Analysis of Factors Affecting Private Saving in Ethiopia

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Abstract:

Purpose: *The objective of this paper was to investigate the determinants of private savings in Ethiopia using time series annual data from the period 1991/92-2019/20. Main research questions are what role can policy making institutions play to increase private saving and to what extent variables included in the model affect private saving in Ethiopia.*

Design/Methodology/Approach: *The study applied the augmented Dickey-Fuller test for stationarity, Johansson co-integration test to determine the long-run relationship between variables, and the Vector error correction model (VECM) to estimate both short-run and long-run models.*

Findings: *The estimated results indicated that inflation, real interest rate, private consumption expenditure, and age dependency ratio have a negative and significant effect on private savings both in the long run and short run. Whereas, deposit interest rate has a positive and statistically significant effect on private savings in the long-run. Furthermore, per-capita income affects private savings positively and significantly in the long run. The findings of the study indicated that stable and low inflation rates which would help improve real incomes.*

Practical Implications: *The government should continue its effort to push for increased economic growth which will translate to increased incomes and savings.*

Originality/Value: *The results imply that lower inflation raises growth which in turn increases savings.*

Keywords: *Private saving, determinants, per-capita income, Economic Growth and VECM.*

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1. Introduction

1.1 Background of the Study

Evidence show that plenty of studies have been conducted on the importance, trend, as well as role of saving to a country. The classical economic thought, represented by Adam Smith, and David Ricardo gives great importance to saving, believing that each capital is productive and it results from savings. Literature on the relationship between savings dependency ratios are the main demographic variables considered as determinants of saving. There are many reasons to consider dependency ratio is essential for explaining differences in savings behavior and economic growth in Ethiopia.

The argument present as follows, Economic agents have negative savings when young and have low or no income, positive savings during their productive years and, again, negative savings when they are old and retired (Modigliani, 1970). As children constitute a major charge for parents and do not contribute to production, an increase in their share in the population is expected to reduce the private savings rate. Higher rate of savings in a country is converted into higher investment depends on well-connected financial structure in form of financial institutions, assets and markets that link savers and investors by linking the information gap and the transaction costs that may be involved (Tesha, 2013).

In many sub-Saharan African countries, the rate of economic growth has been impeded by the low level of savings mobilization making them depend on foreign assistance in form of loans and aid to cover their current account deficit (Tesha, 2013).

Designing policies to encourage savings and investment, which in turn increase economic growth through capital formation, is strongly motivated by the long-debated association between savings and the growth rate of income (Ozcan *et al.* 2003). In doing so, analyzing the determinants of saving more careful is so critical in understanding the nature and behavior of domestic savings. The saving varies from, region to region, country to country, individual to individual, this would result variations in investment and capital formation by which the economic growth may also be ended up with great variation. As regards saving variation, according to Adewuvi *et al.* (2007), over the past thirty years, on average, East Asia saves more than 30% of gross national disposable income, while Sub-Saharan Africa saves less than 15 percent.

Utilizing domestic savings effectively can support a nation in achieving sustainable growth and get free of dependence on external resource for investment. Ethiopia is one of the developing countries whose economic performance is mostly dependent on external resources as recently the debt of the country stretched more than 50% of

Gross Domestic Product which is significantly increase debt burden and cannot be a solution in the long run economic growth.

As a result domestic resource mobilization in Ethiopia needs an extra work and coordination. Even though domestic saving specially private saving is the most important for domestic finance, different factors affect domestic saving which might be differ from country to country, hence this study aims to examine factors affecting private saving in Ethiopia. Low domestic savings created constraints for private investors who need finance to support the huge demand of private investment required for the country's accelerating growth and development. Cash on the hand of individuals, potentially support the shadow economy.

An economy system must be able to produce capital in order to satisfy the wants and needs of its people. If there is enough saving leads to reduce lending rate and increase financial accessibility. Ethiopia was the subject of this study because, as previous research had indicated, there has been little financial progress there. Since Ethiopia has a larger saving to investment gap than other Sub-Saharan African nations, it is crucial to empirically evaluate the factors influencing private saving in Ethiopia.

The recommendation obtained from this study is used as an input for policy designing in relation to encouraging saving culture in the country. The majority of earlier studies focused on assessing the factors that affect total or national savings without distinguishing between private and public savings using outdated data. This study used the recently developed econometric models VAR and ECM.

1.2 Statement of the Problem

The role of savings to economic growth has been under scored in various literatures. Having considered the importance of savings for investment, the question of what determines the magnitude and trends as well as contributions of savings to growth in a country, cross country and regional level has been issue of concern for researchers, institutions and all stake holders.

A study by Eric and Mwai (2015) in Kenya, showed that gross domestic product, inflation and age-dependency ratio were significant determinants of gross domestic savings whereas real interest rates was not a significant factor of gross domestic savings. Marcel and Gabriel (2016) found that increase in inflation cases decrease private savings contrary to the theory of precautionary motives for saving. Implies lower inflation in Kenya raises growth which in turn increases savings in the country. While real interest rate which was statistically insignificant.

According to the study conducted by, Sebastian (2007), GDP per capita, interest rate spread domestic inflation rate and real interest rate affected significantly saving in Nigeria. In the case of Tanzania private saving in is responsive to real per capita

GDP and external savings and nonresponsive to real deposit rate and public saving, (David 2013). Biswajit Maitra (2017) examines macroeconomic determinants of saving in India and the role of savings promoting economic growth over the period of five decades.

Involving annual time series data set of economic growth, net domestic savings, interest rate, by using some econometric tests, the paper found that income growth has a positive impact whereas the dependency ratio has adverse impact on savings both in the short-run and in the long-run. Demographic factors such as age dependency ratio, labor participation growth rate, unemployment rate, employment rate, rural population, population growth rate, urban population and others affect saving (Coasin *et al.,* 2015).

Youth dependence is positively correlated with saving; it can be interpreted that people who have young dependent individuals have to have more savings than older people because of education costs, and additionally urbanization forces people to save more to be able to guarantee their children's futures, (Coasin *et al.,* 2015). Investment contributes to growth in collective economy. But the investment cannot increase without increasing in the amount of saving. Thus, savings play a major role in providing the countries capacity for investment and national income, similarly it also affect the potential of economic growth.

In the sense that for economic policy-making purposes, it is important that economic planners or policy makers have to accurate and rational decision about the important of saving and investment, the behavior of people towards investment and saving and the method by which saving can be improved for investment. Economic planners would also need to know about the intentions of saving and investment in order to setting demands accordingly.

Haile (2013), investigate the determinants of domestic saving in Ethiopia using time series annual data form 1970/71-2010/11, used ARDL bounds testing Approach and Error correction model (ECM). The Estimated results revealed that growth rate of income(gPCI), budget deficit ratio (BDR) and inflation rate (INF) were statistically significant short run and long run determinants of domestic saving in Ethiopia Genet (2017) examined determinant of domestic saving estimated using co-integration and error correction models. Results of the study indicate that broad money to GDP ratio; inflation and age dependency ratio play a significant role in determining the gross domestic savings in Ethiopia.

In connection with this, as in the case of various countries, it is believed that different factors attributed to domestic saving growth and trends in Ethiopia which is not well analyzed so far. Most of previous studies concentrated on analyzing the determinants of total or national savings without separating private from public savings with old data. Regardless of the fact that private savings play the key role in growth and development, little is known about the determinants of private savings in

Ethiopia. Therefore this study conducted to fill this gap through detail assessment of the impact of selected macroeconomic variables (inflation, deposit interest rate, real interest rate, per capita income and private consumption expenditure) and age dependency ratio. Unlike the previous studies, this study applied VAR model and ECM which is a recent advance in econometrics, study also added recent data not used in previous studies.

The objective of this study is to empirically analyze the factors affecting private saving in Ethiopia. Main research questions are what role can policy making institutions play to increase private saving and to what extent variables included in the model affect private saving in Ethiopia.

2. Literature Review

Under this section both theoretical and empirical literature reviews are presented as follow. In economics, there are different theories which are supposed to explain the area of savings. Among which the most broadly used can be noticed onto the following classes. These are Relative Income Hypothesis (RIH) by Duesenberry (1949) Absolute Income Hypothesis (AIH) by Keynes (1936), Life-Cycle Hypothesis (LCH) by Modigliani (1963) and Permanent Income Hypothesis (PIH) by Friedman (1957).

2.1 Theoretical Literature Review

2.1.1 Duesenberry Relative Income Hypothesis
James Duesenberry (1949) a household consumption function is subject to on a household's income in relation to other household income, as a result, for any given relative income distribution, the amount of income saved by a household will incline to be different, invariant, and increasing function of its percentile position in the income spreading.

Relative Income Hypothesis adopts that the amount of income saved will be independent of the absolute level of income. This infers that the MPS (marginal propensity to save) of an individual would be greater if his /her percentile position in the income distribution is higher. According to the this theory consumption function is found to be dependent not only depend on the given level of disposable and/or absolute income level of a household but also on the other household's income level and previous consumption level.

2.1.2 The Keynesian Theory of Absolute Income Hypothesis
In both of the developed and developing countries, income is found as the back bone, which has a big role in determining saving rates of individuals, family and countries, amongst others. In the 1930s, the argument, raised Keynesian economists, was that consumption and savings are non-decreasing function of absolute or current disposable income, as Keynes (1936).

Keynes (1936) had been tried to associate consumption and savings with income level through the idea of Marginal Propensity to Consume (MPC), although his intuitive model had not been tested or supported by data in both long-run and short-run cases due to the reason that the predicted MPC result is found to be lower than what was found using Ordinary Least Square (OLS).

To elaborate more, the short-run estimation result shows the average propensity to consume (APC), is higher than Marginal Propensity to Consume (MPC), and whereas in the long run the estimated result of the APC is found to be the same with the MPC. Here the central point is that, under normal condition, consumption is supposed to increase by decreasing rate, while the other side of consumption, that is saving is in a situation to increase by an increasing rate every time when disposable income increases.

2.1.3 Milton Friedman and the Permanent Income Hypothesis

The contradiction of Keynes's analysis with data about the consumption function and current income hypothesis give direction for scholars to look for detailed estimation across the course of their relationships (Romer 1996). Based on this in 1957, Friedman has come up with his new philosophy of the so-called Permanent Income Hypothesis (PIH). The central idea of his theory is that measuring predictable long-term income (permanent income) is the key determinant factor for consumption and/or saving manners of economic agents, instead of merely depends on upon the absolute or current income as the case which was argued by Keynes (1936).

In this argument that consumers are rational and they seek to optimize their lifetime utility subject to the constraint that all their lifetime resources must be spent. Friedman decomposes current income into two parts temporary income and permanent income. Transitory income has been defined as the difference between actual income and permanent income over a specified period of time and permanent income is defined as the lifetime income an individual is projected to earn out of the physical and human assets that he holds.

2.1.4 The Life-Cycle Model

The other model that deals with the consumption function is the Life-Cycle Hypothesis (LCH). This theory was predominantly modified into implementation by Ando and Franco Modigliani (1963), it is more or less parallel or near similar with the permanent income hypothesis, however there one difference that is, the Life-Cycle Hypothesis assumes the natural variation of income in a certain (defined) time horizon, while the permanent income hypothesis focused on the overall variations in income over the unspecified lifetime.

According to the life-cycle theory, income growth is assumed to be one of the outstanding factors of the behavior of domestic savings. This hypothetical scheme is also in a position to get emphasis through the modern empirical studies. Because it

tries to capitalize on the present value of lifetime utility of individual's from inter-temporal consumption from end to end lifetime budget constraint of that individual.

2.1.5 Saving and Economic Growth

Early theories of economic growth focus on the role of savings as a source of capital accumulation and, hence, growth. Similarly Keynesian economics the aggregate demand-based theory also focused on aggregate expenditure, which has a direct implication to savings. Low national savings rate is one of the critical obstacles to achieving higher and sustainable economic growth.

Classical and neoclassical models are emphasize saving is a main deriver for long run economic growth. Positive change in saving rate could promote the growth rate. For this reason saving is one of the factors for economic growth, accumulated saving is the source for capital which leads to increase investment implies higher, output and more employment these would enhance economic growth (Solow, 1956). Keynesian aggregate demand models focus on final consumption spending in enhancing the current economic growth rate; based on growth theories (Harrod-Domar, 1939). Also (Solow-Swan, 1956) models verify the critical importance of saving in generating future economic growth by a means of investment.

2.1.6 Saving and Interest Rate

The classical theory of demand and supply theory of interest, keeps that the rate of interest is determined by the demand and the supply of funds by businessmen and households respectively. The supply of funds is ruled by the time preference and the demand for capital by the predictable productivity of capital. Shaw (1973) and McKinnon (1973) argue that for developing countries, the net impact of a change in real interest rate on saving is likely to be positive. This is because, in the typical developing economy where there is no well functioned financial market and quasi-monetary assets usually account for a greater proportion of household saving compared to that in developed countries.

2.1.7 Inflation and Saving

Inflation is explained as continuous rise over time in the fundamental price level of goods and services in an economy. This continuous rise in prices of goods and services translates to the monetary unit purchasing less goods and services. Hence it can be concluded that inflation mirrors decreasing purchasing power per unit of the country's currency, reduced value of goods and services in the medium of exchange and unit of account within the economy (Fischer, 1993). When inflation is depositors are forced to withdraw their money for consumption purpose and converted their money in to fixed asset unless banks provided high interest rate which offset inflation loss because inflation eats purchasing power of money.

2.1.8 Saving and Consumption Smoothing

Choices by individuals and families about their saving are one of established fundamental determinates of national savings. These decision makers split the

current increment to their resources between consumption, the satisfaction of current wants, and savings that intern will affect their ability to satisfy wants in the future. Any model of rational decision making by savers must, therefore, focus very clearly on the trade-off between satisfying wants now and later with in this limitation, however, there is extensive latitude for different specifications of consumer's objectives and the constraints they face in attaining them.

2.2 Empirical Literature Review

With respect to factors which have been incorporated in the area of savings behaviors, many studies have mainly focused on the association amongst savings and demographic variables such as dependency ratio and life expectancy, while majority of others have gave much attention on the macroeconomic variables including real interest rate, income, money supply, terms of trade current account balance and etc.

Samantaraya and Patra (2014) examine the determinants of savings in India from the period 1971-72 to 2011-2012 by applied ARDL approach to cointegration on a set of variables including, real interest rate, gross domestic product, dependency ratio, inflation, gross fiscal deficit, net barter terms of trade, and some others they finds that that GDP, interest rate, dependency ratio, and inflation have statistically significant influence on household savings in India, both in the long run and short run.

The results of the estimated saving rate model supposed that income, young population, age dependency ratio, urban population and rural population are found to have positive effect on gross domestic savings. Hence, the age structure of the population has a different role in explaining the general national savings rates.

As studied by Coale and Hoover (1958), Mason (1988), and Higgins (1998), demographic factors are believed to be significantly associated with the saving rates historically. Moreover, life cycle hypothesis of Modigliani (1966) also advocates the possible negative correlation between old age dependency ratio and saving rate, by stating that individuals prefer to spend their entire income evenly throughout their lives. Moreover, as life cycle hypothesis supported by Modigliani (1970) signifies, elderly population is expected to save less than working-age population.

For young age dependency ratio, as investigated by Fry and Mason (1982) and Mason (1988). The presence of children naturally accelerates the consumption of households and hampers households from saving their income (Mason 1988). Increases in the dependency ratio may put significant upward pressure on government spending on education and health needed to improve the quality of life.

This may be involving a reduction in public savings if fiscal policies remained unchanged. Old age dependency ratio is negatively associated with domestic saving

rate, as economic problem due to larger proportion of non-working population hampers the economy from generating savings. On the other hand financial deepening which is measured by broad money supply to GDP ratio, on have a negative effect on saving rates, other explanatory factors such as inflation and old population are found to have no any significant effect on the saving rates.

A study conducted by Kudaisi (2013) on the determinants of gross domestic savings in the region of West Africa over the time covered from 1980-2006, the results somehow seems opposite to Aric's findings; in a sense that gross domestic saving rate is negatively associated with size the size of dependency ratio and interest rate, while growth of GDP has a positive impact on; but, all of these variables are show to be statistically insignificant for this regard.

Though, the other macroeconomic variables such as government budget surplus and inflation rate in one corner, and the financial market development on the other hand, are found in a position to have a statistically significant and positive effect on domestic saving, and as far as terms of trade and the real interest rate concerned, it's reported as there is no reasonable impact in determining the saving rate over the West African countries. Adu Larbi (2013) examined the determinants of savings in Ghana and found that financial liberalization, inflation and per capita income have a positive relationship with savings. Haile (2012) investigated the determinants of domestic saving in Ethiopia using time series data form 1970/71-2010/11 by applied ARDL bounds testing Approach and ECM to capture both short run and long run relationships.

The estimated results showed that growth rate of income, budget deficit ratio and inflation rate were statistically significant in both short run and long run. On the other hand current account deficit, deposit interest rate, and financial depth were found to be statistically insignificant in the long run. However, in the short run, financial depth and deposit interest rate were found to have statistically significant in explaining domestic savings in Ethiopia.

Kidane (2009) explored the determinants of gross domestic saving in Ethiopia using co-integration and error correction econometric model, and employ data for the time series analysis of period 1971-2009. Found that that growth of per capital income have significant and positive effect on domestic saving while the current per capital income level is significant but negatively correlated with domestic saving in the long run, insignificant in the short run model.

The financial variables represented by development of broad money supply and real deposit rate do not show any impact in improving the domestic saving. Inflation rate has negative effect and dependence ratio has a significant negative effect saving in Ethiopia. According to Ayalew (2013), in the past four decades the average domestic saving rate was only 7.9% of the GDP during the three consecutive governments of

Ethiopia over the study period reveals that the average saving rate was 13.8% of GDP.

According to Myers and Brealey (2003, cited in Jembere 2014) it is a decline in the purchasing power of money (market value) as a result of persistent rise in prices. Actual value of money declines resulting in loss to creditors and benefit to debtors. From the monetarist observation inflation is demand pull and an exogenous rise in money supply is the causality. In the short run an upsurge in money supply encourages demand above supply of goods and services which causes prices to rise until the market adjusts to the equilibrium.

The study carry out by Mohammad and Mahdi (2010, cited in Jembere 2014) showed that in Latin America the effect of inflation on saving and time deposit to GDP was significantly negative. In this case the classical belief is that, because bank assets and liabilities are expressed in monetary terms and because these assets will generally grow in line with growth in money supply, banks are comparatively protected from the effects of inflation. In general monetary policy works by controlling the cost and accessibility of credit.

Yohannes (2014) investigate time series analysis of the determinants of gross national saving in Ethiopia using autoregressive distributed lag and error correction econometric modeling, and by deployed data for the period 1971-2011. The estimation results shows that Current account deficit and financial development are significant determinants of gross national saving in Ethiopia in the long run, while other explanatory variables such as gross national disposable income, budget deficit, dependency ratio, and inflation, approximated by consumer price index, reported as they were statistically insignificant determinants of gross national saving in Ethiopia over the long run.

The study also showed that variables such as financial development, current account deficit, budget deficit and gross national disposable income, were statistically significant in determining gross national saving in the short run, while consumer price index and dependency ratio are not. A study conducted the determinants of domestic savings in West Africa during 1980-2006. The estimation result indicate the size of effect of the dependency ratio, and interest rate on domestic savings is found out negative and insignificant, while inflation rate are found to be statistically significant.

And real interest rate, and terms of trade have insignificant impact on the level of saving in West Africa, (Bosede V. Kudaisi, 2013). Davis Adu Larbi, (2013), explored the determinants of private savings in Ghana using the Phillips and Ouliaris (1990) residual-based tests to determine the long run relationship between private savings and its determinants. The estimation results designate financial liberalization; per capita income and inflation were found to have a positive and significant relationship with private savings.

Tasnim Khan *et al.* (2013), investigates the impact of demographic factors on Private Saving in Pakistan, time series data from 1975-2008 and used co-integration analysis. The study finds that increase in per capita income, increase in years of education of both males and females, deepening of financial system and age are positively associated with higher saving rate but increase in dependency ratio has negative impact on saving rate.

Cyril *et al.* (2014), empirically investigate determinants of savings in Namibia through the use of co-integration and error correction mechanisms for the period running from 1991 to 2012. The results suggest that inflation and income have positive impact on savings, whilst population growth rate has negative effects on savings. Further, deposit rate and financial deepening have no significant effect on savings. Mohamed Sayeda, (2014), examined the long run and short run relationships between private savings and economic growth in Bahrain, covers the period (1990-2013).used co-integration and Granger causality techniques.

The test result indicates that a positive long run relationship between the study variables, while Granger causality test reveals that significant bilateral causality between the private savings and the economic growth. Mohamed Sayedb, (2014), investigate the effect of interest rate, inflation rate and GDP on national savings rate ate in kingdom of Bahrain over the period 1990-2012 by applied Augmented Dickey-Fuller unit root test and co-integration test to examine the long run relationship between the variables under study.

The findings indicate that the Real GDP growth rate and nominal interest rate has positive and significant effect on national saving rate at 5% and 1% level on the long run and short run respectively.

Eric Perez Mwai Ndirangu and Willy Muturi (2015), investigate determinants of gross domestic savings in Kenya (1970-2013). Ordinary Least Square (OLS) technique was applied to test the validity of the model and the relative importance of different variables which may have an impact on gross domestic savings. The estimated results revealed that Age-dependency ratio (ADEPR), gross domestic product (GDP), Inflation (INF) and were significant determinants of gross domestic savings whereas real interest rates (RIR) was not a significant determinant of gross domestic savings.

Shee Kah *et al.* (2015), narrow down determinant of private saving, in Malaysia, for the period from 1985 to 2010. Used regression analysis (OLS) the result implies inflation rate has a significant and positive relationship with private savings. Genet, (2017), examined the trend and major determinants of gross domestic savings rate (GDS) in Ethiopia used co-integration and error correction models to analyze the short and long run equilibrium among the variables. Results of the study indicate that age dependency ratio, inflation rate, and broad money to GDP ratio play a significant role in determining the gross domestic savings in Ethiopia whereas real

interest rates and foreign aid was not a significant determinant of gross domestic savings. Mojekwu *et al.* (2017), examined the determinants of national savings in Nigeria for the period 1981-2015 using multiple regression model. The co-integration tests indicate the existence of a long run equilibrium relationship among the variables. The results of the study show that only financial deepening play significant role in contributing positively to national savings in Nigeria while the other variables are insignificant in determining national savings during the period under consideration.

3. Research Methodology

3.1 Research Design

Research design provides a logical structure for research, data gathering and analysis. Or it is plan, structure and strategy of research the blueprint that will guide the research process. In other words, it is an action plan that guides a research from question to conclusion and includes steps for collecting, analyzing and interpreting evidences according to pre-established propositions, units of analysis, logic for linking the data to the propositions and application of a set of criteria for interpreting the findings (Yin, 2003).

This research would be used non experimental research design because non-experimental research designs are carried out in natural settings; it does not involve manipulation of the situation, event, circumstances or people. Survey, case studies, correlational studies comparative studies and descriptive studies are some of the examples of non-experimental research design. A researcher cannot control, manipulate or alter the predictor variable or subjects, but instead, relies on interpretation, observation or interactions to come to a conclusion.

3.2 Research Approach

The researcher was investigated the factors affecting private saving; therefore the researcher employed quantitative research methodology to address the research questions. Considering the research objective and problem along with the perspective of the different research approaches, the quantitative nature of the data collected, quantitative research approach is found to be appropriate for this study. Quantitative research is a logical and scientific investigation of quantitative properties and phenomena and their relationships (Abiy, 2009).

3.3 Data Source and Method of Data Collection

Secondary data source is used for this study from 1991-2020. The required data are obtained from the National Bank of Ethiopia (NBE), Ministry of Finance (MoF), Central Statistical Agency (CSA) and World Bank Data base.

3.4 Method of Data Analysis

The study construed as a combination of a VAR model and a vector error correction model (VECM). A VEC model is a special form of the VAR for order of integration I (1) variables which are co-integrated (Griffiths *et al.* 2008. Specifically this VAR methodology enables to estimate the correlation between private saving, inflation, real interest rate, age dependency ratio, deposit interest rate, per capita income and private consumption expenditure.

The study analyzes the long-run and short-run relationship between dependent and independent variables during the period 1991 to 2020. Tiwari (2011) maintains that before conducting estimation certain pre-estimations like unit root and co-integration are required because without them conclusions drawn from this study may not be valid. Unit root testing should be seen as a mandatory exercise to be carried out prior to model estimation.

Descriptive statistics and econometric model were employed to analyze the collected data. The descriptive statistics was used to summarize trends of different variables through graphs. The study was applied econometric models to estimate the coefficients of variables. It uses co-integration method and Error Correction Model to show the influence of major macroeconomic and demographic factors on private saving. The commonly augmented Dickey-Fuller (ADF) unit root tests for determining the variables' orders of integration was applied.

3.5 Description of Variables

Private saving (PS): private saving is taken as the difference between total savings and public savings.

Inflation (IF): It shows a consistent rise in price level. High inflation rates do not encourage higher savings. It is reasonable to expect that savings will fall with inflation as people shift their resources into real assets to escape the loss of money value. When prices of commodities increase steadily, people have to spend more on consumption which decreases the rate of domestic savings. So, it is expected that there is a negative relationship between inflation and national savings.

Per capita income (PCI): is used to measure the living standard of the peoples by dividing total real GDP to total population.

Real interest rate (RIR): is the difference between nominal interest rate on savings deposit and annual inflation rate.

Age dependency ration (ADR): Age dependency ratio here is the ratio of the sum of people younger than 15 and those older than 64 to the working age population. It is the ratio of dependents younger than 15 or older than 64 to the working-age

population (15-64 years). This indicator gives insight into the amount of people of non-working age compared to the number of those of working age. The data is calculated as the proportion of dependents per 100 working-age population (World Bank). Following the life cycle model, the retired population is expected to be dissaving while young dependents should cause households to have higher consumption levels and thus lower saving rates. It is expected that an increase in age dependency ratio will lead to a decrease in national savings.

Private consumption expenditure (PCE): The proportion of expenditure spent on consumption from income.

Deposit interest rate (DR): implies that when there is deposit money at the bank, the bank may earn interest on that money especially in savings accounts or certificates of deposit. Deposit interest rate is the price at which present and future income can be exchanged. According to classical economists, saving is the direct function of the rate of interest. Consequently, savings tend to rise with an increase in the rate of interest as present consumption is being shifted to the future and vice versa. This is known as the substitution effect. Therefore, it is expected that there is a positive relationship between interest rate and national savings.

3.6 Model Specification

Since the data set is a time series, stationarity of the variables is essential to evade spurious regression In addition, regression of non-stationary time series on another non-stationary time series may lead to counterfeit regression. In order to check for the existence of long run relationship, in the model a unit root test on the residuals from the regression has been conducted by using Augmented Dickey Fuller (ADF) test. To estimate the impact of factors affecting on private saving in Ethiopia in relation to this the following general empirical research model was developed:

$Y_{it} = \beta_0 + \Sigma\beta X_{it} + \varepsilon_{it}$

Where:
i denote independent variables .
t denotes years ranging from 1991 to 2020 (time-series dimension).
Y_{it} represents the mean value of dependent variable (private saving)
β_0 is the intercept
βK represents the coefficients of the X variable
X_{it} represents the explanatory variables (PCI, RIR, DR, ADR, IF, PCE).
ε_{it} is the error term.
The above general empirical research model would be changed in to the study variables to analyze the effect of the above specified variables on the dependent variable.

PS= f (PCI, RIR, DR, ADR, IF, PCE,)   (1)

$$LnPSt=\beta o+\beta 1LnPCIt+\beta 2\ RIRt+\beta 3\ lnDRt+\beta 4IFt+\beta 5lnPCEt+\beta 6lnADRt+et \qquad (2)$$

Where:

$\beta 0$ is an intercept term and $\beta 1$, $\beta 2$, $\beta 3$, $\beta 4$, $\beta 5$ and $\beta 6$ are the long run coefficients

lnPSt= Natural logarithm of Private Saving at period t

lnPCEt= Natural logarithm of Consumption Expenditure at period t (-)

lnPCIt= Natural logarithm of Per capita income at period t (-)

RIRt= Real interest rate at period t (-/+)

lnDRt= Natural logarithm of Deposit rate at period t (+)

IFt= Inflation at period t (-)

lnADRt= Natural logarithm of Age dependency ratio at period t (-)

Where:

Δ implies the different operators;

$\beta 0$ denotes the constant term;

$\beta 1 - \beta 6$ implies the short-term dynamics of the variables;

ϵt denotes the error term

The first part of the equation (colored in green) represents the first short run equation while, the second part of the equation (colored in blue) represents the long run equation. The causal effect of the short-run equation is represented by the t-statistics of the explanatory variables (short run coefficients); meanwhile the long-run causal effect is captured by the significance of the parameter λ.

4. Results and Discussion

4.1 Unit Root Test

When estimating a model that includes time series variables, it is necessary to ensure that all time series variables in the model are stationary, which means that they are integrated of the same order. This is done by conducting a unit root test on each variable to find the order of integration. A stationary variable has a time invariant mean and covariance. Estimation based on non-stationary variables may lead to spurious results with high R^2 and t-statistics, but without any coherent economic meaning and inconsistent parameter estimator. This is called spurious regression.

A basic assumption of the Classical Linear Regression model requires all variables to be stationary. The violation of this assumption leads to spurious regression. To avoid this shortfall, the unit root test with and without trend is conducted on all variables to find out whether they are stationary or non-stationary. The Augmented Dickey-Fuller (ADF) and Phillip-Perron (PP) methods are conducted to check for a unit root for all variables in both levels and first differences.

There is a general consensus that many macroeconomic variables are non-stationary in character i.e. their mean and variance depend on time. Regression on one non-

stationary series can generate a problem of spurious regression. Thus, a statistical inference is made with the conclusion that a relationship exists even when there is none. Therefore, in order to avoid the problem of spurious regression results this may emanate from estimation of non-stationary macroeconomic time series, variables.

Table 1. *Results of Augmented Dickey Fuller (ADF) test (Unit-Root Test)*

Variable	Intercept	P value	Trend and Intercept	P value	No Trend No Intercept	P value	Order of Integration
LPS	-1.231135	0.64350	-1.161083	0.8960	4.376118	1.00000	I(1)
D(LPS)	-5.662380*	0.00010	-5.770756*	0.0005	-0.804162	0.35660	
LPCE	2.780137	1.00000	-1.862181	0.6469	2.648889	0.99700	I(1)
D(LPCE)	-2.829148*	0.06750	-3.610981*	0.0477	-0.508749	0.48620	
LPCI	2.038122	0.99980	-2.163057	0.4905	4.949743	1.00000	I(1)
D(LPCI)	-3.827752*	0.00740	-4.722460*	0.0042	-0.498657	0.48990	
RIR	-1.875306	0.33770	-2.40856	0.3666	0.878389	0.89260	I(1)
D(RIR)	-4.657059*	0.00100	-4.471831*	0.0074	-1.006836	0.27330	
LADR	-0.789894	0.80650	-1.692854	0.7276	-1.126752	0.22980	I(1)
D(LADR)	-5.203047*	0.00020	-5.169246*	0.0015	-5.063925*	0.00000	
LADR	-1.692047	0.42420	-1.718509	0.7160	0.033122	0.68500	I(1)
D(LDR)	-6.743125*	0.00000	-7.091459*	0.0000	-6.911875*	0.00000	

Note: *denotes rejection of the null hypothesis at 1%, 5% and 10% significance level.*
Source: *Own study.*

The test has shown that all variables are non-stationary in level (and they become stationary at first difference). Accordingly the study concludes that all variables included in the private saving model are I (1). Hence, it is possible to employ Johansen procedure to test co integration.

4.2 Results for Co-Integration Test and Vector Error Correction Model

From Table 2 the study selected 2 as optimal lag with the majority of the criterion and it assumed it has the minimum information criterion.

Table 2. *VAR Lag Order Selection Criteria*

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-100.64	NA	6.85e-06	7.973330	8.309288	8.073228
1	97.95472	279.5036	1.20e-10	-3.107757	-0.420095	-2.308574
2	201.0389	91.63040*	5.17e-12*	-7.113994*	-2.074629*	-5.615527*

4.3 The Johansen Co-Integration Test Result

Many time series are non-stationary but 'move together' over time - that is, there exist some influences on the series, which imply that the two series are bound by some relationship in the long run. The idea behind co integration is that a linear combination of two or more non-stationary series may be stationary (Engle and Granger, 1987).

Variables may deviate from their relationship in the short run, but their association would return in the long run. The stationarity test demonstrated that all variables are not stationary at level and integrated order (I) and it implies that any estimation using this level data will lead to wrong conclusion and policy implication.

However, the Granger representation theorem states that it is possible for non-stationary variables to produce a stationary relationship if they are co-integrated. This would imply that there is a meaningful long run relationship among the variables. Thus, the presence of and the number of such co-integrating relationships are checked using the trace and the maximum Eigen value methods.

Table 3. *Unrestricted Co-integration Rank Test (Trace Hypothesized No.of CE(s)*

	Eigenvalue	Trace Statistic 0.05	Crtical Value	Prob.**
None*	0.959824	277.4855	125.6154	0.0000
At most 1*	0.945703	190.6942	95.75366	0.0000
At most 2*	0.89192	112.0356	69.81889	0.0000
At most 3*	0.534924	51.96385	47.85613	0.0196
At most 4	0.502283	31.29389	29.79707	0.0334
At most 5	0.369028	12.45533	15.49471	0.1364
At most 6	0.000815	0.022022	3.841466	0.8819

*Note: Trace test indicates 5 co-integrating eqn(s) at the 0.05 level, * denotes rejection of the hypothesis at the 0.05 level, **MacKinnon-Haug-Michelis (1999) p-values*
Source: Own study.

Max-eigenvalue test indicates 3 co-integrating equation(s) at the 0.05 level,* denotes rejection of the hypothesis at the 0.05 level and **MacKinnon-Haug-Michelis (1999) p-values. The study has found number of co-integrated equations using trace statistics and maximum Eigen value statistics. According to probabilities given in tables 4.2 and 4.3, the analysis rejects the null hypothesis that there is no co-integrated vector (r=0) at 5 percent level of significance in favour of the specific alternative , there is at most 3 co-integrated vector (r= 3). The implication is that a linear combination of all the six series is found to be stationary and that there is a stable long-run relationship between the series.

4.4 Vector Error Correction Model

4.4.1 Long Run Estimate
The long run estimates of the model is reported in table 4.4, confirms, the null hypothesis of no significance (effect) is rejected for all variables included in the model. This suggests that the above six mentioned variables are statistically significant in influencing private saving in the long run.

Table 4. *Vector Error Correction long Run Relationship*

Variable	Coefficient	Standard Error	T-statistic	Conclusion
INFLATION(-1)	-0.337447	(0.06270)	[-5.38227]	Significant
LNADR(-1)	-2.320908	(0.31736)	[-7.31323]	Significant
LNDR(-1)	2.305254	(0.38428)	[5.99891]	Significant
LNPCE(-1)	-2.279458	(0.15241)	[-14.9560]	Significant
LNPCI(-1)	0.930378	(0.18208)	[5.10962]	Significant
RIR(-1)	-0.354906	(0.06304)	[-5.62957]	Significant
C	17.43265	*	*	

Source: EViews9 output, Standard errors in ( ) & t-statistics in [ ].

LnPS=17.43C-0.33IF-2.32LNADR+2.30LNDR-2.27LNPCE+0.93LNPCI-0.35RIR
$\qquad$ [-5.38]   [-7.31]   [5.99]   [-14.9]   [5.10]   [-5.62]

The results show that four variables (inflation, real interest rate age dependency ratio and private consumption expenditure) has negative coefficient and two variables (Per capita income and deposit rate) has positive coefficient. The interpretation of each variable is expressed in the following manner. A one percent increase in inflation rate is lead to decrease private saving by 0.337 percent on average in the long run under citreous paribus condition. Negative impact of inflation rate on savings suggests that, in Ethiopia, higher anticipated inflation reduces private saving. In this regard, the results imply that lower inflation raises growth which in turn increases savings.

One percent increase in private final consumption expenditure leads to decline or decrease private saving on average in the long run by 2.279 percent under citrus paribus condition. Keeping other things remain constant a one percent increase in real interest rate and age dependency ratio leads to decrease private saving by 0.354 and 2.321 percent on average respectively in the long run.

On the other hand keeping other things remain constant a one percent increase in deposit interest rate and per capita income leads to increase private saving by 2.305 and 0.930 percent on average in the long run respectively. Inflation, deposit rate, and real interest are statistically significant both in the long run and short run, while age dependency ratio, per capita income, private consumption expenditure are significantly affect private saving in the long run not in the short run.

4.5 Short Run Model

The coefficient of the error correction term for the equation is negative and significant, high absolute t-statistic of 10.5.This tells that there is a reasonable adjustment towards the long run steady state. This means that error correction model is well specified and also confirms the findings on the co-integration of the variables. This guarantees that although the actual private saving may temporarily deviate from its long-run equilibrium value, it would gradually converge to its equilibrium.

The estimated coefficient of -0.187 suggests that approximately 19% of the disequilibrium of the previous year comes back to long run equilibrium in the next year or the deviation of private saving from its equilibrium value is eliminated every year by 19%. The fact that ECM coefficient is significant and negative serves as evidence for the existence of co-integration relationship amongst the variables included in the model.

It also points out to the presence of long term causal relations (no problem in the long run equilibrium relationship) between the dependent variable and the independent variables. Table 5 shows the short run relationship outcome of the error-correction model, from which the short-run impact of inflation, private consumption expenditure, real interest rate, per capita income, and deposit rate and age dependency ratio on private saving can be analyzed.

Keeping other thing remain constant one percentage increase in inflation and real interest rate at lag one results 0.090 and 0.092 percent decline or decrease on average in private saving respectively in the short run. While under citreous paribus condition a one percent increase in deposit rate at lag one leads to increase private saving by 0.562 percent on average in the short run. Age dependency ratio, per capita income, private consumption expenditure is insignificant in the short run.

Table 5. *Vector Error Correction model Short-run Relationship*

Variables	Coefficient	Std. Error	t-Statistic	Prob
ECM	-0.187322	0.017801	-10.52327	0.0000
D(LNPRIVATE_SAVING(-1))	-0.478279	0.116362	-4.110283	0.0007
D(INFLATION(-1))	-0.090589	0.01722	-5.260790	0.0001
D(LNADR(-1))	-0.090707	0.102513	-0.884836	0.3879
D(LNDR(-1))	0.562151	0.105343	5.336372	0.0000
D(LNPCE(-1))	-0.135208	0.075859	-1.782348	0.0916
D(LNPCI(-1))	-0.028112	0.043296	-0.649288	0.5244
D(RIR(-1))	-0.092595	0.017242	-5.370420	0.0000
C	0.325875	0.028422	11.46546	0.0000

R-squared	0.896997	F-statistic	19.59393	
Adjusted R-squared	0.851217	Prob (F-statistic)	0.00000	
S.E. of regression	0.025014	Durbin-Watson stat	1.615936	

Source: EViews9 output.

Coefficient of determination of the model the above table shows the results of regression analysis. An F statistics of 19.59 (with Probability > F= 0.0000) implies reject null hypotheses that all the explanatory variables have coefficients not different from zero. It also indicates the significance of the variables in explaining the model (the variables included in the model jointly explained the model). R^2 measures the goodness of fit of the variables, to what extent the variation of the dependent variable is explained by the explanatory variable(s). R^2 is between 0 and 1; values close to 1 indicate good explanatory power.

Based on this the coefficient of determination of R^2 0.851217means that 85.1% of the variation in private saving is explained by the independent variables included in the model. The remaining 14.9% captured by error terms. The coefficient estimate of the constant of the regression is 0.325 shows that the value of dependent variable if all independent variable becomes zero. This indicate that private saving will be increased by the 0.325 given all independent variable zero and this indicate that the dependent variable in the model is highly depends on the independent variables.

4.6 Test for Heteroskedasticity

The test of heteroskedasticity is a test of the assumption of OLS estimator that says the variance of errors term is constant or residuals do not differ across observations. The study uses Breusch Godfrey test (BG test) to test for heteroskedasticity.

H0: The assumption that there exists homoscedasticity H1: There is no homoscedasticity (there is Heteroskedasticity).

Table 6. *The Heteroskedasticity test of the multiple regressions*

Heteroskedasticity Test: Breusch-Pagan-Godfrey			
F-statistic	3.676007	Prob. F(14,12)	0.6768
Obs*R-squared	21.89475	Prob. Chi-Square(14)	0.0808
Scaled explained SS	7.663265	Prob. Chi-Square(14)	0.9061

Source: *EViews-9 output.*

In this study as shown in Table 6, both the F-statistic and Chi-Square versions of the test statistic gave the same conclusion that there is no evidence for the presence of heteroskedasticity, since the p-values were in above of 0.05. The explained sum of squares from the auxiliary regression, also gave the same conclusion that there is no evidence for the presence of heteroskedasticity problem, since the p-value was considerably in excess of 0.05.

Therefore, EViews displays three different types of tests for heteroskedasticity and all fails to reject the null hypothesis of homoscedasticity presence or accept the null hypotheses there is no Heteroskedasticity problem. So it can be concluded that the variance of error term is constant or the assumption of CLRM is not violated.

4.7 Autocorrelation Test

The Durbin-Watson test tests the first order autocorrelation. For further test of autocorrelation the study uses Breusch-Godfrey test so that the autocorrelation that are not detected by DW test will be found. Moreover, BG test tests the autocorrelation of the residual and several lagged values of it.

H0: There is no autocorrelation: H1: There is autocorrelation.

Table 7. *Autocorrelation test of multiple regressions*
Breusch-Godfrey Serial Correlation LM Test:

F-statistic	0.415823	Prob. F(2,16)	0.6667
Obs*R-squared	1.33406	Prob. Chi-Square(2)	0.5132

Source: *Eviews-9 output.*

According to the DW result of the study, there is no autocorrelation which occurred between the variables and their respective lagged value. The results as indicated by the probability values of both F-statistic and observed R-squared fail to reject the null hypothesis of no serial correlation. In addition, DW test from the regression have a value of 1.615936 leads to conclude there is no evidence of the presence of autocorrelation. The test of autocorrelation of the residuals and several lagged value of it, Breusch-Godfrey test (BG test), presents with two type of test and both fails to reject the null hypothesis of no autocorrelation. Therefore, given these result it can be concluded that there is no evidence for the existence of autocorrelation.

4.8 Test for Multicollinearity

The results of correlation tests are depicted by a correlation matrix Table.

Table 8. *Correlation matrices*

Variables	INFLATION	LNADR	LNDR	LNPCE	LNPCI	RIR
INFLATION	1					
LNADR	-0.0054	1				
LNDR	-0.1643	0.025546	1			
LNPCE	0.3900	-0.69408	-0.02852	1		
LNPCI	0.3619	-0.69500	0.038485	0.991356	1	
RIR	-0.9870	0.020237	0.317435	-0.39589	-0.35995	1

Source: *EViews9 output.*

The correlation matrix presented in Table 8 it suggested that real interest rate and inflation strongly negatively correlated while private consumption is strongly positively correlated with private consumption expenditure. Inflation is positively correlated with private consumption expenditure and per capita income but weak. Private consumption expenditure is correlated negatively with real interest rate age dependency ratio and deposit rate.

Per capita income is positively correlated with deposit rate and negatively correlated with real interest and age dependency ratio. According to the above table multicollinearity is not a serious problem.

4.9 Variance Decomposition

Variance Decomposition tells us how much of a change in a variable is due to its own shock and how much of it is due to shocks to other variables.

Table 9. *Variance Decomposition*
Variance Decomposition of LNPRIVATE_SAVING:

Period	S.E.	LNPRIVATE SAVING	INFLATION	LNADR	LNDR	LNPCE	LNPCI	RIR
1	0.025014	1.000.000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
2	0.039677	5.434.199	0.406936	2.418.920	0.585824	2.053.834	1.608.102	2.341.206
3	0.063035	4.463.542	0.208066	2.830.591	0.720118	8.479.491	1.225.646	5.394.524
4	0.099567	3.065.703	1.237.856	2.501.240	0.336017	1.527.910	1.259.160	3.745.288
5	0.135949	2.115.062	1.830.787	2.544.984	0.514563	1.845.990	1.206.563	4.051.577
6	0.174377	1.755.054	2.165.711	2.388.595	0.935516	2.012.213	1.082.383	5.024.919
7	0.214427	1.451.160	2.535.815	2.274.665	0.987067	2.109.743	1.040.411	4.894.998
8	0.252158	1.254.960	2.722.316	2.223.245	1.165.994	2.173.347	9.936.306	5.159.021
9	0.289495	1.139.392	2.874.107	2.155.751	1.289.884	2.214.211	9.553.634	5.321.866
10	0.325619	1.037.987	3.003.644	2.113.248	1.350.386	2.242.819	9.333.328	5.339.308

Source: EViews9 output.

It also tells also the percentage of the fluctuation in a time series attributable to other variables at the 10 years of time horizons. Table 9 presents the forecast of variance decomposition of the seven variables. The variance decomposition measures the contributions of each type of shock to the forecast error variance and it also provides information about the relative importance of each random innovation (shock) in affecting the variables in the VAR. More specifically, it indicates the amount of information each variable contributes to the other variables in the VECM model.

The column labeled S.E in sees Table 9 represents the forecast error of the variable for each forecast horizon (period). The forecast error emanates from the variation in the current and future values of the shocks to each variable in the system. The reported numbers in the remaining columns give the percentage of the forecast error in the household savings that can be contributed to innovations in the household savings itself and other variables at ten different time periods. Each row adds up to the value of a 100%.

From the table we realize that own shocks variation ranged from 10.4% to 100% over the ten years of forecast. This implies that from a contribution of 100% to variations in its forecast errors, the contribution of private saving fell to 21.1% in the

medium term and 10.4% in the long term. The difference was therefore taken up by other variables. At period one private saving is 100% because the only source of the one period ahead variation is its own shock. In addition, the results indicate inflation is the most significant group for the error variance. Starting from the seventh year, its shocks account for more than 25.4% in explaining the variance in private savings. In the same breath, the gradual increase can be seen in the contribution of deposit interest rate and real interest rate.

Their contributions however remain small compared to that of inflation, personal consumption expenditure, age dependency ratio and per capita income in explaining private savings may tend to be affected if there is a possible shock in one of the variables. Age dependency ratio appears to be third in line in terms of contribution of innovation to private saving. Its contributions increase from the 2nd to the 3rd year period and gradually decline to the 4th period. Variance decomposition analysis shows that inflation constitutes the predominant source of variations in private saving, followed by private consumption expenditure and age dependency ratio.

5. Conclusions and Recommendations

5.1 Conclusion

This paper empirically examined the factors affecting private savings in Ethiopia for the 1991-2020 period by consider theories of the Permanent Income Hypothesis (PIH), Relative Income Hypothesis (RIH) and Life Cycle Hypothesis (LCH) framework. Ordinary Least Square (OLS) technique is applied to test the validity of the VAR model. Augmented Dickey Fuller test is used to test stationarity of all-time series variables. To test long-run relationship of the variables, Johansen test was applied with ECM. It would therefore be fairly important to conclude from this study that governments would need to think and/or re-thinking the issues of inflation, per capita income growth, real interest rate, deposit interest rate, private consumption expenditure and level of age dependency.

The results of the paper provide substantiation that private saving in Ethiopia is affected by a number of factors. First, per capita income has a positive impact on private saving in Ethiopia at 5% level of significant in the long run. A one percent increase in per capita income leads to increase private saving 0.930 percent on average in the long.

The result suggests that an increase in per capita income growth will increase private savings in in Ethiopia. Real interest is negatively associated with private saving and statistically significant at 5% level of significant, a one percent increase in real interest rate leads to decrease private saving by 0.354 and 0.092 percent on average respectively in the long run and short run respectively. According to this investigation, the ratio of age dependency to the total population is has a negative association with private savings and statistically significant at 5% level of

significance. A one percent increase in age dependency ratio leads to decrease private saving by 2.321 percent on average in the long run.

Under this investigation, the inflation rate as macroeconomic instability exhibits negative and statistically significant at the 5% levels of significant in the long run. The estimation result also indicate, as inflation increases across time by one percent, private saving lowers or decrease by 0.09 percent in the short run and 0.533 percent in the long run, meaning higher inflation could reduce saving. Inflation serves as a measure of macroeconomic stability.

Higher inflation lowers the credibility of the authorities and as a result discourages savings. Besides, if people are consumption oriented, consumption function shifts upward, while saving function shifts downward. This finding contradicts the precautionary saving theory which states that as inflation rises, consumers will spend less so as to cushion for anticipated difficult times. On the other hand a one percent increase in deposit interest rate leads to increase private saving by 2.305 and 0.562 percent on average in the long run and short run respectively. One percent increase in private final consumption expenditure leads to decline or decrease private saving on average in the long run by 2.279 percent.

5.2 Recommendations

On the basis of the study findings the following possible course of action are recommended to policy makers to enhance private saving in Ethiopia. In the short run, the government continues to support basic goods and service by exempting them from tariffs and taxes, while supporting the agriculture industry in the long term to boost output or work on the supply side.

• The Government should apply strong population policy to reduce youth unemployment and increase deposit interest rate to encourage saving and narrow the gap between lending interest rate and deposit interest arte which benefit the mass.

• Government and all concerned organ has to put in place continues effort to reduce rate of inflation to a single digit as much as possible which intern improve real interest arte and encourage private saving.

• It is advisable to give due attention key economic sectors of the economy such as agriculture, industry, service and tourism since they can absorb unemployed labor force and help lower the proportion of young people who rely on welfare as well as raise per capita income and assure sustainable growth.

• Pay close attention to important economic sectors including agriculture, industry, services, and tourism since they can monitor the labor force's unemployment rate and help lower the proportion of young people who rely on welfare as well as raise per capita income and assure sustainable growth.

• Government and all concerned organs has to work on financial access to the retail segment and support the innovative private sector which well have paramount importance in private saving, consumption as well as ensuring sustainable economic growth.

• It is also advisable to increase disposable income by reducing income tax and make marginal increment to consumption tax to improve private saving in the long run.

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