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Impact of Remittance (private individual transfer) on inflation in Ethiopia

Project work submitted to Indra Gandi National Open University in Partial fulfillment of the requirement for the award of the degree-Master of arts in Economics .I hereby declare that this work has been done by me and has not been submitted elsewhere.

Signature of the candidate: ……..

Name of the Candidate: Tsedeke Digafe Gashaw

Address: Addis Ababa

Year: April 2016

CERTIFICATE

Certified that the project work entitled ***"Impact of Remittance (private individual transfer) on inflation in Ethiopia"*** submitted by Tsedeke Digafe Gashaw is his own work and has been done in the light of evaluator's comments under my supervision.

Signature:…….

Name:……..

Adress:…….

Study Centre:…….....

Regional Centre:……

Date:……..

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Abstract

Like Many developing countries Remittance are large capital inflows in Ethiopia in recent years. Hence understanding the impact of remittance on Macro variables such as inflation is essential for the policy makers of recipient Economy. Incorporating remittance as exogenous variable to the standard inflation function, this paper verifies how it affects the inflation rate in Ethiopia in the 1991 quarter one to 2014 quarter four periods. Applying Vector Autoregressive technique remittance positively affects the price level in the short run. Where us there is no long run causation between these two variables.

ACRONYMS

NBE	National Bank of Ethiopia
MoFED	Ministry of Finance and Economic Development
CSA	Central Statistics Authority
WB	World Bank
IMF	International Monetary Fund
EEA	Ethiopia Economics Association
CPI	Consumer Price Index
GDP	Gross Domestic Product
GRE	Government Recurrent Expenditure
PT	Private Individual Transfer
VAR	Vector Autoregressive
ADF	Augmented Dickey Fuller
VECM	Vector Error Correction Model
LDC	Least Developed Countries
DC	Developed Countries
SSA	Sub Saharan Africa

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Chapter one

1. Introduction

1.1 Background of the study.

Remittances refers to money, it's equivalents or something of values sent by individuals living or working outside their countries of birth to their home country for the purpose of consumption by migrant family or direct investments by the migrant. Remittances can be in the form of; migrants' salaries and wages earned in the host countries, current transfers by migrants who are considered residents of the foreign country or capital transfers that result from the correspondence between the migrants and their households for instance the flow of goods.

The importance of the flow of workers remittances in the economies of developing Countries during the last few decades or so cannot be ignored at the face changing global order where most of the economies in the world are transforming themselves to the call of globalization and transmuting towards more open markets with freer flows of goods and factors across borders. Remittances – the unrequited transfer of funds by the migrants to their families at home – are a source of foreign exchange which is much scarce in developing economies. It is a more stable and less volatile source of external finance. Foreign capital flows in the form of remittance have a significant impact on both the host and home country macro-economic variables.

In many literatures Inflation refers a sustained rise in prices across the board, that is, a phenomenon where the average price of all goods is on an increasing trajectory for some stretch of time. Of course, this may be accompanied by changes in relative prices.
For the common person, there is something threatening about the phenomenon of inflation, especially on those occasions when the rise in prices of goods is not matched by an equivalent increase in the price of labor.

Annual average national headline inflation at the end of fiscal year 2013/14 was 8.1 percent. Annualized food inflation was 5.9 percent. Similarly, annual average non-food inflation registered stood at 10.6 percent. (National bank of Ethiopia, 2013/14)

For any government one of the most urgent issues is to stabilize the price and maintain a price level within the limits of purchasing power of the common people .It is vital because price instability yields a lot of economic and political distortion which hinder overall development of a country. Therefore it is important for policy makers to pay special attention to this issue.

The impact of remittance on inflation can be viewed from three different angles: namely appreciation of exchange rate, increasing money supply and balance of payment deficit Remittance affects the price level through spending effect.

Under fixed exchange rate regime, the country cannot adjust its International relative prices after a negative shock to the tradable sector.

The nominal depreciations, thus, prevented, and as a result, the tradable output contracts and the price level rises. However Under a flexible exchange rate regime, since international relative prices can be adjusted following a large inflow of remittance, the resulting effect will be a rising price.

When large inflows of foreign exchange are remitted by expatriates to their home country, the conversion of this foreign exchange into domestic currency raises the money supply. If this is absorbed into productive sectors (or capital investment), then it goes into consumption expenditure, fuelling inflation. Remittances also boost real wealth, which stimulates consumption expenditure. This creates short-run excess demand, which drives up the price level.

Growth of money supply depends on the growth domestic output produced. When money supply increases due to new addition to the stock of domestic currency equivalent to the foreign currency remitted, there will be extra money chasing the few products produced.as a result the extra money supply pressurize the price level to increase.

When foreign currency amount obtained from foreign trade fails short of supporting import then balance of payment deficit will be a natural consequence. The gap of balance payment could be filled by remittance. This remittance amount will give extra purchasing power for domestic consumers which will then reflected on the price level.

According to Paresh K.Seema Agarika M(2011) on the study conducted on developing countries through using different models they found fairly consistent evidence that remittances across the bulk of the models had a positive and statistically significant effect on the inflation rate.

This implies that remittances generate inflationary pressures in developing countries.

1.2 Statement of the Problem

In developing countries like Ethiopia price level is a big issue that capture public sphere due to its catastrophic consequence on individuals standard of living and nations progress at large. Nations aggregate output growth alone doesn't reflect countries progress. In addition to economic growth, distributional aspect of growth has paramount significance on peoples live and poverty reduction. Economic growth without fair distribution of its benefit will widen the ever increasing income inequality.

One of the factors affecting peoples live or income distribution is inflation. Unless it is solved at early stage of growth along with output growth, it will deepen the root of the problem.

Inflation is highly related with aggregate demand. The right policy decision has to come after identifying those factors determining aggregate demand. As we know consumption is the largest constituent of aggregate demand. Any factors affecting consumption will affect the overall aggregate demand. Again consumption could be affected by factors that are endogenous and exogenous to domestic economy. In developing countries like Ethiopia were large numbers of citizens living abroad, the level of remittance will be large enough to influence aggregate demand through consumption. This could lead to inflation.

In our recent past inflation has increased dramatically. According to Government report the current inflation rate is a bit above single digit showing downward movement.

Though the reality on the ground is not as rosy as reported, one can sense that the current price level lessened its upward swing compared to the rate it had for seven or eight years before.

Because of the above theoretical and empirical facts mentioned, identifying individual impact of remittance on inflation will help us to choose the right policy instrument to check inflation.

A number of studies conducted in order to understand the factors that determine inflation applying different methods and variable. However studies about individual impact of factors on inflation found to be limited. In this study the impact of major factors on inflation and one exclusive exogenous variable namely remittance impact will be studied in detail.

Thus this study fills the gaps by studying remittance impact on price level. Therefore this study is conducted to see whether remittance has a significant impact on inflation in Ethiopia.

1.3 Objective of the Study

I. **General objective**

The general objective of the study is to assess factors affecting inflation in Ethiopia.

II. **Specific objective**

The specific objective of the study is to empirically verify the direction and magnitude of impact of remittance on inflation In Ethiopia.

1.4 Research Question

The research question for a quantitative correlation study such as remittance and its impact on inflation in Ethiopia will be:

- What impact has remittance had on inflation?
- Does remittance have a positive impact on inflation in Ethiopia?

1.5 Research Methodology

1.5.1 Source and type of data

The study will be conducted based on secondary quantitative data from domestic and international sources. Institution which serve as major source of data will be central Statistics Agency (CSA),National Bank of Ethiopia(NBE),Ethiopian Economics Associations, Ministry of Finance and Economic Development (MoFED),International Monetary Fund (IMF)and World Bank (WB).

1.5.2 Method of analysis

Vector autoregressive (VAR) methodology used as a method of estimating impact of remittance on inflation in order to indicate the possible impact of remittance on inflation.

Thus, to assess statistical linkage between remittance and inflation, Unrestricted VAR methodology is used in order to compute degree of influence.

Other tests like causality through Granger causality also applied. In addition to this in order to investigate the long run determinants of inflation in Ethiopia, the Johansen Co-integration test applied.

An error correction model used to see both long run and short run dynamics of inflation. The test for Impulse response function under Vector Error Correction environment was conducted.

The variables used in the estimation include domestic consumer price index (P), Gross Domestic Product (GDP), Government Recurrent Expenditure (GRE) and Private individual Remittance (R).

$P = b_0 + b_1GDP + b_2R + b_3GRE + e$

GDP: Gross domestic product

P: Consumer Price Index (CPI)

R : Private Individual Remittance (PT) proxy for remittance

GRE: Government Recurrent Expenditure

1.6 Expected Outcome

Expected outcome of the study is to see whether foreign remittance of Ethiopia positively affects the overall price level of the country or not.

1.7 Scope and limitation

The study covers the period from first quarter of 1991 to fourth quarter of 2014. One of the limitations is to capture political, administrative and social factors as part of determining variable of inflation for the study period.

1.8 Significance of the study

Understanding the impact of private individual remittance on inflation will help to know the level of domestic aggregate demand that could result from external factors especially from private individual remittance.

Unlike to other studies, this study will focus on individual impact of private individual remittance or Private Transfer on Inflation.
In this regard it adds to existing literature by giving special emphasis for remittance (Private Individual Remittance) and its role on inflation.

The outcome of this study may provide useful inputs in understanding private transfer and taking measures to curb or control its contribution for inflation. It shades light on domestic policies and supply constraint resulting from an increase in domestic consumption from private transfer.

The study is also significant in terms of identifying the impact of Gross Domestic Product and Government Recurrent Expenditure on the domestic price level of Ethiopia. Understanding all of these factors may help policy makers and related bodies to consider and take appropriate measures to control inflation.

1.9 Organization of the study

The study organized under five chapters; the first chapter contains an introduction part of the study introduction of the study. This part covers background of the study, statement of the problem, objective of the study, Research question and research methodology, significance of the study, Expected outcome and scope and limitations.

Chapter two of the study presented literature review that has been overviewed to conduct the study. The data source methodology and model specification categorized under third chapter. The fourth chapter of the study is devoted for empirical analysis using different econometric techniques. The final chapter of study devoted for conclusion and recommendation

Chapter Two

2. Review of Related literature

In many literatures Inflation refers to a sustained rise in prices across the board, that is, a phenomenon where the average price of all goods is on an increasing trajectory for some stretch of time. Of course, this may be accompanied by changes in relative prices. For the common person, there is something threatening about the phenomenon of inflation, especially on those occasions when the rise in prices of goods is not matched by an equivalent increase in the price of labor.

2.1 Theoretical literature on inflation

2.1.1 Keynes' Theory of Demand-Pull Inflation

Keynes and his followers emphasize the increase in aggregate demand as the source of demand-pull inflation. There may be more than one source of demand. Consumers want more goods and services for consumption purposes. Businessmen want more inputs for investment.

Government demands more goods and services to meet civil and military requirements of the country. Thus the aggregate demand comprises consumption, investment and government expenditures. When the value of aggregate demand exceeds the value of aggregate supply at the full employment level, the inflationary gap arises.

The larger the gap between aggregate demand and aggregate supply, the more rapid the inflation. Given a constant average propensity to save, rising money incomes at the full employment level would lead to an excess of aggregate demand over aggregate supply and to a consequent inflationary gap. Thus Keynes used the notion of the inflationary gap to show an inflationary rise in prices.

The Keynesian theory is based on a short-run analysis in which prices are assumed to be fixed. In fact, prices are determined by non-monetary forces. On the other hand, output is assumed to be more variable which is determined largely by changes in investment spending.

The Keynesian chain of causation between changes in nominal money income and in prices is an indirect one through the rate of interest. When the quantity of money increases, its first effect is on the rate of interest which tends to fall.

A fall in the interest rate would, in turn, increase investment which would raise aggregate demand. A rise in aggregate demand would first affect only output and not prices so long as there are unemployed resources. But a sudden large increase in the aggregate demand would encounter bottlenecks when resources are still unemployed.

The supply of some factors might become inelastic or others might be in short supply and non-substitutable. This would lead to increase in marginal costs and hence in prices. Accordingly prices would rise above average unit cost and profits would increase rapidly which, in turn, would bid up wages owing to trade union pressures.

Diminishing returns might also set in some industries. As full employment in reached, the elasticity of supply of output falls to zero and prices rise without any increase in output. Any further increase in expenditure would lead to excess demand and to more than proportional increase in prices.
Thus, in the Keynesian view so long as there in unemployment, all the change in income is in output, and once there is full employment, all is in prices.

2.1.2 Monetarist View or Monetary Theory of Inflation

The monetarists view emphasis the role of money as the principal cause of demand-pull inflation. They contend that inflation is always a monetary phenomenon. Its earliest explanation is to be found in the simple quantity theory of money. The monetarists employ the familiar identity of Fisher's Equation of Exchange.

MV= PQ
Where M is the money supply, V is the velocity of money, P is the price level, and Q is the level of real output.

Assuming V and Q as constant, the price level (P) varies proportionately with the supply of money (A/). With flexible wages, the economy was believed to operate at full employment level. The labour force, the capital stock, and technology also changed only slowly over time.
Consequently, the amount of money spent did not affect the level of real output so that a doubling of the quantity of money would result simply in doubling the price level. Until prices had risen by this proportion, individuals and firms would have excess cash which they would spend, leading to rise in prices.

So inflation proceeds at the same rate at which the money supply expands. In this analysis the aggregate supply is assumed to be fixed and there is always full employment in the economy.

Naturally, when the money supply increases it creates more demand for goods but the supply of goods cannot be increased due to the full employment of resources. This leads to rise in prices. But it is a continuous and prolonged rise in the money supply that will lead to true inflation.

Friedman's View:

Modern quantity theorists led by Friedman hold that "inflation is always and everywhere a monetary phenomenon that arises from a more rapid expansion in the quantity of money than in total output." He argues that changes in the quantity of money will work through to cause changes in nominal income.

Inflation everywhere is based on an increased demand for goods and services as people try to spend their cash balances. Since the demand for money is fairly stable, this excess spending is the outcome of a rise in the nominal quantity of money supplied to the economy. So inflation is always a monetary phenomenon.

Next Friedman discusses whether an increase in money supply will go first into output or prices. Initially, when there is monetary expansion, the nominal income of the people increases. Its immediate effect will be to increase the demand for labor.Workers will settle for higher wages. Input costs and prices will rise.

Profit margins will be reduced and the prices of products will increase. In the beginning, people do not expect prices to continue rising. They regard the price rise as temporary and expect prices to fall later on.

Consequently, they tend to increase their money holdings and the price rise is less than the rise in nominal money supply. Gradually people tend to readjust their money holdings. Price then rise more than in proportion to the money supply.

The precise rate at which prices rise for a given rate of increase in the money supply depends on such factors as past price behavior, current changes in the structure of labor, product markets and fiscal policy. Thus, according to Friedman, the monetary expansion works through output before inflation starts.

2.1.3 Structural Inflation in the LDCs

Both Myrdal and Straiten have argued against the straightforward application of the orthodox aggregative analysis to the LDCs. According to them, this kind of analysis necessarily presumes balanced and integrated structures, where substitutions in (consumption and production and inter-sectorial resource flows in response to market signals are reasonably smooth and fast, such that we can legitimately talk in terms of aggregate demand and aggregate supply.

But the situation is different when we come to analyze the working of the economies of the LDCs, which are structurally backward, unbalanced as well as highly fragmented due to market imperfections, and rigidities of various kinds. Consequently, often times, substantial under-utilization of resources in some sectors coexists with shortages in other sectors.
These features of the LDCs make the application of fully aggregative analysis to the LDCs 'misplaced' (Streeten).

They suggest that the simple notion of aggregate demand and aggregate supply should be rejected in favor of disaggregated analysis and of sectorial demand and supply balances; that the given structural composition of the economy defines sectorial constraints—constraints that are slow to change and that get easily converted into sectorial bottlenecks, which then generate as well as exacerbate inflation.

Therefore, to understand the true nature (the origin as well as propagation) of inflation in the LDCs, one must go behind the forces that tend to generate bottlenecks or gaps of various kinds in the normal process of development, study how the bottlenecks lead to price increases and how these increases spread to the rest of the economy. The above kind of 'structural view' of inflation has found maximum advocacy from several Latin American economists since the early 1950s.

The essentials of their arguments can be summed up in two main propositions:

1. That whereas inflation in developed countries (DCs) is associated with full-employment policies and the labour-market response to these policies, inflation in LDCs is bound with the developmental effort and the structural response to this effort expressed through bottlenecks or gaps of various kinds in these countries; and

2. That the socio-economic-political structure of a LDC determines the source and character of inflation by determining the particular kinds of sectorial demand-supply gaps or bottlenecks that emerge in the process of development.

A study of these gaps or bottlenecks is therefore, essential for understanding inflation in these countries and for devising appropriate anti-inflationary policies.

The gaps or bottlenecks that have attracted maximum attention in the literature are discussed below:

1. Resources Gap:

Most of the LDCs are trying to industrialize themselves rapidly through the public sector. But the socioeconomic-political structures are such that the government is not able to raise enough resources from taxes, borrowings from the public and profits of public-sector undertakings to meet rapidly-growing public consumption expenditure, waste and corruption, and also save enough for investment.

Under popular pressure, there is excessive dependence on 'deficit financing' (or borrowing from the central bank) which results in excess increases in the supply of money year after year. Thus, though the latter may be the proximate cause of inflation, one should not stop at saying only this much and must go to the operation of forces which tend to generate such excess increases in the supply of money. The resources-gap in the private sector puts further pressure on the institutional mechanism leading to the excess expansion of money supply and bank credit (Krishnaswamy, 1976).

2. Food Bottleneck:

Due to various structural factors, such as the defective system of land ownership and tenancy, technological backwardness and low rate of investment in agriculture, obtaining in LDCs, the domestic supply of food does not keep pace with increase in the demand for food coming from increasing population and urbanization.

The extreme dependence of agriculture on weather produces acute shortage of food from time to time due to drought, wide-spread floods, etc. In years of food shortages prices of food grains rise very fast, boosted further by speculative hoarding of food grains by traders. Food grains being the key wage-good, increase in their prices tends to raise other prices as well.

Therefore, some economists consider food grain prices the kingpin of the whole structure of prices in LDCs. and analyze their behaviour separately (Pandit, 1978).

3. Foreign Exchange Bottleneck:

The industrial development of the LDCs requires heavy import bill on account of import of capital goods, essential raw materials and semi-manufactured goods, and in several cases also import of food grains and other consumer goods. Since 1973, due to periodic hefty increases in the price of oil, the import bill of oil-importing LDCs has been shooting up further. But due to low exportable surplus, restrictive trade practices the world over, and relatively poor competitive power of the exports of the LDCs, their export earnings do not increase as fast. Therefore, most of the time the LDCs face serious shortages of foreign exchange on their trade account. So, the domestic availability of goods in short supply cannot be easily improved through imports, the prices of such goods increase, and the increase spreads to other prices.

In Latin American countries, periodic devaluations of currencies to correct overvaluations so as to improve foreign exchange position have led inevitably to rise in domestic prices, which again overvalues their currencies and necessitate their further devaluation.

4. Infrastructural (Physical) Bottlenecks:

Due to resources and foreign exchange gaps, rampant inefficiency and corruption, and faulty planning and plan implementation, most LDCs have come to face severe infrastructural bottlenecks in the fields of power and transport. This holds back the development in other sectors, creating under-utilised capacity in the economy, which, in turn, discourages further investment in the economy.

Since most of the infrastructural facilities lie in the public sector, and due to the resources gap already considered, the government is not in a position to devote enough resources for adequate growth of these facilities; the rate of development of the entire economy gets arrested. Therefore, even small increases in expenditure get converted into excess demand pressures and generate inflation.

5. Other Structural Factors:

It has also been said that capitalists in LDCs do not possess adequate spirit of enterprise, adventure, and innovation and that they prefer safe and conventional investments. Also, merchant capital is still relatively strong as compared to industrial capital.

Socially unproductive private investments in land, precious metals, etc. fritter away a sizeable part of investible resources. These behaviour patterns hold back growth and prepare the ground for inflationary forces to operate successfully. According to the structural approach to inflation, the above factors and similar other structural features of LDC best explain inflation in that country.

2.2 Empirical Literature

Literature on the effect of remittance mostly focuses on the exchange rate(i.e ''Dutch Disease '' and terms of trade issues Adelman and Teylor (1992), also Balderas and Nath (2008) pointed out that through their direct and indirect effects on the aggregate demand remittance may have effect on inflation.

Remittance is spent partly on consumption and partly on investment. The direct effect of remittance on aggregate demand is resulted by the increase in consumption expenditure by the receiving household.

In the case of Mexico, Durand .et .al., (1996) find that almost three quarters of the total reported remittance are spent on consumption. Large proportion of wage earners in America, Middle East and Europe are mostly member of lower strata.

Aggregate demand could also increase if the money is spent on investment and resulted in demand pull inflation. Empirical evidence on several countries reveals that a small proportion of remittance spent on investment yields capital formation.

The large portion is spent on consumption (Martin, 1991 and taylor et al., 1996).However a good number of studies shows that remittance significantly affects saving and investment though it has inflation impact on some sectors of countries economy (McCormic and Wuhab, 2001; Dustman and Kirchkamp, 2001;Kazi, 1989).

In addition to increasing aggregate demand through consumption and investment ,it could increase reservation wage which could result in inflation(Filter, 1987;looney 1998).Aumedo –Dornates and Pozo(2004),Bourdet and Falck(2006).lopez, mollina bussolo(2007),Jansen,Naufal and Vacaflores (2007) and Narayan and Mishra(2011) shows that an increase in remittance results in an increase in inflation.

Katseli and Glystos(1986) on the study conducted on Greece, remittance negatively affects inflation. The study conducted on 21 small open economies Bol,Lopez and Reyes(2012) have found out that under fixed exchange regime an increase in remittance resulted in an inflation while in flexible exchange rate regime it has decreased.

According to Acosta, Pablo A.; Lartey, Emmanuel K. K.; Mandelman, Federico S.(2009) remittances result in a decrease in the labor supply which leads to increase in production costs of the non-tradable sector, which is relatively labor intensive. This in turn results in rising non tradable prices which is consistent with real exchange rate appreciation, and consequently creates an expansion of the non-tradable sector at the expense of the tradable sector.

Annual average national headline inflation at the end of fiscal year 2013/14 was 8.1 percent. Annualized food inflation was 5.9 percent. Similarly, annual average non-food inflation registered stood at 10.6 percent. (National bank of Ethiopia, 2013/14)

For any government one of the most urgent issues is to stabilize the price and maintain a price level within the limits of purchasing power of the common people .It is vital because price instability yields a lot of economic and political distortion which hinder overall development of a country. Therefore it is important for policy makers to pay special attention to this issue.

The impact of remittance on inflation can be viewed from three different angles: namely appreciation of exchange rate, increasing money supply and balance of payment. Remittance affects the price level through spending effect.

According to the Salter-Swan-Corden-Dornbusch paradigm remittances could cause a real exchange rate appreciation via rising domestic prices. More importantly, the extent of the effect of a rising level of remittances on domestic prices will depend on the country's exchange rate regime.

As per the study of Reinhart and Rogoff (2004), different exchange rate regimes would result in different effects on macroeconomic variables. Under a fixed exchange rate regime, for instance, an increase in remittances will move resources from the tradable to the non-tradable sector and this result in an increase in the price level. This will Result in an increase in the price level. Since the exchange rate is fixed, the country cannot adjust its International relative prices after a negative shock to the tradable sector. The nominal depreciation is, thus, prevented, and as a result, the tradable output contracts and the price level rises. On the other hand, under a flexible exchange rate regime, since international relative prices can be adjusted following a large inflow of remittance, the resulting effect will be a rising price.

Acosta, Mandelman, and Lartey (2007) develop a micro-founded dynamic stochastic general equilibrium model that can explain the increasing price level when remittance is high. They consider a transmission mechanism: an increase in the household income (due to remittances) results in a decrease in the labor supply. A shrinking labor supply is associated with higher wages in terms of the price of the tradable output. This in turn leads to higher production costs, contributing to a further contraction of the tradable sector. Both the real exchange rate and the ratio of tradable to non-tradable output therefore induce high spending and resource movement. This can potentially result in an increase in inflation.

Obstfeld and Rogoff (1996) contend that a positive transfer of resources to a country erodes its competitiveness in the global market because transfers lead to an appreciation of the real exchange rate. This implies that resource transfers generate inflation.

When large inflows of foreign exchange are remitted by expatriates to their home country, the conversion of this foreign exchange into domestic currency raises the money supply. If this is absorbed into productive sectors (or capital investment), then it goes into consumption expenditure, fuelling inflation. Remittances also boost real wealth, which stimulates consumption expenditure. This creates short-run excess demand, which drives up the price level.

According to Paresh K. Seema A. Garika M (2011) on the study conducted on developing countries through using different models they found fairly consistent evidence that remittances across the bulk of the models had a positive and statistically significant effect on the inflation rate. This implies that remittances generate inflationary pressures in developing countries.

Remittances to Sub-Saharan Africa (SSA) have increased steadily in recent decades and are estimated to have reached about $32 billion in 2013.
Although smaller than the official development assistance and foreign direct investment inflows, remittances constitute important resource inflows to the region.

In 2012 remittances accounted for about 4 percent of the GDP of a typical country in Sub-Saharan Africa with consistent data on official remittances inflows, and accounted for over 5 percent of the GDP in about ten of the countries in the region. The magnitude is sizeable even in some of the larger countries.

For instance, recorded remittances to Nigeria amounted to about 8 percent of GDP in 2012, the corresponding figure being about 10 percent for Senegal. The importance of remittances is particularly evident in some of the smaller countries of the region. In Lesotho and Liberia, for instance, remittances account for over 20 percent of the GDP.

The true size of remittances is believed to be substantially higher given that officially reported figures ignore remittances transferred through informal channels. (Gemechu A.Maria S. Martinez P, 2014)

As per the report from World Bank report Remittances to Sub Saharan Africa (SSA) are estimated to have increased by 2.2 percent (to $32.9 billion) in 2014, after a sluggish 0.9 percent growth in 2013. Nigeria alone accounts for around two-thirds of total remittance inflows to the region, but its remittances are estimated to have remained flat, at roughly $21 billion in 2014. The regional growth in remittances in 2014 largely reflected strong growth in Kenya (10.7 percent), South Africa (7 percent) and Uganda (6.7 percent).Ethiopia is among the countries issuing Diasporas bond.

It is now widely recognized that remittance flows are large, growing, and important for many economies. Central banks in recipient countries struggle with how best to deal with these flows while researchers try to understand their effects in general.

The critical questions involved turn on whether these flows are inflationary, pro- or counter-cyclical, and whether or not they generate relative price changes, causing a reallocation of domestic resources.

Different studies have been made to extract the causes of inflation in Ethiopia. Among the researches made, the following are worth to mention regarding their importance to the study I want to conduct.

As the short run and long run model estimations conducted indicated that the determinants of inflation in Ethiopia vary across sectors (food and nonfood) as well as over time horizons.

The most important determinants of inflation in the long run are mainly domestic monetary developments while cost-push factors are the force behind short run inflation (Alemayehu G, 2008)

According to Yohaness A (2010) the long run food and non-food price are determined by international price. International relative price is one factor that causes inflation of course the effect being different depending on exchange rate. As mentioned in the above explanation, remittance has affected international food and Nonfood relative prices.

According to Teshome A (2011) the source of inflation in Ethiopia is due to the higher demand growth in the economy. This type of source of inflation is called demand-pull inflation. Demand is highly influenced by the change in consumption spending which remittance is of cause having spending effect.

Chapter Three

4. Data Source, Methodology and Model Specification

4.1 Data Source and Type

The presence of sufficient and accurate economic data is very crucial for any economic studies and policy analysis. In this regard this study used macroeconomic time series data from different source. Secondary data for this study was obtained from national bank of Ethiopia (NBE), Ministry of Finance and Economic Development (MoFED), Ethiopia Economics Association and World Bank (WB).the study was conducted using quarterly data from first quarter 1991 to fourth quarter of 2014.

4.2 Methodology

With regard to methodology, the study conducted used Granger causality, Co-integration, Vector Error correction mode and impulse responses function under unrestricted Vector Autoregressive environment.

Causality is full of controversies in economic literatures. At one extreme are people saying everything cause everything and at the other extreme are those who deny causality whatsoever. As one author puts it events in the past can cause events to happen today and Future events cannot affect the present one. Unlike other regression, the regression involving time series data means causality between variables.

In the recent theoretical development co-integration has become important in terms of modeling macro econometric data. Vector autoregressive model better reflect the short run and long run relationship between variable.

Likewise impulse response function also shows the long run and short run relationships among variables in the model.

Testing procedures have been developed by Johansen (1988) for multiple equation system. Appropriate critical values for this study have been computed using MacKinnon (1991).

The use of Vector Error Correction model (VECM) in determining inflation determinant is advantageous to employ VECM as it captures short run dynamism of inflation given the long run equilibrium impact. In addition to this using VECM will help to avoid spurious relationship and Multicolinearity which otherwise affect the reliability of econometric analysis.

4.2.1 Stationary and non-stationary series

The standard classical assumption in the applied economic analysis is the assumption of stationary. According to Damador N.Gujarati,Dawn C.Porter,Sangeeth Gunasekar (2009) A stochastic process is said to be stationary if its mean and variance are constant over time and the values of covariance between the two time periods depends only on the distance or gap between two time periods and not the actual time at which the covariance is computed.

A non-stationary time series will have a time varying mean or a time varying variance or both. If a time series is non-stationary we can study its behavior only for the time period under consideration as result it is impossible to generalize it to the other periods.

Using no stationary data for classical estimation could lead into spurious relation which means the results obtained suggest statistically significant relationships between variables in regression when in fact all that is obtained is evidence of contemporaneous correlation rather than meaningful causal relation.

Hence the non-stationary nature of the data has to be removed if it existed before conducting any economic work. So various stationary test has be implemented to safeguard the analysis from spurious relationship.

Testing for stationary

Augmented Dickey Fuller (ADF) Test

A unit root test using the Augmented Dickey Fuller Test is a test that is used to check whether the series has a unit root or not Using different forms namely random walk with drift, without drift or both deterministic and stochastic trend. The null hypothesis is that the time series has a unit root or non-stationary and the alternative hypothesis is that the series has no a unit root or it is stationary. If the series found to have a unit root it has to be differenced once to have stationary series.

4.2.2 Causality

Granger Causality

After testing for stationary the next step is to see the causality between variables of the model. In a regression of Y on other variables (including its own past values) if past or lagged value of X significantly improves the prediction of Y, then one can say that X causes Y.

A similar definition is applied if Y causes X (Damador N.Gujarati,Dawn C.Porter,Sangeeth Gunasekar (2009)). The test used is granger causality test. The null hypothesis is that the variable under consideration doesn't granger causes the other variable. And the alternative will be the variable under consideration granger causes the other variable.

4.2.3 Co-integration and Error Correction

Co-integration is a theoretical counter part of long run relationship between two or more variables in the model. Variables cannot move ''too far'' away from each other as compared to the case of lack of co-integration where variables have no long run link .Co-integration technique provides a means of identifying and hence avoids spurious regression generated by non-stationary series. The test used will be a Johansen Co-integration test. If at least a single equation finds to be co-integrated then we can run the vector error correction Model.

An important theorem, known as the Granger representation theorem, states that if two variables Y and X are co-integrated, the relationship between the two can be expressed as Error Correction Model. The Vector error correction Model (VECM) is means of reconciling the short run behavior of an economic variable with its long run behavior.

4.3 Model Specification

Consumer price index

The consumer price index (CPI) is a measure that examines the weighted average of prices of a basket of consumer goods and services, such as transportation, food and medical care. The CPI is calculated by taking price changes for each item in the predetermined basket of goods and averaging them; the goods are weighted according to their importance. Changes in CPI are used to assess price changes associated with the living. Consumer price index is the price level in one economy.it is expected that it will be affected by those factors listed below. It is expected to be influenced by remittance, gross domestic product and Government recurrent expenditure.

Remittance (private individual remittance)

Personal remittances comprise personal transfers and compensation of employees. Personal transfers consist of all current transfers in cash or in kind made or received by resident households to or from nonresident households. Personal transfers thus include all current transfers between resident and nonresident individuals. Compensation of employees refers to the income of border, seasonal, and other short-term workers who are employed in an economy where they are not resident and of residents employed by nonresident entities. Remittance will add up more to domestic consumer's income or will provide extra ability to purchase goods and service produced domestically. Remittance (private individual remittance) expected to influence price positively.

Gross Domestic Product

Gross domestic product (GDP), generally defined as the market value of goods and service within the sovereign territory of a country. Gross domestic product shows the level of output produced in a fiscal year. The level of output will determine the level of price within a country. GDP as variable included because commonly used as an indicator of the economic health of a country, as well as a gauge of a country's standard of living. Therefore gross domestic product expected to negatively affect inflation.

Government recurrent expenditure (GRE)

Recurrent expenditure refers to payments made by governments or organizations for all purposes except capital costs. Recurrent expenditure includes payments made on goods and services (wages and salaries, employer contributions) as well as interest, transfers and subsidies.

Recurrent expenditure will affect aggregate demand through consumption. If individuals' income increases, the demand for consumption will increase. Unless GDP (national output) increase along with the increase in income what happens to price level will be upward pressure. Extra income will be added up or reflected on price level.

Chapter Four

5. Empirical Analysis and Results

5.1 Unit Root Tests

Among the properties of time series, unit root nature of time series data is mandatory to be checked whether the relationship between the variables is spurious or not. To see stationery or non-stationery property of variables, Augmented Dickey -Fuller test applied. The ADF test is applied based on model with intercept at level. The null hypothesis is that there is a unit root in our observed time series against the alternative hypothesis that the process is stationary. The following table reports the ADF test for the variables at level with intercept. The estimated statistic show that at 10% significant level ,the null hypothesis of unit is rejected because the ADF statistics exceed all the critical values for all variables. This shows that the variables are free from unit root at 10 % significant level

Table 2: Results of Augmented Dickey-Fuller (ADF) Unit Root Test

Variable	t-ADF	Critical Value
CPI	2.857368	-2.58268
GDP	3.291624	-2.58474
PT	5.413999	-2.58302
Re	5.819845	-2.58374

Source: Own Computation

*denotes significance at 1% level.

5.2 Lag selection

Optimum lag selection is crucial both in restricted and unrestricted VAR model. Four variable VAR model used to determine the optimum lag length. Based on LR, FPE, AIC, SC and HQ VAR lag selection criteria the lag length for the model has come to be eight lag. As can be seen from the table there is unique lag length chosen by all the criteria's mentioned.

Table 2: VAR Lag Order Selection Criteria

Lag	LR	FPE	AIC	SC	HQ
0	NA	3.49E+23	65.56067	65.67032	65.60493
1	586.4299	5.84E+20	59.16793	59.71614	59.38919
2	82.44179	3.07E+20	58.52248	59.50926	58.92075
3	76.72035	1.65E+20	57.89916	59.32452	58.47445
4	53.10893	1.17E+20	57.53887	59.4028	58.29117
5	62.81651	6.92E+19	57.00195	59.30446	57.93126
6	46.06908	5.04E+19	56.66218	59.40326	57.7685
7	58.67824	2.91E+19	56.07861	59.25825	57.36194
8	54.18138*	1.72e+19*	55.50810*	59.12632*	56.96845*

Source: Own Computation

* indicates lag order selected by the criterion

LR: sequential modified LR test statistic (each test at 5% level)

FPE: Final prediction error

AIC: Akaike information criterion

SC: Schwarz information criterion

HQ: Hannan-Quinn information criterion

5.3 Causality between Inflation and private transfer flow

Theoretically private transfer will affect inflation through increasing money supply and aggregate demand. This study will find out the effect of private transfer on inflation based on data ranging from first quarter of 1991 to fourth quarter of 2014.To run a VAR model there must be causality among variables of interest. The direction of causation between CPI and private transfer has to be determined before going any further to see the relationship. For this purpose Granger causality test used to determine the direction of causation.

As per the result of the test there is unidirectional causality from private transfer to inflation at 5% level of significance and the reverse is not true.

Table 3: Granger Causality

Dependent variable: CPI			
Excluded	Chi-sq	Df	Prob.
GDP	47.10591	8	0.0000
Remittance(PT)	54.23291	8	0.0000
GRE	13.1803	8	0.1058
All	107.3501	24	0.0000
Dependent variable: Remittance(PT)			
Excluded	Chi-sq	Df	Prob.
CPI	12.55804	8	0.1280
GDP	91.55766	8	0.0000
GRE	16.44387	8	0.0365
All	199.3515	24	0.0000

Source: Own Computation

5.4 Vector error correction model

Before running VECM model there should be co-integration among variable. As it is prerequisite for running the model there should be a test to see whether the model is co-integrated or not. To identify whether the variables are co-integrated or not we run a test of Johansen co-integration. As all the variables are stationery and integrated with the same order, the co-integration analysis is performed to infer the long run relationship among variables. Johansen Co-integration test applied to vector autoregressive version. The table below reports the trace statistic and Maximum Eigen value of unrestricted co-integration rank test among variables under study to identify number of co-integrating vectors assuming a linear deterministic trend and an optimum lag length of eight as determined by all lag selection criteria.

Both trace and maximum Eigen value rejects the null hypothesis of no co-integrating relationship among variables. This result reveals the existence of long run relationship between variables of the model.

Table 4: Unrestricted rank co-integration test

Hypothesized No. of CE(s)	Trace Statistic	0.05 Critical Value	Prob.**	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None *	80.0114	47.8561	0.000	47.6813	27.5843	0.000
At most 1 *	32.3302	29.7971	0.0250	18.0452	21.1316	0.128
At most 2	14.2849	15.4947	0.0754	14.2531	14.2646	0.050
At most 3	0.031854	3.8415	0.8583	0.03185	3.8415	0.858

Source: Own Computation

Trace test indicates 2 co-integrating equation (s) at the 0.05level

Max-eigenvalue test indicates 1 co-integrating equation(s) at the 0.05 level

* denotes rejection of the hypothesis at the 0.05 level

As we have seen on the above test for co-integration the Johansen Co-integration test have shown that the variables are co-integrated. When variables in the VAR model are co-integrated, then the model shows long run relationship among variables. VECM model show both the long run and short run relationship among variables. The co-integrating coefficient has a positive sign and the P-value shows that it is insignificant. The model to have long run relationship the coefficient has to be negative in sign and significant P-value. This shows that there is no long run relationship among variables.

To check significant short run impact of gross domestic product, private transfer and recurrent expenditure on inflation, the standard Wald test applied to see joint significance of coefficient of these variables. The null hypothesis is the coefficients for each variable namely GDP, PT and GRE are jointly zero.

As the table below reports the null for gross domestic product and private transfer are rejected at 5 % significance level.

The probability of both F-test and Chi-square test seems to suggest that recurrent expenditure is above 5%. This is equivalent to saying that GDP and PT have significant impact in the short run while recurrent expenditure is not.

Table 5: Results of Wald Test

Variables	**Wald Test**								
	GDP			**PT**			**RE**		
Test Statistic	Value	df	Probability	Value	df	Probability	Value	df	Probability
F-statistic	5.526	(8,57)	0.0000	6.6110	(9, 57)	0.0000	1.773	(8,57)	0.1016
Chi-square	44.209	8	0.0000	59.499	9	0.0000	14.182	8	0.0771

Source:Own Computation

The model was checked for serial correlation based on Breusch-Godfrey Serial Correlation LM Test. The null hypothesis is that there is no serial correlation. As per the report on the table below the probability value is above 5% which means the null hypothesis of no serial correlation is accepted. Hence the model is free from serial correlation.

Table 6: Breusch-Godfrey Serial Correlation results.

Breusch-Godfrey			
F-statistic	0.980875	Prob. F(8,49)	0.4621
Obs*R-squared	12.56138	Prob. Chi-Square(8)	0.1279

Source:Own Computation

The model was checked for possible Heteroskedasticity .The null hypothesis for the following test is that there is no Heteroskedasticity in the model. As per the report of the following table the probability value is higher than 5% which means the null hypothesis will be accepted and the model is free from Heteroskedasticity.

Table: 7 Test result for Heteroskedasticity

Heteroskedasticity Test: ARCH			
F-statistic	0.693952	Prob. F(8,74)	0.6957
Obs*R-squared	5.792267	Prob. Chi-Square(8)	0.6705

Source:Own Computation

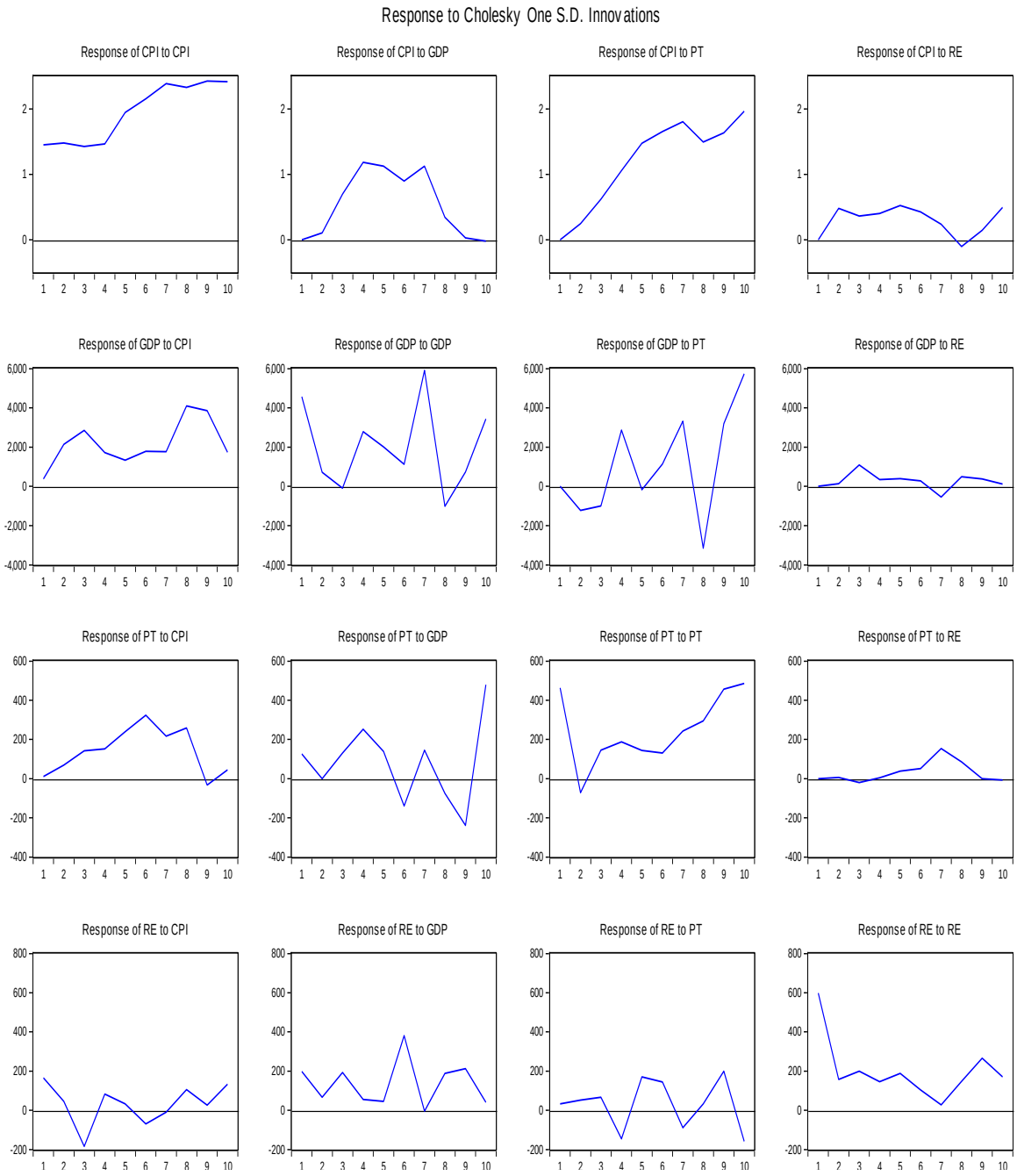
5.5 Impulse response function in a VECM environment

Impulse response function is a tool that shows the dynamic relationship among variables in the VAR model. It shows the response of each variable to an identified shock. The output for impulse response function presented using the following graph and it has solid lines to depict the response.

If the solid line lies on confidence interval of zero, then the shock in the variable will not have a significant impact on the other variable. By taking this fact into account the following impulse response function explained.

The first column displays the response of each variable to one standard deviation shocks to CPI equation residual. The first graph shows a significant positive response of CPI to CPI residual. Response of CPI to GDP shock is significant and positive between the second and eighth lag. The response of CPI to PT shock which is the main goal of this study is positive and significant. However the response of CPI to RE was insignificant.

Graph: impulse response function under VECM Environment



Chapter Five

5. Conclusion and Recommendations

5.1 Conclusion

Over the past twenty four years remittance played crucial role in the economic development of Ethiopia and are expected to remain so over the coming years. Remittance (private transfer) plays a significant role in poverty alleviation and economic development.

Private individual remittance exceeds the foreign currency that the county obtains from export of goods. The central focus of this study is to see the effect of private transfer on inflation from first quarter of 1990 to the fourth quarter of 2014 using vector autoregressive model along with Vector error correction model. The result of the study reveals that there is significant positive effect that goes from private transfer to inflation or there is theoretically hypothesized causation between private transfer and inflation in the short run. However there is no long run causation that goes from private transfer to inflation.

The results of Z.S.Khan and S.Islam (2013) study on Bangladesh differ from the results of this study. Using yearly data over the 1972-2010 periods in Bangladesh; they found that there is unidirectional positive effect causation from remittance to CPI in the long run. The cause of this difference could be because the exchange rate and money supply has not been considered in this study. Though the variables taken are not the same study result reveals similar causation like the study made on Mexico by Balderas and Nath(2008).

5.2 Recommendation

As per this study remittance (private individual remittance) have significant impact on the domestic price level. Private individual transfer which is used as a proxy for remittance in this study will cause inflation domestically through increasing consumption demand. Any inflation controlling measure should take into account the transmission mechanism by which remittance affect inflation.

Impact of remittance has to be studied in line with exchange rate regimes a country pursue to see the level of effect on the overall price level. Depending on the exchange regime that a country follows, capital inflow from workers transfer has different level of effect. In either case though there is some variation, there will be upward pressure in price level. In Ethiopia the exchange regime we follow is a managed floating kind of exchange rate regime which is an amalgam of the extremes. Policy makers should consider exchange rate regime effect before any policy prescription to the problem.

Money supply is one of the transmission mechanisms for remittance to impact price level. Any economic growth plan has money supply growth plan that goes with the targeted growth. This money supply growth plan should take in to account factors other than domestic to the proposed growth target. The level of remittance that Ethiopia currently receiving is very high and stable to impact macroeconomic variable that are key to economic stability. It is by far larger than earning from foreign trade which is dependent on few agricultural exports. The domestic currency equivalent that has to be pumped into the economy is must to consider for any money supply plan and inflation controlling measure.

In the balance of payment deficit, the role that remittances play is worth to mention.

When a country is under an extended balance of payment deficit there could a possibility for the policy change especially to scale up export earnings.

This type of policy measure could have impact on price rise on imported goods domestically in addition to increasing money supply due to devaluation. The policy mix should be chosen considering the above facts.

The trend of outmigration from Ethiopia is increasing from time to time. The past trend seems to suggest that the outflow doesn't seem to decelerate let alone to stop it. As a result of high unemployment level domestically or for better job opportunity, Ethiopia seems to keep supplying work force to Europe and Middle East. This consistent and ever increasing labor outflow will have its impact on domestic labor supply. Lower labor supply will increase price level through an increase in wage rate. Likewise the foreign currency inflow will again pressurize price level through increasing the spending capacity of domestic citizens. The choice for policy package has to be made considering the above factors.

Supply of domestic consumption goods and service has to be augmented to support the growth in money supply resulting from remittance. Money supply growths will a negative impact on standard of living as far as domestic production is inelastic. If domestic production is in pace with the money supply growth the upward pressure on price level remain minimal. Hence there should be policy measures that lift domestic production of goods and service.

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Annex: 1

Vector Error Correction Estimates

Date: 02/16/16 Time: 00:23

Sample (adjusted): 1992Q2 2014Q4

Included observations: 91 after adjustments

Standard errors in ( ) & t-statistics in [ ]

Cointegrating Eq:	CointEq1
CPI(-1)	1.000000
GDP(-1)	-0.000838
	(0.00030)
	[-2.76115]
PT(-1)	0.008458
	(0.00340)
	[2.48792]
RE(-1)	0.002110
	(0.00193)
	[1.09198]
C	-42.93175

Error Correction:	D(CPI)	D(GDP)	D(PT)	D(RE)
CointEq1	0.007251	545.5156	50.35977	5.553050
	(0.03384)	(106.771)	(11.1814)	(15.2160)
	[0.21428]	[5.10923]	[4.50391]	[0.36495]

D(CPI(-1))	-0.075304	866.9446	-3.330669	-5.062306
	(0.12278)	(387.368)	(40.5664)	(55.2043)
	[-0.61334]	[2.23804]	[-0.08210]	[-0.09170]
D(CPI(-2))	-0.050027	1143.181	48.71197	-182.5963
	(0.11075)	(349.426)	(36.5930)	(49.7971)
	[-0.45171]	[3.27159]	[1.33118]	[-3.66680]
D(CPI(-3))	-0.087267	694.6420	14.33251	8.355998
	(0.12566)	(396.460)	(41.5185)	(56.5000)
	[-0.69448]	[1.75211]	[0.34521]	[0.14789]
D(CPI(-4))	-0.175238	66.63839	-34.97203	-26.79927
	(0.12156)	(383.513)	(40.1627)	(54.6549)
	[-1.44163]	[0.17376]	[-0.87076]	[-0.49034]
D(CPI(-5))	-0.191023	-666.7013	-0.166865	-83.85286
	(0.12218)	(385.495)	(40.3703)	(54.9373)
	[-1.56341]	[-1.72947]	[-0.00413]	[-1.52634]
D(CPI(-6))	0.051145	-358.6346	21.61747	-104.9346
	(0.12197)	(384.817)	(40.2993)	(54.8407)
	[0.41933]	[-0.93196]	[0.53642]	[-1.91344]
D(CPI(-7))	-0.032726	46.20753	119.2875	-72.77544
	(0.13845)	(436.823)	(45.7455)	(62.2522)
	[-0.23637]	[0.10578]	[2.60763]	[-1.16904]

D(CPI(-8))	0.059718	61.67581	19.39246	-94.69457
	(0.13685)	(431.779)	(45.2173)	(61.5333)
	[0.43637]	[0.14284]	[0.42887]	[-1.53892]
D(GDP(-1))	-1.81E-05	-0.320915	0.045753	0.005103
	(3.7E-05)	(0.11713)	(0.01227)	(0.01669)
	[-0.48810]	[-2.73993]	[3.73011]	[0.30572]
D(GDP(-2))	9.86E-05	-0.362080	0.067973	0.029025
	(4.6E-05)	(0.14588)	(0.01528)	(0.02079)
	[2.13167]	[-2.48198]	[4.44926]	[1.39610]
D(GDP(-3))	0.000124	0.010805	0.106217	0.021131
	(5.0E-05)	(0.15742)	(0.01649)	(0.02243)
	[2.49125]	[0.06864]	[6.44312]	[0.94193]
D(GDP(-4))	5.34E-05	0.124160	0.103717	0.016178
	(5.8E-05)	(0.18351)	(0.01922)	(0.02615)
	[0.91828]	[0.67659]	[5.39704]	[0.61863]
D(GDP(-5))	-7.66E-05	0.098679	0.022131	0.078659
	(6.4E-05)	(0.20180)	(0.02113)	(0.02876)
	[-1.19684]	[0.48899]	[1.04719]	[2.73511]
D(GDP(-6))	-0.000171	0.823131	-0.018776	0.036668
	(7.3E-05)	(0.22897)	(0.02398)	(0.03263)
	[-2.35777]	[3.59493]	[-0.78302]	[1.12374]

D(GDP(-7))	-0.000227	-0.000849	-0.077993	0.045358
	(6.7E-05)	(0.21227)	(0.02223)	(0.03025)
	[-3.37472]	[-0.00400]	[-3.50855]	[1.49942]
D(GDP(-8))	-0.000269	0.557301	-0.121152	-0.019379
	(6.4E-05)	(0.20185)	(0.02114)	(0.02877)
	[-4.19900]	[2.76097]	[-5.73137]	[-0.67369]
D(PT(-1))	0.000410	-7.281943	-1.581253	0.045926
	(0.00049)	(1.53707)	(0.16097)	(0.21905)
	[0.84063]	[-4.73756]	[-9.82349]	[0.20966]
D(PT(-2))	0.001203	-10.06381	-1.301620	0.157085
	(0.00062)	(1.96236)	(0.20550)	(0.27966)
	[1.93378]	[-5.12843]	[-6.33379]	[0.56170]
D(PT(-3))	0.002391	-5.147029	-0.817841	-0.095803
	(0.00071)	(2.23398)	(0.23395)	(0.31837)
	[3.37630]	[-2.30397]	[-3.49580]	[-0.30092]
D(PT(-4))	0.003956	-6.517893	-0.469387	0.342796
	(0.00080)	(2.50839)	(0.26269)	(0.35747)
	[4.97609]	[-2.59843]	[-1.78687]	[0.95894]
D(PT(-5))	0.002758	-6.294334	-0.632149	0.670920
	(0.00093)	(2.94594)	(0.30851)	(0.41983)
	[2.95404]	[-2.13661]	[-2.04905]	[1.59808]

D(PT(-6))	0.001262	-5.910240	-1.170040	0.746533
	(0.00093)	(2.93873)	(0.30775)	(0.41880)
	[1.35452]	[-2.01115]	[-3.80187]	[1.78254]
D(PT(-7))	-0.000164	-14.34283	-1.377637	0.627741
	(0.00085)	(2.69733)	(0.28247)	(0.38440)
	[-0.19227]	[-5.31742]	[-4.87706]	[1.63304]
D(PT(-8))	-0.001148	-7.003905	-0.714701	0.278139
	(0.00070)	(2.21568)	(0.23203)	(0.31576)
	[-1.63459]	[-3.16106]	[-3.08016]	[0.88086]
D(RE(-1))	0.000787	-0.933502	-0.095972	-0.748463
	(0.00031)	(0.98726)	(0.10339)	(0.14070)
	[2.51604]	[-0.94555]	[-0.92826]	[-5.31973]
D(RE(-2))	0.000437	-0.338923	-0.169881	-0.485756
	(0.00039)	(1.24543)	(0.13043)	(0.17749)
	[1.10689]	[-0.27213]	[-1.30251]	[-2.73684]
D(RE(-3))	0.000374	-1.537210	-0.237716	-0.260092
	(0.00042)	(1.32683)	(0.13895)	(0.18909)
	[0.89023]	[-1.15855]	[-1.71080]	[-1.37550]
D(RE(-4))	0.000381	-1.828058	-0.214223	-0.239004
	(0.00042)	(1.31477)	(0.13769)	(0.18737)
	[0.91368]	[-1.39041]	[-1.55587]	[-1.27558]

D(RE(-5))	0.000119	-2.206112	-0.175679	-0.280411
	(0.00042)	(1.32045)	(0.13828)	(0.18818)
	[0.28523]	[-1.67073]	[-1.27044]	[-1.49013]
D(RE(-6))	1.44E-05	-2.989963	0.037562	-0.339610
	(0.00040)	(1.27667)	(0.13370)	(0.18194)
	[0.03556]	[-2.34200]	[0.28095]	[-1.86661]
D(RE(-7))	-0.000577	-0.827389	0.215103	-0.278080
	(0.00038)	(1.19553)	(0.12520)	(0.17038)
	[-1.52378]	[-0.69207]	[1.71808]	[-1.63216]
D(RE(-8))	-0.000151	0.061359	0.038809	0.068457
	(0.00031)	(0.99038)	(0.10372)	(0.14114)
	[-0.48237]	[0.06195]	[0.37419]	[0.48503]
C	0.233832	13090.19	1271.774	275.7992
	(0.80604)	(2543.11)	(266.322)	(362.421)
	[0.29010]	[5.14732]	[4.77532]	[0.76099]
R-squared	0.770072	0.967278	0.909557	0.931032
Adj. R-squared	0.636955	0.948334	0.857195	0.891103
Sum sq. resids	120.0966	1.20E+09	13110766	24279520
S.E. equation	1.451537	4579.666	479.5972	652.6534
F-statistic	5.784951	51.05966	17.37057	23.31715
Log likelihood	-141.7468	-874.9118	-669.5763	-697.6133
Akaike AIC	3.862567	19.97608	15.46321	16.07941
Schwarz SC	4.800690	20.91421	16.40134	17.01754

Mean dependent	1.206264	3193.398	241.8351	243.5630
S.D. dependent	2.409062	20148.04	1269.125	1977.761

Determinant resid covariance (dof adj.)	3.37E+18
Determinant resid covariance	5.19E+17
Log likelihood	-2372.455
Akaike information criterion	55.21879
Schwarz criterion	59.08165

Annex: 2

Dependent Variable: D(CPI)

Method: Least Squares

Date: 02/20/16 Time: 17:36

Sample (adjusted): 1992Q2 2014Q4

Included observations: 91 after adjustments

D(CPI) = C(1)*(CPI(-1) - 0.000837798077641*GDP(-1) + 0.008458218523

31*PT(-1) + 0.00211040056604*RE(-1) - 42.9317453478) + C(2)

*D(CPI(-1)) + C(3)*D(CPI(-2)) + C(4)*D(CPI(-3)) + C(5)*D(CPI(-4)) +

C(6)*D(CPI(-5)) + C(7)*D(CPI(-6)) + C(8)*D(CPI(-7)) + C(9)*D(CPI(-8))

+ C(10)*D(GDP(-1)) + C(11)*D(GDP(-2)) + C(12)*D(GDP(-3)) + C(13)

*D(GDP(-4)) + C(14)*D(GDP(-5)) + C(15)*D(GDP(-6)) + C(16)*D(GDP(

-7)) + C(17)*D(GDP(-8)) + C(18)*D(PT(-1)) + C(19)*D(PT(-2)) + C(20)

*D(PT(-3)) + C(21)*D(PT(-4)) + C(22)*D(PT(-5)) + C(23)*D(PT(-6)) +

C(24)*D(PT(-7)) + C(25)*D(PT(-8)) + C(26)*D(RE(-1)) + C(27)*D(RE(

-2)) + C(28)*D(RE(-3)) + C(29)*D(RE(-4)) + C(30)*D(RE(-5)) + C(31)

*D(RE(-6)) + C(32)*D(RE(-7)) + C(33)*D(RE(-8)) + C(34)

	Coefficien	Std. Error	t-Statistic	Prob.

t

C(1)	0.007251	0.033841	0.214276	0.8311
C(2)	-0.075304	0.122777	-0.613337	0.5421
C(3)	-0.050027	0.110752	-0.451709	0.6532
C(4)	-0.087267	0.125659	-0.694479	0.4902
C(5)	-0.175238	0.121555	-1.441629	0.1549
C(6)	-0.191023	0.122184	-1.563411	0.1235
C(7)	0.051145	0.121969	0.419328	0.6766
C(8)	-0.032726	0.138452	-0.236371	0.8140
C(9)	0.059718	0.136853	0.436365	0.6642
C(10)	-1.81E-05	3.71E-05	-0.488095	0.6274
C(11)	9.86E-05	4.62E-05	2.131666	0.0374
C(12)	0.000124	4.99E-05	2.491246	0.0157
C(13)	5.34E-05	5.82E-05	0.918283	0.3623
C(14)	-7.66E-05	6.40E-05	-1.196840	0.2363
C(15)	-0.000171	7.26E-05	-2.357773	0.0218
C(16)	-0.000227	6.73E-05	-3.374717	0.0013
C(17)	-0.000269	6.40E-05	-4.199003	0.0001
C(18)	0.000410	0.000487	0.840626	0.4041
C(19)	0.001203	0.000622	1.933778	0.0581
C(20)	0.002391	0.000708	3.376299	0.0013
C(21)	0.003956	0.000795	4.976089	0.0000
C(22)	0.002758	0.000934	2.954040	0.0046
C(23)	0.001262	0.000931	1.354521	0.1809
C(24)	-0.000164	0.000855	-0.192274	0.8482
C(25)	-0.001148	0.000702	-1.634586	0.1076
C(26)	0.000787	0.000313	2.516038	0.0147
C(27)	0.000437	0.000395	1.106887	0.2730

C(28)	0.000374	0.000421	0.890235	0.3771
C(29)	0.000381	0.000417	0.913680	0.3647
C(30)	0.000119	0.000419	0.285230	0.7765
C(31)	1.44E-05	0.000405	0.035563	0.9718
C(32)	-0.000577	0.000379	-1.523781	0.1331
C(33)	-0.000151	0.000314	-0.482371	0.6314
C(34)	0.233832	0.806045	0.290098	0.7728

R-squared	0.770072	Mean dependent var	1.206264
Adjusted R-squared	0.636955	S.D. dependent var	2.409062
S.E. of regression	1.451537	Akaike info criterion	3.862567
Sum squared resid	120.0966	Schwarz criterion	4.800690
Log likelihood	-141.7468	Hannan-Quinn criter.	4.241041
F-statistic	5.784951	Durbin-Watson stat	2.116174
Prob(F-statistic)	0.000000		

Indira Gandhi National Open University

MCP-001 Project Proposal

IMPACT OF REMITTANCE ON INFLATION IN ETHIOPIA

Tsedeke Digafe

ID1362166

November 2015

Addis Ababa Ethiopia

1. Introduction

In many literatures Inflation refers to a sustained rise in prices across the board, that is, a phenomenon where the average price of all goods is on an increasing trajectory for some stretch of time. Of course, this may be accompanied by changes in relative prices. For the common person, there is something threatening about the phenomenon of inflation, especially on those occasions when the rise in prices of goods is not matched by an equivalent increase in the price of labor.

Annual average national headline inflation at the end of fiscal year 2013/14 was 8.1 percent. Annualized food inflation was 5.9 percent. Similarly, annual average non-food inflation registered stood at 10.6 percent. (National bank of Ethiopia, 2013/14)

For any government one of the most urgent issues is to stabilize the price and maintain a price level within the limits of purchasing power of the common people .It is vital because price instability yields a lot of economic and political distortion which hinder overall development of a country. Therefore it is important for policy makers to pay special attention to this issue.

The impact of remittance on inflation can be viewed from three different angles: namely appreciation of exchange rate, increasing money supply and balance of payment. Remittance affects the price level through spending effect. According to the Salter-Swan-Corden-Dornbusch paradigm remittances could cause a real exchange rate appreciation via rising domestic prices. More importantly, the extent of the effect of a rising level of remittances on domestic prices will depend on the country's exchange rate regime.

As per the study of Reinhart and Rogoff (2004), different exchange rate regimes would result in different effects on macroeconomic variables. Under a fixed exchange rate regime, for instance, an increase in remittances will move resources from the tradable to the non-tradable sector and this result in an increase in the price level. This will Result in an increase in the price level. Since the exchange rate is fixed, the country cannot adjust its International relative prices after a negative shock to the tradable sector. The nominal depreciation is, thus, prevented, and as a result, the tradable output contracts and the price level rises. On the other hand, under a flexible exchange rate regime, since international relative prices can be adjusted following a large inflow of remittance, the resulting effect will be a rising price.

Acosta, Mandelman, and Lartey (2007) develop a micro-founded dynamic stochastic general equilibrium model that can explain the increasing price level when remittance is high. They consider a transmission mechanism: an increase in the household income (due to remittances) results in a decrease in the labor supply. A shrinking labor supply is associated with higher wages in terms of the price of the tradable output. This in turn leads to higher production costs, contributing to a further contraction of the tradable sector. Both the real exchange rate and the ratio of tradable to non-tradable output therefore induce high spending and resource movement. This can potentially result in an increase in inflation.

Obstfeld and Rogoff (1996) contend that a positive transfer of resources to a country erodes its competitiveness in the global market because transfers lead to an appreciation of the real exchange rate. This implies that resource transfers generate inflation.

When large inflows of foreign exchange are remitted by expatriates to their home country, the conversion of this foreign exchange into domestic currency raises the money supply. If this is absorbed into productive sectors (or capital investment), then it goes into consumption expenditure, fuelling inflation.

Remittances also boost real wealth, which stimulates consumption expenditure. This creates short-run excess demand, which drives up the price level.

According to Paresh K. Seema A. Garika M (2011) on the study conducted on developing countries through using different models they found fairly consistent evidence that remittances across the bulk of the models had a positive and statistically significant effect on the inflation rate. This implies that remittances generate inflationary pressures in developing countries.

Remittances to Sub-Saharan Africa (SSA) have increased steadily in recent decades and are estimated to have reached about $32 billion in 2013. Although smaller than the official development assistance and foreign direct investment inflows, remittances constitute important resource inflows to the region. In 2012 remittances accounted for about 4 percent of the GDP of a typical country in Sub-Saharan Africa with consistent data on official remittances inflows, and accounted for over 5 percent of the GDP in about ten of the countries in the region. The magnitude is sizeable even in some of the larger countries. For instance, recorded remittances to Nigeria amounted to about 8 percent of GDP in 2012, the corresponding figure being about 10 percent for Senegal. The importance of remittances is particularly evident in some of the smaller countries of the region. In Lesotho and Liberia, for instance, remittances account for over 20 percent of the GDP. The true size of remittances is believed to be substantially higher given that officially reported figures ignore remittances transferred through informal channels. (Gemechu A.Maria S. Martinez P, 2014)

As per the report from World Bank report Remittances to Sub Saharan Africa (SSA) are estimated to have increased by 2.2 percent (to $32.9 billion) in 2014, after a sluggish 0.9 percent growth in 2013. Nigeria alone accounts for around two-thirds of total remittance inflows to the region, but its remittances are estimated to have remained flat, at roughly $21 billion in 2014.

The regional growth in remittances in 2014 largely reflected strong growth in Kenya (10.7 percent), South Africa (7 percent) and Uganda (6.7 percent).Ethiopia is among the countries issuing diasporas bond.

It is now widely recognized that remittance flows are large, growing, and important for many economies. Central banks in recipient countries struggle with how best to deal with these flows while researchers try to understand their effects in general. The critical questions involved turn on whether these flows are inflationary, pro- or counter-cyclical, and whether or not they generate relative price changes, causing a reallocation of domestic resources.

Different studies have been made to extract the causes of inflation in Ethiopia. Among the researches made, the following are worth to mention regarding their importance to the study I want to conduct.

As the short run and long run model estimations conducted indicated that the determinants of inflation in Ethiopia vary across sectors (food and nonfood) as well as over time horizons. The most important determinants of inflation in the long run are mainly domestic monetary developments while cost-push factors are the force behind short run inflation (Alemayehu G, 2008)

According to Yohaness A (2010) the long run food and non-food price are determined by international price. International relative price is one factor that causes inflation of course the effect being different depending on exchange rate. As mentioned in the above explanation, inflation caused by remittance resulted change in international food and Nonfood relative prices

According to Teshome A (2011) the source of inflation in Ethiopia is due to the higher demand growth in the economy. This type of source of inflation is called demand-pull inflation. Demand is highly influenced by the change in consumption spending which remittance is of cause having spending effect.

3. Statement of the Problem

In developing countries like Ethiopia price level is a big issue that capture public sphere due to its catastrophic consequence on an individual's standard of living and a nations progress at large. Nations aggregate output growth alone doesn't reflect countries progress. In addition to economic growth, distributional aspect of growth has paramount significance on people's lives and poverty reduction. Economic growth without fair distribution of its benefit will widen the ever increasing income inequality. One of the factors affecting people's lives or income distribution is inflation. Unless it is solved at early stage of growth, along with output growth, it will deepen the root of the problem.

Inflation is highly related with aggregate demand. The right policy decision has to come after identifying those factors determining aggregate demand. As we know consumption is the largest constituent of aggregate demand. Any factor affecting consumption will affect the overall aggregate demand. Again consumption could be affected by factors that are endogenous and exogenous to domestic economy. In developing countries like Ethiopia where large numbers of citizens are living abroad, the level of remittance will be large enough to influence aggregate demand through consumption. This could lead to inflation.

In our recent past inflation has increased dramatically. According to Government report the current inflation rate is a bit above single digit showing downward movement. Though the reality on the ground is not as rosy as reported, one can sense that the current price level lessened its upward swing compared to the rate it had for seven or eight years before.

Because of the theoretical and empirical facts mentioned above, identifying individual impact of remittance on inflation will help us to choose the right policy instrument to check inflation.

A number of studies have been conducted in order to understand the factors that determine inflation applying different methods and variables. However studies about individual impact of factors on inflation are found to be limited. In this study the impact of major factors on inflation and one exclusive exogenous variable namely remittance t will be studied in detail.

Thus this study fills the gap by studying the impact remittance on price level. Therefore this study is conducted to see whether remittance has a significant impact on inflation in Ethiopia.

4. Objective of the Study

4.1 General objective

The general objective of the study is to assess factors affecting inflation in Ethiopia.

4.2 Specific objective

The specific objective of the study is to empirically verify the direction and magnitude of impact of remittance on inflation In Ethiopia.

5. Research Question

The research question for a quantitative correlation study such as remittance and its impact on inflation in Ethiopia will be: What impact does remittance have on inflation? Does remittance have a positive impact on inflation in Ethiopia? How significant is the impact of remittance on inflation in Ethiopia?

6. Significance of the study

Unlike other studies, this study will focus on individual impact of remittance on inflation. In this regard it adds to existing literature by giving special emphasis for remittance and its role and magnitude of influence on inflation.

7. Research Methodology

7.1 Source and type of data

The study will be conducted based on Time series data from domestic and international sources .The institutions which will serve as major source of data will be the central Statistics Agency (CSA),National Bank of Ethiopia(NBE),Ethiopian Economics Associations, Ministry of Finance and Economic Development (MoFED),International Monetary Fund (IMF)and World Bank (WB).

7.2 Method of Analysis

Descriptive analysis will be used to see the separate and joint trend of inflation and GDP, Remittance and inflation remittance and GDP. The result of the analysis could be presented in tabular, graphic or other presentation forms with due consideration.

Econometric Analysis will also be employed, specifically Vector autoregressive (VAR) methodology will be used as a method of estimating impact of remittance on inflation in order to indicate the possible impact of remittance on inflation. Thus, to assess statistical linkage between remittance and inflation, VAR methodology will be used in order to compute the degree of influence .In addition to this in order to investigate the long run determinants of inflation in Ethiopia, the Johnson integration test could be conducted. An error correction model will be employed to see the long run and short run dynamics of inflation. Other tests liken causality through Granger causality could also be used. The variables used in the estimation include domestic consumer price index (P), Gross domestic product(GDP) ,Nominal exchange rate(E) ,Government expenditure(G) ,Remittance (R) ,Money supply(Ms) and Previous Year inflation (PI).

To make the series of the data more stable and to make the interpretation easier, all variables' data could be transformed to logarithmic form.

LnP=b0 +b1LnGDP +b2LnR+b3LnMs+b4LnG+b5LnE+LnPI+e

GDP: Gross domestic product
P: Consumer Price Index
R: Remittance
E: Nominal Interest rate
G: Government Expenditure
MS: Money Supply
PI: Previous Year Inflation

8. Expected Outcome

Expected outcome of the study is to see the impact of the selected factors on inflation and a separate impact of remittance as a factor determining inflation.

9. Scope and limitation

The study covers the period of twenty four years from 1991 to 2014. One of the limitations is to capture political, administrative and social factors as part of determining variable of inflation for the study period.

10. Time duration of the Project

Activities	Duration of time
Data collection	November 15, 2015-December 15, 2015
Organizing data	December 15,2015-January 15, 2016
Analysis of data	January 15, 2016-March 15, 2016
Conclusion and policy recommendation	April 30, 2016

11. Cost of the Project

Activities	Cost of the Project
Data collection	450 birr
Organizing data	200 birr
Analysis of data	250 birr
Conclusion and policy recommendation	450 birr
Total	1,350 birr

Reference

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NEGATU LEGESSE SIMA

EDUCATIONAL BACKGROUND:

University:1998-2000,Addis Ababa University (AAU),Msc,Human Resource Economics
1992-1995,AAU,Bachlor of Arts (BA) in Economics
High School: 1982-1985,Atse Gelawdeous Comprehensive High School
Elementary: 1975-1981 ,Nazareth No.4 Elementary School

OTHER DIPLOMA AND CERTIFICATE:

- Diploma in Application Softwares ; like Introduction to Computer & DOS, Windows 98 , Word 2000, Excel 2000 &Access 2000 from SOFTNET Computer Engineering.
- Certificate on **Basic Computer Application in Econometrics/ Forcasting** , organized by the Ethiopian Economic Association held in Addis Ababa fro july 19-21 2002.
- Certificate of participation on **"Advances in Economic Analysis (What is New in Development Economics)",** organized by the Ethiopian Economic Association held in Addis Ababa from 6-8 July 2003.

EMPLOYMENT HISTORY:

A. Assistant Researcher: Oct-Dec 1994,in the Urban socio-Economic survey conducted by the department of Economics, AAU, in collaboration with the University of Goteborg, Sweden.

B. Teaching:

i. Feb 1996-Aug 1999, Ginbot 20 Residential High School administered by the Defense Engineering College and Jan 1996-May 1996, Nursing College administered by the same as a part time instructor.

ii. Sep 1999-Nov 2006, Unity University College at the rank of Lecturer III.

- ✓ Worked as member of the exam committee, social committee and student affairs committee at the department and faculty level
- ✓ Initiated and developed an MA program on development economics which is currently undertaken by the university.
- ✓ Organized and offered a short term training on "Development Planning and Project Management" from June 5, 2001 to June 14, 2001 to experts and professionals from both private and public sectors.
- ✓ Served as a member of the focus group that deliberated on a one day Strategic Option – Development Workshop that was held on July 10, 2004 where the input obtained from the workshop led to the formulation of the five – year strategic plan for the university college.

iii. Dec 2007- June 2009 at Alpha University College(AUC), Department of business Management and Economics

- ✓ Served as head of the department of business management and economics, including marketing management and procurement and supplies management.
- ✓ Served as member of the academic commission
- ✓ Worked as member of research and publication senate standing committee
  - Served as a member of the conference organizing committee
  - Participated in identification of conference themes
  - Reviewed and selected conference proceedings
  - Participated in the budget preparation for the annual conference
  - Worked as a moderator in two of the research conference organized by the university college
  - Served as a member of the Newsletter's Editorial Committee of AUC.

- ✓ Served as an active member of strategic planning committee and produced a five year strategic plan document for the University College

iv. July 2009 – july 2014 at Hope University College worked as an acting dean and lecturer.

- ✓ Organized the faculty and worked together with other staff in establishing the various departments under it
- ✓ Reviewed the curriculum under the faculty of business which was soon accredited by the ministry of education in July 2011.
- ✓ Prepared annual plan and semester based action plan at the faculty level and monitored its effective implementation
- ✓ Worked in the student selection and recruitment committee that was responsible for listing out the criteria for selection of students who should be admitted to the university college especially on scholarship basis.
- ✓ I also teach advanced macro and micro economics and international trade and finance at St. Marry University College, graduate program, which is offered in collaboration with Indira Gandhi National Open University, School of Social Sciences, on a part time basis.

v. Since August 2014 working at Addis Ababa University School of Commerce, Department of Economics

ADDITIONAL PROFESSIONAL ACTIVITIES:

. Conducted a study on

1. "The Role of Manufacturing Industry in the Economic Development of Ethiopia."
2. "The Role of Public and Private Health Care Sectors in Addis Ababa."
3. "The Ethiopian Balance Payments: 1975-1984"
4. " The Determinants of the Demand for Health care Services in Private versus Public Health Care sectors in Addis Ababa."
5. "Private Investment response to Micro and Macro Economic conditions in Ethiopia."

6. "Investment Climate and Business Environment [ICBE] in Ethiopia in the Post Liberalization period with special reference to health" a research project undertaken in collaboration with Trust Africa and Unity University.
7. "The Economics and development of Health Care Services in Ethiopia." paper Presented to the sixth international conference on the Ethiopian Economy, organized by the Ethiopian Economic Association,

ACTIVITIES ON COURSE MATERIALS PREPARATION:

.Prepared

- A text on Introduction to Economics; A text on Introduction to Economics for distance learners; A text on Labour Economics for distance learners; a text on Industrial Economics for distance learners; Revised Grade 12 Ethiopian Economy text book in Collaboration with the ICDR;Prepared Grade 12 Ethiopian Economy text book which is currently being used in the Ethiopian high schools in collaboration with Aster Nega publishing P.L.C ; Teacher's guide for Grade 12 Ethiopian Economy text book; Buisness Economics for TVET programme; Edited Insurance Practice and Procedure

PROFESSIONAL MEMBERSHIP:

. Member of the Ethiopian Economic Association

FIELDS OF TEACHING:

. Entrepreneurship development, Macroeconomics Theory, Microeconomics Theory, Industrial Economics, Labour Economics **,** International Economics and Finance, Development planning and project analysis, Quantitative Methods for Economists, Mathematical Economics,

Managerial Economics, Research Methods, Project management and analysis, Strategic management etc.

CONFERENCES, WORKSHOPS AND TRAINING :

A. Conferences

. Attended the first up to the sixth international conferences on the Ethiopian Economy which was organized by the Ethiopian Economic Association.

B. Workshops

. Attended a workshop on " Teaching-Learning Process"organized by Unity College,9 nov.1999.

Specific Topics:"Teaching Methods"and

"academic Measurement and Evaluation"

. Attended a workshop organized by Unity College,3 nov 2002.

Specific Topics:" Teaching as a Profession at a Tertiary level."

"Organization Culture."

"Research Culture at Higher academic Institution."

" Course Manual :What it is and its purpose."

. Attended a workshop on "tax Reform In Ethiopia"organized by the Ethiopian Economic Association in collaboration with the Ministry of Revenue may 15, 2002.

. Attended a sensitization workshop on the Impact of COMESA FTA on Government Revenue and Industrial Competitiveness In Ethiopia from oct 3-5, 2002.

C. Training

. Organized and offered a half day training program on "Development of Distance Education Curriculum and its implementation" for the academic staff of Defense Resource Management College.

. Attended a short term training organized by Addis Ababa University, Faculty of Education, department of business Education,22 July 2000 on,

. Marketing and Salesmanship.

- Banking and Insurance .
- Purchasing and Stores Management.
- Cost and Management Accounting.

. Attended a workshop organized by Unity University College, distance and continuing education unit on how to write a course material to distance learners.

. Attended a workshop organized by Alpha University College, distance and continuing education college, on how to deliver tutorial program to distance learners.

. Attended a one month training program on competency based education organized by Hope University College.

REFERENCES:

1. Dr Demmelash Habte
   Dean, Faculty of Business and Economics
   Unity University
   Tel. 0911-366467

2. Dr Tesfaye wolde
   Academic Vice President
   Dynamic International University College

3. Dr Eyayu Leulseged
   Former Vice president for Academic affairs
   Hope University college