	November 10 – December 31/2015

9.2 Cost

Items	Total Cost
Stationary	Birr 1,350.00
Personnel	Birr 1,320.00
Transport	Birr 3,25.00
To	**Birr 2,995.00**
Contingency (10% of Total)	Birr 299.5
Grand To	**Birr 3,294.5**

10.   Reference

10.1 Books, Publications and Articles

- Abdul Khaliq and Ilan Noy, 2007, Foreign Direct Investment and Economic Growth: Empirical Evidence from Sectorial Data in Indonesia.

- Dictionary of Economics published by A & C Black Publishers Ltd, London.

- Economics of growth and development, Economics Growth Models, Indira Gandhi National Open University press.

- Federal democratic republic of Ethiopia Growth and Transformational Plan I, MoFED. November 2010. Addis Ababa.

- Hiroyuki Taguchi and Suphannada Lowhachai, a revisit to the Incremental Capital Output Ratio: The case of Asian economies and Thailand.

- Janvier D. Nkurunziza (2014), Capital Flight and Poverty Reduction in Africa.

- Mankiw, N.Gregory. 2001. Macroeconomics.5th.Edition. New York: Worth.

- Melville J.Ulmer, Economics Theory and Practice Second Edition, Houghton Mifflin Company, Boston.

- National Economic Accounts Statistics of Ethiopia, estimates of the 2010/11 base year series April, 2013. MoFED, Addis Ababa.

- Siraj Mustefa (2014), Private Investment and Economic growth Evidence from Ethiopia, Mekelle University, a published Masters of Art Thesis.

10.2 Web pages

- http://en.wikipedia.org/wiki/Incremental_capital-output_ratio.
- http://economywatch.com/economicstatistics/economicindicators/Investment_Percentage_of_GDP/ .
- http://www.blog.kpmgafrica.com/africas-top-10-fastest-growing-economies/
- http://www.investopedia.com/terms/e/economicgrowth.asp