Ethiopian Economics Association
(EEA)

PROCEEDINGS OF THE EIGHTH INTERNATIONAL CONFERENCE ON THE ETHIOPIAN ECONOMY

Edited by:
Getnet Alemu
Worku Gebeyehu

Volume II

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- ALL ACTIVITIES OF EEA ARE SPONSORED BY THE AFRICAN CAPACITY BUILDING FOUNDATION (ACBF), EMBASSY OF UK (DFID), EMBASSY OF SWEDEN (SIDA), THE NORWEGIAN CHURCH AID, EMBASSY OF NETHERLANDS, EMBASSY OF IRELAND (DCI), FRIEDRICH EBERT STIFTUNG OF GERMANY (FES), AND INTERNATIONAL DEVELOPMENT RESEARCH CENTER (IDRC) OF CANADA.

- THE 8th INTERNATIONAL CONFERENCE WAS CO-ORGANIZED BY THE ETHIOPIAN STRATEGIC SUPPORT PROGRAM II (ESSP II) OF THE INTERNATIONAL FOOD POLICY RESEARCH INSTITUTE (IFPRI).

FOREWORD

The Ethiopian Economics Association (EEA) is happy to issue three volumes of the proceedings of the 8th International Conference (the 19th Annual Conference) on the Ethiopian Economy that was held from June 24 – 26, 2010 at EEA Multi-purpose Building Conference Hall. EEA has been organizing annual conferences on the Ethiopian Economy every year as part of its overall objectives that include contributing to the economic policy formulation capability; promoting the professional development of its members; promoting the study of Economics in the country's educational institutions, promoting economic research and disseminating the findings of such researches in the country, providing fora for the discussion of economic issues and promoting professional contacts between the Ethiopian Economists and those of others.

In its effort to achieve its objectives, EEA has over the last two decade expanded from a handful of members to over 3000 members; from just a Secretariat to an additional institute called Ethiopian Economic Policy Research Institute (EEPRI) established in 2000 as a research and training arm of the Association; from an asset of a few hundred Birr to the owner of Multi-purpose Building; from a newsletter to publication of various products which include Economic Focus, Quarterly Macro-economic Report, Annual Economic Report, Bi-annual Ethiopian Journal of Economics, Proceedings of the Conferences etc.; from a simple roundtable discussion to the regional and International conferences and many thematic discussion forums. These have earned EEA respect from the development community including policy makers, business communities, civil society organizations, donors and the public at large and become a truly independent source of socio-economic policy options and data base in Ethiopia.

The 8th International Conference on the Ethiopian Economy attracted high turnout of the participants, papers presenters and session organizing institutions. The conference was attended by about 470, 300 and 250 participants during the first, second and third days of the conference, respectively. The conference officially opened by H.E. Ato Sufian Ahmed, Minister, Ministry of Finance and Economic Development.

At the conference about 85 papers were presented in three plenary and five breakout sessions. Out of the total 85 papers, about 39 papers were presented by partner institutions like IFPRI-ESSP II, ILRI, FSS, Young Live Ethiopia, National Social Protection Platform led by UNCIF and WB. The rest 46 papers were presented by individual researchers. The editorial committee reviewed papers that were presented for the publication of the proceedings of the conference and communicated its comments and suggestions including editorial comments to authors. After passing all these process and language editing, the editorial committed selected 31 papers to be included. All these papers are organized into three volumes. Volume I contains Poverty and Social Sector, Volume II contains Business Environment, Population and Urbanization and Volume III contains Agriculture and Related Activities.

I would like to take this opportunity to express my heartfelt gratitude, on my own behalf and on behalf of the Ethiopian Economics Association to the co-organizer of the conference, the **Ethiopian Strategic Support Program II (ESSP II) of the International Food Policy Research Institute (IFPRI).** ESSP is a unique collaborative effort between IFPRI and the Ethiopian Development Research Institute (EDRI). The program, which is based in Addis Ababa, begin its activities in late 2004 with the aim of undertaking timely and actionable research to fill knowledge gaps in the formation and implementation of economic policies, improving the knowledge base available for such analysis, and strengthening national capacity to undertake such work.

I would like also to thank the authors of the papers and the audience whose active participations made the conference meaningful and dynamic. The many professionals who dedicated their time to the conference and served as chairpersons deserve due thanks for their special contributions.

The staffs of the EEA deserve a special recognition for their enthusiasm and perseverance in managing the conference from inception to completion. I also want to extend my personal gratitude to the Organizing Committee and members of the Executive Committee of the Ethiopian Economics Association for the dedicated services and the leadership they provided to the Association.

Our special thanks go to our partners who have shared our vision and provided us with generous financial support to materialize the activities of EEA. These include; The African Capacity Building Foundation (ACBF), The Norwegian Church Aid, The Royal Netherlands Embassy, The Swedish Embassy through SIDA, The Development Cooperation of Ireland (DCI) and the Ireland Embassy, the British Embassy through DFID, the Friedrich Ebert Stiftung of Germany, and International Development Research Center (IDRC) of Canada.

Finally, I would like to extend my sincere gratitude to H.E, Ato Sufian Ahmed, Minister, Ministry of Finance and Economic Development, for his an insightful keynote address; and other senior government officials who spared their busy schedule and participated in the conference.

Alemayehu Seyoum Taffesse (Phil. D)
President of the Ethiopian Economics Association

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Business Environment, Population and Urbanization

BANKING REFORM AND SMEs FINANCING IN ETHIOPIA: THE CASE OF SMEs IN THE MANUFACTURING SECTOR

Ashenafi Beyene Fanta[1]

Abstract

This study assesses the effect of banking reform on Small and Medium Enterprises' (henceforth SMEs) access to bank credit during the post-liberalization period, 1994-2007. Aiming at casting light on the changes in the country's banking sector, bank concentration, competition, efficiency, and liquidity have been assessed. Also undertaken is the survey of 102 randomly selected manufacturing SMEs to examine changes in SMEs' access to bank loan. Assessment of changes in the banking sector reveals that the sector has become less concentrated. However, the sector is found to be uncompetitive, inefficient, and has been continuously accumulating liquidity. Changes in the banking sector are not found to be robust as to ease SMEs' credit access and there have not been significant variations in terms of access across firms of different age groups, ownership forms, and across three stages of life cycle. Thus, SMEs' problem of credit access has still persisted despite the introduction of the banking sector reform in 1994 that led to expansion of the banking industry. The change in the structure of the banking sector is not sufficient to introduce competition and hence enhance efficiency, nor an improvement in credit access of SMEs. Policy makers should, therefore, exert efforts towards fostering competition in the banking sector by softening regulatory controls without compromising safety and soundness of the financial system. Besides, banks need to be encouraged to lend to small firms through credit guarantee program. Credit bureaus need also to be established by the government or by private investors to supply SMEs credit information to lenders.

Key words: Banking reform, SMEs financing, manufacturing sector, Credit Access

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1. Introduction

The effect of the banking sector liberalization on SMEs [2,] access to loan is one of the most interesting areas in the study of liberalization and financial access. Extant literature on financial liberalization documents that liberalization boosts economic growth through fostering the development of the SMEs sector by easing their access to external finance (Laeven, 2000, and Beck et al , 2004). This is further supported by country case studies that brought to light the affirmative effect of liberalization on SMEs credit access. For instance, financial liberalization in Korea led to a narrower interest spread and a lesser reliance of banks on collateral (Hübler et al, 2008), easing of the access to credit of hitherto financially constrained firms (Koo & Shin, 2004). However, studies focused more on emerging economies in Asia, South America and Central and Eastern Europe, while only a few of them on SSA countries. Besides, owing to the fact that countries pursued different paths in liberalizing their financial sector, more country case studies are needed to help in establishing the theoretical framework useful in understanding the nexus between banking liberalization and SMEs credit access. This study, therefore, contributes by bringing the experience of Ethiopia, one of the developing countries in SSA region.

Ethiopia undertook a banking reform program in 1994 three years after the centrally planned economy was scraped, and a market economy was launched by the new government. The reform, ardently supported by the World Bank and International Monetary Fund (IMF), brought about changes to the financial platform. Opening the financial sector to private investment was the first step in liberalizing the market. The banking sector policy, however, restricts foreign bank entry in any form and does not allow purchase of shares by foreign nationals so as to avoid any potential control of the banking business by foreign investors. Besides, despite proliferation of domestic private banks, state-owned banks still lead the banking sector with a considerable share of the market. This prompts a legitimate question as to whether the banking

[2] ECSA defines small manufacturing firms as those using automated equipments and employing less than 10 workers while all firms employing more than 10 workers are classified into the medium and large enterprise category. MTI, on the other hand, defines small business as those with a capital in the range of $2,250 and $56,000 while firms with capital exceeding $56,000 are classified into medium and large enterprise category. Unfortunately, both ECSA and MTI's do not differentiate medium businesses from large ones, and also do not recognize small and medium businesses as a separate category. Thus, we resorted to devising a working definition by taking into account international experience, the level of economic development of the country, the size of average manufacturing firm relative to firms in other industries. Accordingly, manufacturing SMEs are defined as firms **using automated manufacturing process employing between 10 to 150 workers** and **having a capital over the range of ETB 50,000** (approx $4,200) to **ETB 15 million** (approx $1,260,000).

sector liberalization eases SMEs credit access under a condition where the sector is dominated by state-owned banks and where it remains closed against foreign entry. This study is, therefore, needed to answer this vital question, thereby bringing the experience of a developing country in the SSA region into the extant body of literature. To the best of my knowledge, this is the first ever piece of study shedding light on the link between banking liberalization and SMEs credit access in Ethiopia.

Thus, this study tries to investigate the performance of the banking sector over the period from 1994 to 2007 focusing on the most important parameters: concentration, competition, efficiency, and liquidity. Aiming at examining changes in SMEs access to bank loan, a survey of 102 randomly selected manufacturing SMEs was conducted and access to credit is evaluated in relation to the form of ownership, age, and possession of fixed assets; and also at three stages of development: startup, operation, and growth. Assessment of changes in the banking sector reveals that the sector has become less concentrated, concentration declining at a much faster rate in the loan market than in the deposit market. However, the results suggest that there is no significant change in competition and efficiency, and the sector has been continuously accumulating liquidity. In general, the financial reform did not bring a robust change in the banking sector that can enhance access to financially constrained firms.

Survey result also shows that there is no improvement in SMEs credit access during the post-reform period. No significant variation is found in access *vis-á-vis* age and ownership form. It has been found that firms that own collateralizeable assets have a relatively better access to loan compared to those that do not, signifying the importance of collateral in the credit market. Assessment of access at different stages of business life cycle also shows that SMEs are constrained at all stages. In general, it has been found that a change in the structure of a banking sector, *per se*, does not enhance credit access. And unless the banking sector becomes so competitive as to compel the incumbent institutions design schemes that help in reaching out to the hitherto financially constrained firms, SMEs' exclusion from the credit market will persist. The policy and theoretical implications of this finding are twofold. First, it brings a lesson that opening the banking sector to local investors only does not boost access. Second, SMEs' financial constraints may stay unresolved unless banks design schemes that rely less on collateral and more on factors like profitability, degree of business risk and management quality.

The rest of the paper is organized as follows. Chapter 2 reviews related literature. Chapter 3 describes financial liberalization in Ethiopia by tracing back the origins and evolution of banking in the country. The data and research methodology are described in Chapter 4. Chapter 5 presents the change in the Ethiopian Banking

sector from the dimension of concentration, competition, liquidity and efficiency. Chapter 6 reports results of the survey of manufacturing SMEs, shedding light on their access to loan during the post reform period, and Chapter 7 concludes.

2. Review of related literature

In their seminal papers, McKinnon (1973) and Shaw (1973) postulated that financial liberalization, narrowly defined as interest rate decontrol, promotes saving and investment, leading to economic growth by improving efficiency of capital allocation. They argue that the interest rate that equates demand for and supply of deposit encourages savings, and makes more funds available for investment. Under a repressed system, deposit rates are set at a too low level that it can barely attract depositors. Although some scholars doubted the real effect of higher interest rate on promoting economic development, empirical evidence from developing countries shows that keeping interest rate at a moderate level indeed boosts growth (see Ghatak, 1997, Ang & McKibbin, 2007, and Levchenko et al, 2009).

Despite successful implementation of financial liberalization program and attainment of financial deepening and economic growth in some countries, there are indeed nations that did not reap the desired benefits. Even worse, some dived into a deep financial crisis following liberalization. For example, Mexico liberalized its financial system in the 1990s only to see serious banking crises afterwards, costing the government quite a large sum of money in bailing out insolvent banks. Similarly, Korea had a financial crisis in 1997 triggered by financial liberalization, resulting in financial insolvencies and closure of many of its banks. In SSA countries such as Kenya and Nigeria, financial liberalization played no discernible role in achieving financial deepening and economic growth (Ayadi & Hyman, 2006). In their paper that investigates the causes of financial crises in selected SSA countries in the 1980s and 1990s, Daumont et. al (2004)**,** also find that the financial liberalization program gave rise to banking crisis that swept across countries in the region.

Following unfruitful liberalization efforts in some countries and a banking crisis in others, scholars started questioning whether financial liberalization enhances economic development. Studies revealed that, for financial liberalization to succeed, macro-economic stability and institutional framework are prerequisites. Explaining why bank efficiency has dropped following liberalization of Turkish financial sector, Denizer et al (2007), blame macro-economic instability and existence of scale problems. According to Levine et al (1999) legal and accounting reforms must precede financial reform in order for it to bear fruit. Similarly, Tornell et al (2003) discovered that countries with contract enforcement fared better in their financial

reform program than those that launched a liberalization program without legal and institutional framework in place. Explaining the causes of financial system collapse following liberalization in SSA countries, Daumont et al (2004), hold the macro-economic instability and heavy hands of the government as the chief culprits.

However, both theoretical and empirical studies mutually agree that, despite the fact that liberalization in some countries was followed by banking crisis and decline in national output, it pays off, especially when the economic cost of a repressed system is taken into account. That is why researchers and policy makers, including the two Breton woods institutions, ardently advocate it. As discovered by Wyplosz (2001), compared with industrialized nations, developing countries have a strong economic boom following financial liberalization. There is a strong empirical support that a cautiously laid out plan of liberalization brings about financial deepening, credit access to hitherto marginalized enterprises, cut in unemployment, and growth in national output. The adverse economic conditions that followed liberalization are not its inherent consequences but simply outcomes of mismanagement. Reinforcing the foregoing claim, Hagen & Zhang (2006) warn that a drastic move towards financial liberalization is counterproductive, and firmly advocate a gradual and careful move. The failure of both Mexico and Korea in their liberalization effort lies in the fact that both undertook liberalization without putting in place institutional and legal framework beforehand. It is, therefore, indisputable that a wisely implemented liberalization program enhances financial development and economic growth.

Although literature converges to the view that financial liberalization leads to efficient allocation of resources, the channel through which its effects are revealed is subject to debate. Some scholars, following the same line of argument as McKinnon (1973) and Shaw (1973), show that interest decontrol encourages saving and hence makes more funds available for investment, boosting up investment activities leading to a higher national output(see Koo & Shin, 2004). Others, on the other hand, present evidence that the affirmative effect of financial liberalization is revealed through its enhancement of access to external finance of SMEs (see Berger et al, 2004). Consistent with the latter group Laeven (2000) , using a panel data on a large number of firms in 13 developing countries, finds that liberalization affects small and large firms differently. His findings are consistent with earlier literature that a repressed financial system harms smaller firms much more than larger ones, and a financial reform, therefore, benefits SMEs much more than large and well established firms.
The move to date by governments around the world towards financial liberalization shows that some have drastically launched liberalization program by entirely relinquishing state ownership of banks and allowing foreign investors in the sector, while others opted for an overly cautious move with continued state control. The two being extremes in the continuum, there are quite a lot of different models. For

instance, in Ethiopia, state-owned banks run in parallel with domestic private banks while keeping the door closed against foreign banks. Although literature does not provide a clear cut view as to which particular mode of liberalization leads to an optimum result, scholars heavily criticize government control of financial institutions. While the efficacy of privatization of state owned banks is an ongoing matter of scholarly debate, many share the view that relinquishment of ownership control of banks by the state is a signal of a more efficient financial sector (Berger et al,2004). Studying the effect of bank privatization, Clarke et al. (2005) show that benefit of bank privatization is maximized when the state fully relinquishes control of interest. State ownership of banks is often associated with inefficient credit market characterized by politically motivated lending; state banks can be abused by politicians as tools to materialize their political aspiration rather than achieving a national economic growth.
Equally debatable is the real effect of foreign bank entry on fostering competition in the banking sector and in enhancing credit access. Empirical evidence has a mixed result heating up further debate in the area. Cull et. al (1999) ,in their study on the Argentinean banking sector, find that foreign banks compete in sectors where they have a comparative advantage, and domestic banks face a stiffer competition in areas where foreign banks enter. It follows that market segments less attractive to foreign banks would see no discernible change in access to bank loan. This has been confirmed by Gormley (2009) who, drawing the post-liberalization experience of India, finds that foreign banks engage in “skimming the cream”, focusing on the most profitable segment of the market, disregarding lending to SMEs. Moreover, firms reported fall in loan accessibility following foreign bank entry, due to a drop in domestic bank loan, and the decline was significant among SMEs. Supporting the earlier view, Sengupta (2007) posits that foreign banks lend more to large firms thereby disregarding SMEs.

In contrast, Haas & Naaborg (2005) find that acquisition of local banks by foreign banks has not led to a persistent bias in the credit supply towards large multinational corporations. Instead, increased competition and the improvement of subsidiaries’ lending technologies have led foreign banks to gradually expand into the SMEs and retail markets. Using data from 35 developing and transition economies, Clarke et al (2006) find that all enterprises, including SMEs, face lower financing obstacles in countries with higher levels of foreign bank presence. Foreign bank entry is followed by a drop in margin and profit caused by increased competition in the market. Using data from 80 countries, Claessens et al (2001) also find that in developing countries, foreign banks win a significant share of market from domestic banks using their excellence in competition. This leads to domestic banks engaging in lending to firms hitherto considered not commercially viable to compensate for market surrendered to more efficient foreign banks. This is consistent with Unite & Sullivan (2003) who find that foreign entry corresponds with improvement in operating efficiency. In general,

under a well functioning bank regulatory and supervisory system and institutional and legal framework, foreign bank entry can enhance SMEs access to bank loan, either through foreign banks participation in the sector or through a spillover effect of its entry on domestic banks.

Elsewhere in SSA, financial liberalization is accompanied with foreign bank entry. Consequently, foreign banks constitute a significant part of the banking market in the neighboring Kenya, Sudan, and other countries in the region. Ethiopia, however, opted out foreign entry in its liberalization program. Evaluating policy makers' rationale of following a closed door policy is outside the purview of this paper. The paper assesses only what SMEs financing looks like in the absence of foreign players in the market. Studies that shed light on SMEs access to credit under state bank predominance and a closed banking market against foreign entry are scant, as the case itself is very exceptional at present. This paper therefore tries to fill the void in SMEs financing literature by drawing experience of the Ethiopian SMEs during a post-reform period.

3. Financial liberalization in Ethiopia

Financial services in Ethiopia date back to the onset of the 20th Century, when Bank of Abyssinia, the first bank in the country, was established in 1905 as a branch of Bank of Egypt by the courageous move of Emperor Menilik II, based on a 50 years concession with the British authorities. The State Bank of Ethiopia was established in 1931, replacing Bank of Abyssinia after an agreement was reached among stakeholders to liquidate the latter. However, it too was liquidated following the Italian invasion in 1936, and was re-established in 1942 bearing the name State Bank of Ethiopia. Three specialized banks were also established during the same period: Development Bank of Ethiopia in 1951, the Imperial Saving and House Ownership Public Association (ISHOPA) and the Housing and Saving Bank in 1962, and the Investment Bank of Ethiopia in 1963. In addition to state-owned banks, there were private banks operating in the country in which foreigners as well had ownership equity. The Agricultural and Industrial Development Bank (AIDB) was set up in 1970, taking over two earlier development banks: the Development Bank of Ethiopia and the Ethiopian Investment Corporation. The Housing and Savings Bank was created in 1975 out of a merger between two earlier housing finance institutions (see for details Mauri, 2003).

The socialist regime that took power in 1974 redesigned the banking platform of the country through its nationalization policy. All the private banks operating at that time were brought into government ownership and merged with Commercial Bank of

Ethiopia. The state-owned banks were designed to serve as a tool in materializing the government's economic policy, built on the socialist ideology. Nationalization of the financial and non-financial firms led to a significant fall in private sector loan. Credit to the private sector fell to 40% of outstanding loans during the socialist regime, from 100% during the Imperial period (Addison & Geda, 2001). The banks served the public sector, and private sector investment was marginal. A substantial portion of the loans was channeled to state-owned farms and public enterprises. The credit market disenfranchised the private sector as evidenced by an average private sector credit of 14% over a period from 1985 to 1989 compared with loan to the central government of 60% of outstanding loans (Ibid, 2001).

The 1991 revolution brought with it market economy compelling the government to gradually relinquish control of the economy, and promote economic growth through private sector development. The new government placed financial liberalization at the top of its economic policy and allowed participation of the private sector through banking business proclamation of 1994. The reform did not, however, take privatization of state-owned banks as a necessary step. The private sector expanded driven by denationalization of state-owned enterprises and opening of large parts of the economic sector to private investment. It was thus expedient that the financial sector is redesigned to satisfy the increasing demand for financial services. Banking sector reform has been undertaken giving rise to the reemergence of private banks that brought change in the face of the financial platform.

Following licensing of private banks, state-owned banks gradually relinquished market share to a bit more efficient new banks. The sector had three players in the field in 1994, all state-owned, with CBE alone controlling above 90% of the market share. In 2007, there have been ten more banks, which were all privately owned, controlling nearly one half of the market. Bank branch network has increased from 192 in 1994 to 458 in 2007 of which 44% belong to private banks. CBE alone mobilized 95% of deposits in 1994 while its share in the deposit market has plummeted to 60% in 2007, surrendering a third of its deposit market to private banks. Outstanding loans stood at ETB 3.8 billion in 1994, while it rose to ETB 24.8 billion in 2007, of which more than 60% represents that of private banks. Assets of the banking sector has also grown from ETB 12billion in 1994 to ETB 65 billion in 2007, and bank capital increased over seventeen-fold from ETB 275million to ETB 4.7 billion. Taken at face value, the foregoing figures suggest that there is change in the banking sector, serving as a primary motivation for this study that investigates (1) whether there are changes in concentration, competition, liquidity, and efficiency and (2) impacts of the changes, if any, on SMEs credit access.

4. Data and methodology

4.1 Data

This study uses a combination of primary and secondary data. The primary data involves survey of manufacturing SMEs, while the secondary data is collected from two state-owned banks and six private commercial banks operating in the country. The survey was conducted covering a randomly selected sample of 102 manufacturing SMEs operating in Addis Ababa, the capital that hosts nearly one half of manufacturing SMEs. The sample represents 13% of manufacturing SMEs operating in the country. The firms are stratified into 10 industrial classes: Food products and beverages (31.4%), wearing apparel (5%), Tanning and dressing of leather; manufacture of footwear, luggage and handbags(7.8%), Paper products and printing (15.7%), Chemical and chemical products (5%), Rubber and plastic products(6.9%), Non-metallic mineral products(5.9%), Fabricated metal products(2.9%), Machinery and equipment(7.8%), and Furniture (11.8%). In terms of age, the sample includes firms with varying age groups ranging from those established during the present regime (58%) to those set up during the socialist regime (21%) and imperial regime (21%). The survey is conducted using a door-to-door interview. The secondary data includes key financial figures acquired from audited annual financial statements of two state-owned banks[3] (Commercial Bank of Ethiopia(CBE) and Construction and Business Bank(CBB)) and six private banks (Awash International Bank Sc.(AIB), Dashen Bank Sc.(DB), Bank of Abyssinia Sc.(BoA), United Bank Sc.(UB), Wegagen Bank Sc.(WB), and Nib International Bank Sc.(NIB)) over a period that stretches from 1994 to 2007.

4.2 Methodology

Changes in the commercial banking sector has been evaluated using concentration, competition, liquidity, and efficiency indicators. *Dominant bank's market share*[4]*, n-*

[3] Banks included in this study are only those that extend commercial loan to the SMEs sector and that have been in operation for at least three years as of end of 2007. Consequently, the Development Bank of Ethiopia and a few newly entering private banks have not been included. The Development Bank of Ethiopia has been excluded because it would channel commercial loans mainly to large agricultural and industrial establishments, but not to the SME sector. Two new private banks (Oromiya Cooperative Bank Share Company and Lion International Bank Share Company) have not been included in the study mainly due to unavailability of financial statements. In general, considering the fact that the credit market share of these banks is small, no significant bias is anticipated in the market structure measurements and the conclusions drawn thereof.

[4] *Dominant Bank's market share*= $\text{Deposit(Loan)}_{\text{Dominant Bank}}$ /Total Deposit(Loan)

concentration ratio[5]*, and Herfindhal Hischerman Index*[6] *(HHI)* are used to measure structural concentration. Lerner (1934) index[7], an indicator of market power, is used to determine the extent of competition. Banking sector efficiency is measured using net interest margin and overhead cost, following the work of (Beck, Demirgüç-Kunt, & Levine, June 1999)**.** The net interest margin is measured as the ratio of accounting value of a bank's net interest revenue to its total assets. Overhead cost ratio is measured by computing the accounting value of a bank's overhead costs by total assets. Bank liquidity is measured using the ratio of loans to deposits.

5. Impact of the reform on the banking sector

Prior to the reform, the Ethiopian banking sector comprised three state-owned banks. CBE was the market leader mobilizing over 95% of deposits, 85% of loans, and with branch network of around 76% of bank branches in the country. It would also act as a financier for the other two specialized state-owned banks, by extending long-term loans and also by keeping a time deposit to satisfy their demand for fund. The financial reform, marked by opening of the sector for domestic private investment through Licensing and Supervision of Banking Business Proclamation No. 84/1994, has brought changes into the state-bank-dominated banking market of the country. One new bank popped up in the banking market every year till 1999, bringing the number of private banks to six by the end of 2007.

A cursory look at the CBE's gradual loss of predominance shows the changing face of the banking sector. CBE, the industrial giant that assumed a market leading position with a quasi-monopoly power, is now sharing the market with the private banks. Its branch network now represents only 38% of bank branches, falling from 90% in 19 94; mobilizes 61% of deposits compared with 95% in 1994; originated 35% of bank loans outstanding in 2007 compared with 87% in 1994; and its net worth represents only 33% of banking sector capital diving from 84% in 1994. To paint a better picture of the trend of changes in the banking market, we look at structural concentration, competition, liquidity and efficiency.

[5] *N-concentration ratio*= Deposit(Loan)$_{\text{three largest banks}}$/Total Deposit(Loan)

[6] HHI=$\sum_{i=1}^{n} s_i^2$ where s_i is the market share of firm *i* in the market, and *N* is the number of firms.

[7] LI= (p-mc)/P where *p* is the interest per birr of assets and *mc* is the sum of interest expense per birr of deposits and other variable costs.

5.1 Concentration and competition

Concentration is measured using *dominant bank's market share* and *n-concentration ratio*, and *HHI*. The market share of CBE is used to compute the dominant bank's market share; *CR-3* includes three biggest banks namely the CBE, AIB, and DB. The *HHI* includes all banks in the study.

Table 1: Bank concentration Ratios

Year	Dominant Bank's share in Deposits	Dominant Bank's share in Loans	CR-3-Deposit	CR-3-Loan	HHI-Deposits	HHI-Loan
1994	0.95	0.87	0.95	0.87	0.91	0.74
1995	0.95	0.88	0.96	0.90	0.91	0.75
1996	0.94	0.89	0.96	0.92	0.89	0.78
1997	0.90	0.87	0.95	0.93	0.81	0.74
1998	0.89	0.86	0.95	0.92	0.79	0.70
1999	0.85	0.83	0.92	0.91	0.73	0.66
2000	0.82	0.77	0.91	0.86	0.68	0.55
2001	0.80	0.71	0.90	0.83	0.65	0.45
2002	0.77	0.64	0.88	0.80	0.61	0.36
2003	0.73	0.55	0.87	0.75	0.55	0.25
2004	0.71	0.52	0.85	0.74	0.52	0.21
2005	0.68	0.49	0.83	0.73	0.48	0.19
2006	0.65	0.39	0.82	0.67	0.44	0.11

Source: Own calculation based on data from audited annual financial statements.

As shown in table 1 above, Dominant bank's share*, CR-3*, and *HHI* have all been generally declining. One can note that the decline in concentration in the loan market is faster than that in the deposit market, implying a more vigorous penetration of private banks into the credit market. Decline in the deposit market at a slower pace manifests the government's long standing directive that obligates government agencies to keep their account at the state-owned Commercial Bank of Ethiopia. This directive helps the bank to cling to large share of the market, losing only a small portion of it over the years. Consequently, the private banks could not penetrate into the entire deposit market, but managed to narrow the gap in the loan market significantly, as evidenced by a fall in CBEs share in loans to 35% from 87% compared to a fall in the share in deposits to only 61% from 95%.

Despite the use of concentration as a signal for degree of competition, recent literature casts doubt over its propriety in serving as a proxy for competition. Berger et. al (2004), suggest that concentration may not be an appropriate measure of competition because it may not prohibit competition in a market with less regulation and more possibility for foreign bank entry. Schaeck & Čihák (2007) and Casu &

Girardone (2009) also find that concentration as a measure of market structure is unlikely to capture competition. Instead, Lerner (1934) index, commonly used as an indicator of the degree of market power, is considered more robust in capturing competition. The index denotes the extent to which firms fix a price (p[8]) above marginal cost (mc[9]) using their market power. A value of the index close to zero indicates perfect competition, while a value of one indicates monopoly. Analysis of competitiveness in the banking market is confined to the period 2000-2007, over which data for all banks under study is available.

Table 2: Lerner index (LI)

Year / Bank	2000	2001	2002	2003	2004	2005	2006	2007	Average
CBE	0.469	0.159	0.504	0.549	0.563	0.570	0.624	0.469	49%
CBB	0.090	0.125	0.086	0.145	0.238	0.515	0.669	0.559	30%
AIB	0.295	0.302	0.141	0.196	0.356	0.349	0.472	0.469	32%
DB	0.271	0.345	0.319	0.274	0.409	0.416	0.506	0.535	38%
BOA	0.404	0.402	0.091	0.095	0.441	0.541	0.558	0.356	36%
UB	0.178	0.239	0.201	0.226	0.403	0.569	0.427	0.475	34%
WB	0.342	0.381	0.269	0.24	0.211	0.473	0.473	0.452	36%
NIB	0.242	0.577	0.482	0.293	0.523	0.483	0.503	0.508	45%

Source: own calculation based on data from annual financial statements.

A Lerner index that hovers around 0.50 suggests that the banking market is neither perfectly competitive nor monopolistic; it is moderately competitive with a certain degree of monopolistic power. Although volatile, there seems to be an increase in market power of each bank, suggesting that there is a room for banks to exercise such power. As indicated by the average, CBE is still predominant in the banking industry. Virtually all the private banks have gained a lot of market power, but they could not emulate the industrial giant. Despite a persistent decline in bank concentration in Ethiopia since 1994, competitiveness in the banking sector has not improved so well. This is because for one thing interest is not fully decontrolled as the minimum deposit rate a bank can pay is still dictated by the National Bank of Ethiopia. Secondly, a boundary has been set for private banks to compete in the deposit market by requiring all governmental agencies to keep their demand deposit at the Commercial Bank of Ethiopia; this gives the state-owned bank an exclusive

[8] Price is defined as the ratio of interest income to total assets.

[9] Marginal cost includes the cost of labor, funds, and capital. Cost of labor is calculated as the ratio of salary and other employee benefits to total assets, cost of funds is the ratio of interest expense to deposits, and cost of capital is the ratio of non-interest operating expense to total assets.

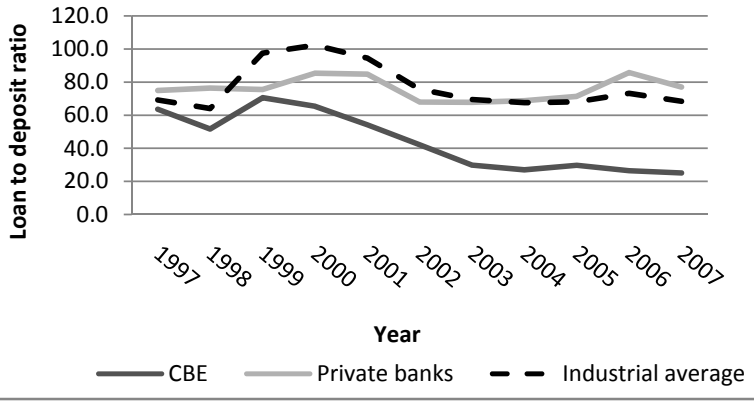
advantage over private banks. Thirdly, with the lowest bank-branch to population ratio, demand for financial services still exceeds the supply, leaving little incentive for banks to aggressively compete for market. The divergence in our conclusion using measures of concentration and competition might be due to inability of concentration to serve as a proxy for competition.

5.2 Liquidity

Liquidity of banks measures the extent to which they extend loan out of the funds they acquire from depositors. Too low liquidity, represented by a high loan to deposit ratio, may signal a lax lending policy and excessive credit risk, while too much liquidity may signal a stringent lending policy and hence a credit restraint. Consistent with the findings of Sacerdoti (2005) for selected countries in SSA region, the Ethiopian banks too have excess liquidity. The average ratio for the period 1997-2007 ranges from the minimum of 44% for CBE and maximum of 93% for NIB. The industrial average is 77% and CBEs loan to deposit ratio represents a little more than one half the industrial average, implying that compared with the private banks, the state-owned bank lags in mobilizing deposits. The foregoing ratios show that banks follow an overly conservative lending policy, which is testified by a huge collateral requirement. For instance, 96.3% of loans in the country are backed by collateral compared with average of 73.6% for SSA, and value of collateral as a percentage of loan is 173.6%, by far greater than the regional average of 109.1%. Besides, collateral burden of 178% for SMEs loan compared with 165% for large firms signifies that the burden is heavier on smaller firms.

As depicted in Figure 1, the industrial average follows a declining trend, despite private banks' share exhibiting no significant change over the study period as the ratio stayed at slightly the same level in 2007 relative to 1997. A continuous decline in CBE's loan to deposit ratio implies that the bank has been continually tightening its credit policy. Although by far better, even the private banks did not maintain their original pace in giving out loans; as revealed by a lower ratio since 2002. The industrial average rose only momentarily over two years, receding to its previous position afterwards. The implication one can draw is that overall, lending has not been growing in tandem with the growth in deposits. Although there was a rise in the industrial average in the first few years, compared with its 1997 position, the ratio did not change much over the period, manifesting "*no collateral no loan*" policy of the banks that led to rejection of possibly commercially viable projects.

Figure 1. Loan to Deposit ratio

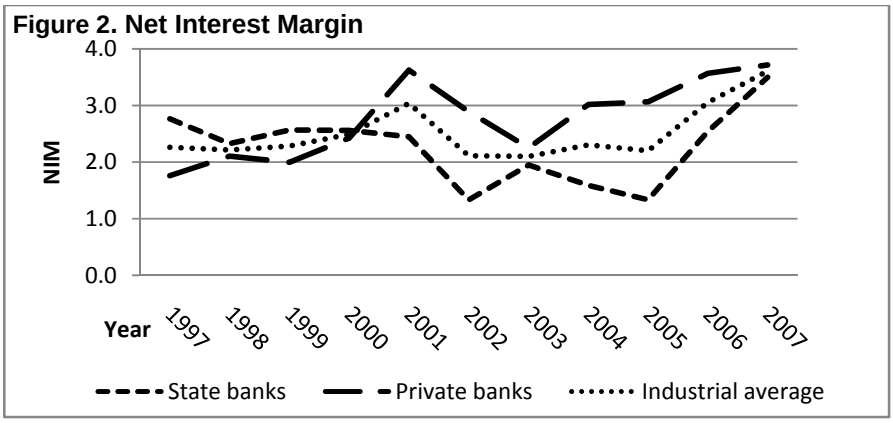


Source: Based On Data from Annual Reports.

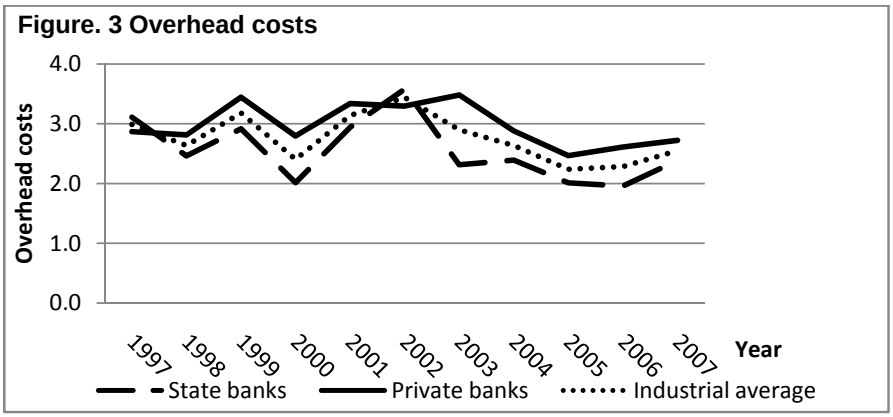
5.3 Efficiency

As depicted in Figure 2, the net interest margin stayed almost unchanged till 2005 after which it started to rise. This can be explained by the fact that private banks that have been relying more on time deposit (a more expensive source of funds) started attracting deposits (relatively cheaper money) by expanding their branch networks. Private banks have had a better margin than state owned banks since 2000 because the former charge a higher interest on loans than the latter. Overhead cost of the banking industry has been fluctuating over the entire period. Most notable is the upsurge in 2002 and a fall afterwards. The rise in overhead cost in 2002 is driven by increase in the provision for doubtful loans following issuance of a more stringent doubtful loans provision by the National Bank of Ethiopia through directive Number SBB/32/2002. State-owned banks have a lower overhead compared with private banks, implying that the former, through their long years of experience might have managed to cut costs. An alternative explanation may be that state owned banks have excessive investment in fixed assets[10] while private banks' investment in fixed assets is smaller, bringing the ratio down. Assessment of both net interest margin and overhead cost, however, shows that, overall, the change in efficiency of the banking sector is unremarkable.

[10] This is due to denominator effect driven by state banks' larger fixed asset base



Source: Based on Data from Annual Reports.



Source: Based On Data from Annual Reports.

6. SMEs financing during the post reform period

This section reports survey result in two segments; the first segment presents access to bank credit in relation to firm characteristics, i.e., ownership form, age, and possession of tangible asset. This is followed by findings on SMEs of access to credit upon start up, in raising working capital, and in financing growth.

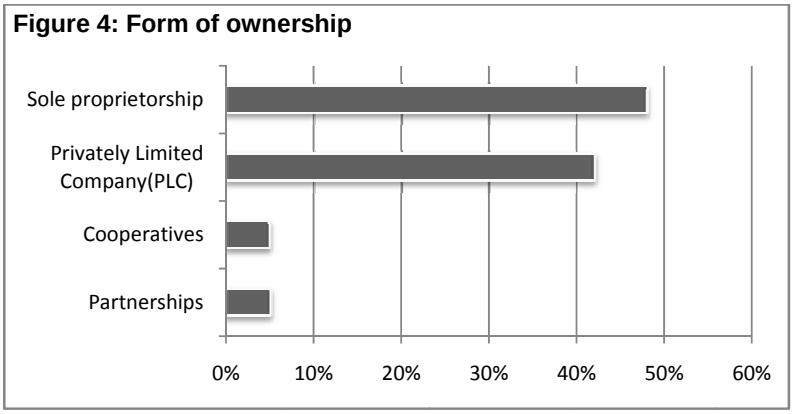
6.1 Credit access related to characteristics of the firms

(a) Form of ownership

Form of ownership of firms is heterogeneous. It takes sole proprietorship, cooperatives, partnership or privately limited companies (PLCs). As depicted in the

figure below, 48% of the manufacturing SMEs are owned by a sole proprietor and 42% are PLCs; the two alone constituting 90% of the ownership form of SMEs in the sample. Of the PLCs, the majority are owned within a family group.

Figure 4: Form of ownership



Source: Field Survey.

Analysis of access to credit based on ownership form reveals that compared with sole proprietors, PLCs had a relatively better access to bank loan. Of the firms that ever had a bank loan, sole proprietors constitute only 25% while 68% are PLCs. The figure for both partnerships and cooperative is even lower at 4% each, suggesting that these two forms have the worst access to bank credit. Only 30% of SMEs reported to have had a bank loan in their life time, of which 26% constitute sole proprietors, 4% partnerships, and 70% PLCs. Despite a marginal variation in access to loan among different forms, the overall picture is that irrespective of ownership, firms are seriously constrained in raising bank credit. This is consistent with the findings of Berkowitz & White (2004) that lenders disregard small firms' organizational status in making loan decisions, because bankruptcy of the business entails foreclosure of the personal property of the owners. Where the personal property of owners is legally protected against foreclosure, lenders hesitate to extend loan in the absence of security backed by collateral. Consequently, even the incorporated SMEs[11] have no significant advantage over the unincorporated in accessing bank loans.

(b) Age

Country case studies document that age is also among the factors that influence firms' access to bank loan. The influential role of age in explaining disparities in financial access of firms is accentuated when the financial system accommodates

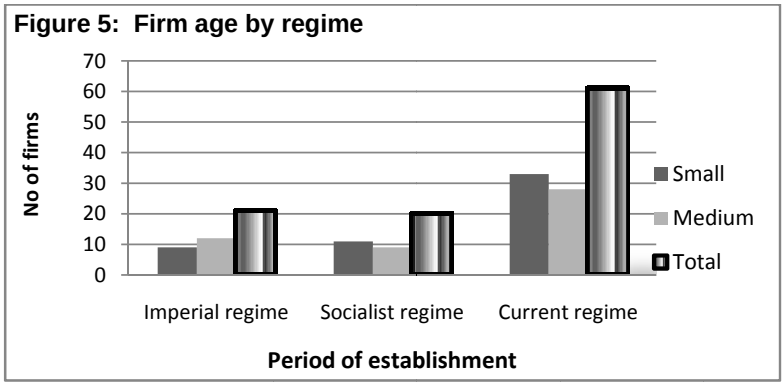
[11] These are SMEs established as a share company.

relationship lending. In countries where banks attach recognition to the length of their relationship with borrowers, older firms with a longer relationship with lenders have an upper-hand in accessing loans. This has been confirmed by Abor & Biekpe (2007) who find that older firms have a stronger relation with their bank and hence a better access to bank credit compared with younger firms that have no or less ties with their financier.

SMEs included in our study have ages ranging from 3 years to 52 years, classified into three age groups: those set up during the imperial regime, socialist regime and the current regime. As depicted in figure 5, 20% were established during the imperial regime, 20% during the socialist regime, and 60% during the current regime, showing that the majority of the firms were set up during the post reform period in response to the private sector development strategy the government has pursued.

Disparity in access to bank loan is observed among firms set up in all the three regimes. A vertical analysis of firms across the three age groups reveals that, of those that succeeded in acquiring a bank loan, 36% are imperial regime, 15% socialist regime, and 49% current regime firms. The above figures, without prejudice to any additional probe, imply that post reform firms are exceptionally better in accessing bank credit. A horizontal analysis, however, tells a different story. Over 50% of imperial regime firms had access to bank loan, compared with only 26% of socialist regime firms and 23% of post reform firms. Taken at face value, these latter figures may imply that imperial regime firms are better positioned in accessing credit than the younger firms.

Figure 5: Firm age by regime



Source: Field Survey.

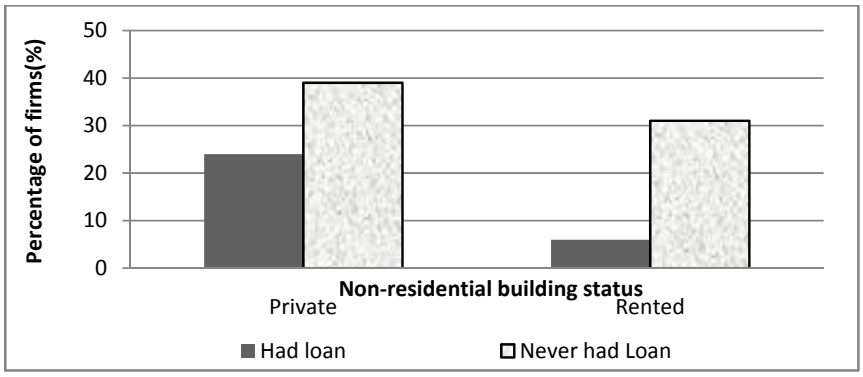
But the reality is, those established during the imperial period might be survivors of restrained financial markets of the past and have enough collateral to pledge to

secure a bank loan, whereas included in the post- reform firms are those that may not survive the existing financial famine. This weakens the effect of age in the lending decision of banks.

(c) Ownership of collateralizable assets

SMEs were inquired on the status of the building they presently occupy to carry out business. Only 30% own the property in which they carry out business while 70% use rented building or acquired in some other way. Ownership of property varies based on size, as evidenced by 63% of medium firms which have their own property while the figure for smaller one is 37%. As depicted in Figure 6, firms that own a non-residential building fared relatively better in getting a bank loan compared with those that do not have one. While 38% of firms with non-residential building had a bank loan in the past, only 16% of those without non-residential building managed to get a bank credit. It can be noted that a bank credit is not automatic even for firms that own a property. This might be due to the possibility that owing to the existence of legal issues not all properties owned by SMEs are eligible to be accepted by banks as collateral.

Figure 6: Access to loan by Non-residential building status



Source: Survey.

As explained in the analysis of the credit market, collateral plays a vital role in accessing bank loan. Many SMEs' owners complain that they are denied loan despite a strong earning capacity and future growth prospect.

6.2 Access to bank credit at different stages of development

A firm's access to fund is often evaluated based on its ability to raise money upon start up, during operation, for business expansion, and also to meet unprecedented

requirements driven by some exogenous events. Our discussion in this section is confined to the first three, namely, financing start up, operation, and expansion.

(a) Source of seed money (financing start up)

One of the impediments to the proliferation of SMEs is their inability to raise seed money. One of the impediments to development of a vibrant SMEs sector in developing countries like Ethiopia is entrepreneurs' inability to raise start up money due to lack of willingness on the bank's side to extend loan on a non-collateral basis. Survey result shows that establishing a business concern is difficult in Ethiopia. As reported by SMEs owners, the most serious challenge in setting up a business concern is securing funds; 76% believe raising seed money is the most daunting challenge.

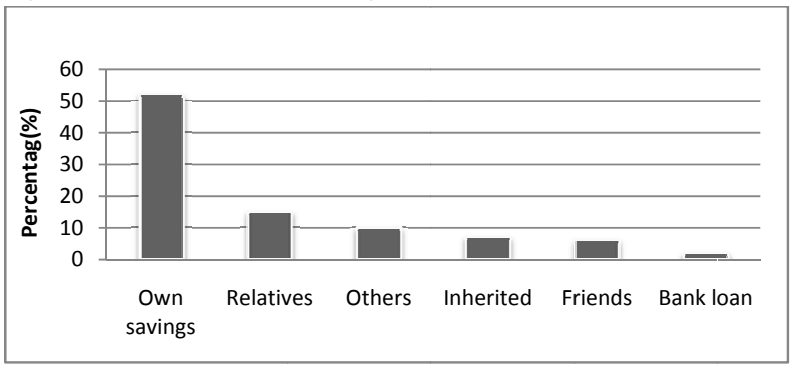
Table 3: The most serious challenge in establishing a business

What is the most serious challenge in setting up a new business?		
	No. of firms	**Percentage**
Finance	78	76%
Premise	19	19%
Others	5	5%
Total	102	100%

Source: Field Survey.

Survey result also shows that more than 50% of the SMEs use their own saving to set up their business, while only 2% succeed in obtaining a bank loan. Using own saving is the most accessible source of financing but it is meager in most cases and hence does not cover all their start up costs. Consequently, new firms oftentimes limit their capital investment to the most essential ones that in turn restrains them from achieving the desired size upon start up.

Figure 7: Source of seed money

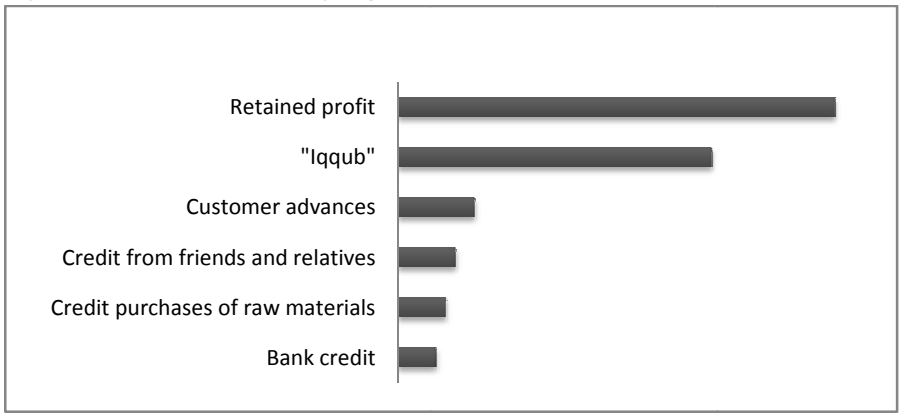


Source: Field Survey.

(b) Financing operation

Financing working capital is as challenging as financing start up for most SMEs in developing countries. Many startups die out few years after establishment due to inability to raise funds for working capital. Ismail & Razak (2003) find that firms in general prefer debt financing to equity financing, and this tendency is higher among smaller firms because of lesser desire of owners to sale ownership interest. Heavy reliance of SMEs on bank loan exposes them to a serious financing constraint in markets where banks follow a conservative lending policy. Survey evidences that only 4% managed to access bank credit in the form of overdraft and a short-term loan. More than 45% of the SMEs use retained profit and 33% use "Iqqub"[12] to finance operation. The popularity of retained earnings as a means of financing operation is consistent with the findings of Abor & Biekpe (2007) that SMEs tend to retain profit to finance operation instead of seeking a bank loan.

Figure 8: Source of working capital



Source: Field Survey.

[12] It is a traditional means of financing wherein members periodically contribute to a fund and accumulated sum is then given to a member who has a draw on that day. Members often draft a mutually agreed bylaw that prescribes the amount of the contribution, its frequency (weekly, bi-weekly, monthly etc), size of a fund to be kept as a cushion whenever a member fails to make a payment, and amount of penalty on members when they fail to comply with their periodic obligations. "Iqqub" is widely practiced in Ethiopia with a lot of business people using it for covering temporary cash shortages, servicing a bank loan, or financing acquisition of machinery and equipment. Despite no interest both on the deposit and on the loan, "Iqqub" serves as a tool for saving and credit. A member keeps on contributing on a periodic basis a certain sum of money till it is his turn to collect. Immediately after collecting the accumulated sum, he takes the position of a debtor and the periodic payments are used to service the outstanding debt. Members can sell their lot to another member at a negotiated price. (*for details see* Aredo,1993)

(c) Financing growth

Quite a lot of the SMEs ardently desire to expand business; as evidenced by the survey result that shows 98% of them having a growth plan. The overwhelming majority of Ethiopian SMEs plan to expand operation; more than 85% of them want to raise production capacity, the major driver behind their capacity expansion plan being existence of market. While 83% of the firms believe they have enough market to serve, 10% believe they have an edge over competitors in producing and distributing the main product. Profit retention is the predominant means of financing planned expansion, with 75% of SMEs opting for it. As a choice of 15% of the firms, "Iqqub" is the next most important source of financing growth. Only 9% of SMEs hope to get a bank loan to finance their planned expansion, signifying inaccessibility of bank loan. Reliance on retained profit as a source of financing growth has two problems. First, profit is less predictable and expansion plan is jeopardized when earning fails to measure up to expectation, hence hindering growth. Second, retained profit is not big enough to allow scaling up of operation by raising capacity or penetrating into a new market.

Table 4: Primary means of financing business expansion

Primary means of financing expansion		
	Frequency	**Percent**
Retained earnings	77	75.49
Credit from friends	1	0.98
"Iqqub"	15	2.94
Bank loan	9	11.76
Total	102	

Source: Field Survey.

7. Conclusion and policy implications

Quite a lot of studies on the nexus between financial development and economic growth suggest that there is indeed an economic gain in fostering the development of the financial sector, without denying the fact that if not well designed, any reform program may prove counterproductive. Consequently, many nations kept liberalization of the financial system at the top of their economic development agenda. Empirical evidence shows that a well laid out program of financial reform enhances economic development via different channels, one among which is improving financial access. However, studies considered countries that have taken long strides in reforming the sector, disregarding those that are gradually moving towards full scale liberalization. Besides, studies of this kind in SSA countries are so

scant that the region is almost precluded from the literature. This study is set out to fill the void, shedding light on the impact of financial liberalization in Ethiopia on its SMEs sector.

This study covers the Ethiopian banking sector over a period from 1994 to 2007, focusing on the most important parameters: *structural concentration, competition, efficiency, and liquidity*. To examine changes in SMEs access to bank loan, survey of 102 randomly selected manufacturing SME is conducted, and access was evaluated in relation to *form of ownership, age, and possession of fixed assets*, and also at three stages of development including *start up, operation, and growth*. Assessment of changes in the banking sector reveals that the sector has become less concentrated.

Concentration has been declining at a much faster rate in the loan market than in the deposit market. However, the results suggest that there is no significant change in competition and efficiency, and the sector has been continuously accumulating liquidity. In general, no robust change is found in the banking sector that enhances access to SMEs.

Survey result also shows that there has been no improvement in SMEs' access during the post-reform period. Also no significant variation is found in access in relation to age and ownership form. However, firms that own assets for collateral are found to have a relatively better access, signifying the importance of collateral in the credit market. Assessment of access at different stages of business life cycle also shows that SMEs are financially constrained at all the stages. In general, the banking reform that changed the structure of the banking sector did not succeed in igniting competition among the banks. Consequently, SMEs continue to be disenfranchised by the credit market limiting the vital role the sector can play in the economic development of the country.

Our policy recommendation comes in two packages. First and most critical is that the government should promote competition in the banking sector by lifting its heavy hands but without compromising safety and stability of the financial system. Secondly, government should step in to the rescue of the SMEs sector using combination of schemes. This includes initiating establishment of credit bureaus that maintain borrower information in a systematic manner useful in extending credit by employing credit scoring techniques. Besides, the state needs to launch credit guarantee programs that can run without subsidy targeting SMEs in selected industries because efficiently managed guarantee schemes can robustly enhance credit access with little distortion to the market.

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PERFORMANCE INDICATORS OF INVESTMENT CLIMATE AND BUSINESS ENVIRONMENT IMPROVEMENT IN PRIVATE HIGHER EDUCATION AND PRIVATE HEALTH SERVICE PROVISION IN ADDIS ABABA 1991-2007

Tenkir Bonger[1], Gezahegn Ayele[2], and Dejene Aredo

Abstract[3]

Driven by the restructuring of the world economy with massive incremental output and demand in Asia by China and India in particular, in the last seven years or so, the Ethiopian economy has been experiencing a remarkable average growth rate of 7.5% [World Bank:2010]. The growth rate in the post 1991 period as a whole has been significantly higher. This is all the more interesting because it is posited on small holder based agriculture without much, albeit a 'curse, of minerals' such as in Angola and Nigeria.

Within this broader context, this study is about institutional development around Investment Climate and the Business Environment [ICBE] in the establishment and growth of segments of the vital two social services - private higher education [PHE] and private health, in Addis Abeba, Ethiopia in the post 1991 period. ICBE encompasses aspects of institutions as they relate specifically to the start up, growth, development and performance or otherwise of businesses and their capacity to drive the pace of economic and social progress.

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[3] The writers wish to acknowledge Trust Africa, a Canadian Research Consortium based in Senegal which funded the main study through a competitive grant [one of 10 selected from a crop of 265 proposals from 30 African countries], Unity University for hosting the same and all the colleagues [11] especially Dr. Demmelash Habte [Task Manager] and Ato Wondossen Tefera [Data Collection and Processing Manager], who took part in the wider research project as authors, co-authors and enumerators. The Research Team would also like to acknowledge the adaptation of part of the questionnaires from the World Bank's ICBE study series. The anonymous referee of this paper is also duly acknowledged for the value added.

Applying the works of institutional economists to Ethiopia, when the modern policy regimes are taken together at the onset of this ICBE study, the Ethiopian economy had traversed ideological swings, political and policy reversals and abrupt macro-, meso- and micro-management system changes all of which did not augur well to drive it towards stability, sustained growth and productivity. The ICBE in the baseline period of this study has thus been overlaid on abruptly changing policy regimes.

Partly as a result of improved ICBE, noticeable positive changes in governance, expansion in private higher education [PHE] and private health provision, efficiency gains, more effectiveness in the physical and social infrastructure are reported. Moreover, there are trends towards improved regional & gender equity, accountability in PHE and health delivery services, some levels of innovativeness and development and sustainability.

Notwithstanding these, the absolute quality and standard of education and health provision leave a lot to be desired. The noticeable achievements have been attained with some challenges which need to be addressed in the forthcoming fine tuning of ICBE improvement policies and institutional engineering.

Rather than absorbing the leftover from the Government sector, genuine and effective partnership between Government, the private sector and employers need to be remodeled with a certain level of autonomy for each. Government needs autonomy to ensure that its social goals are not subsumed by the profit objectives of PHE and private health firms. The latter require autonomy to tailor their services in order to meet the specific demands of the market. The ultimate beneficiaries of the process, employers and students can enrich the institutional packaging through bringing in their up-to-date need in the state of the art and the content of education.

1. Introduction[4]

Since the collapse of the command economy and even before in some cases, there has been an increasing global trend towards the liberalization of economies including the social sectors. Ethiopia began to undertake such measures following the fall of *Derg*[5] in 1991. Particularly in the past seven years or so, the Ethiopian economy has been growing at an unprecedented rate of 7.5% per annum[6]. Concurrently, both government and private sector growth especially in education and to a lesser extent in health sectors have been remarkable. While the factors accounting for the growth rates are many and their interactions complex, the better governance of the Investment Climate and the Business Environment [ICBE] and with it the mushrooming of the private sector in education and health must have had some contributory impact both in the quantitative scale and in driving the institutional momentum for growth and development.

This paper is about institutional development around ICBE in the establishment and growth of segments of the vital two social services - private higher education [PHE] and private health, in Addis Ababa, Ethiopia in the post 1991 period. ICBE encompasses aspects of institutions as they relate specifically to the start up, growth, development and performance or otherwise of businesses and their capacity to drive the pace of economic and social progress.

The ICBE study report in private higher education and health hereunder is a reflection of the ongoing interactions of the social forces unleashed by the Ethiopian People Revolutionary Democratic Front's [EPRDF] policy framework – private sector development and the state's leadership interacting with the embedded values of Ethiopian societies in implementation. While the private sector's and the state's operational ***modes operandi*** in the development of private higher education and

[4] The basic research and full reference for this article is found in the wider Trust Africa funded and Unity University hosted ICBE Research Report Tenkir Bonger:2009a: **Investment Climate and the Business Environment [ICBE] in Private Higher Education [PHE] and Health Sectors in Addis Ababa [ETHIOPIA] in the Post-1991 Period.**

[5] The local name of the military regime that ruled Ethiopia during 1974 -91.

[6] Except for China [1,320 million, India 1,123 million, Myanmar 49 million, Ukraine, 46 million and Mozambique 21 million], the combined population of the other fast growers [excluding Afghanistan for which data was not available] was 73 million - less than that of Ethiopia. Hence, globally among the major population group of countries of over 20 million, Ethiopia ranked 6th. World Bank. 2009. **World Development Report.** p 356.

health are explicitly dealt with, the federal system is purported to bring out the ownership and enhancement of development programmes in their respective areas[7].

Among a myriad of social and cultural institutions, the business environment is enveloped by the formation, character and capability of the state to lead and/or promote the development process in conjunction with the private sector[8]. This is because of the fact that a capable state has the authority and capacity to create and modify institutions in order to define property rights and enforce contracts. The negotiated and/or contested social space between the private and public spheres represented by the state at a given time bring to the fore the opportunities and constraints in the working out of the ICBE. Constructing a working institutional and policy framework between the private and the public sectors and in the context of developing countries interfacing the two with the indigenous ones is a critical pre-requisite for successful transition towards growth and development. In this arena of discourse, *the relative role of the private sector and the state as drivers of the development process has been a contentious issue.*

Institutional economists classify institutions and their capacity to initiate, drive and sustain the development process at particular time in a given society into three interacting hierarchical levels – the social cultural foundation, the institutional environment or the "formal rules of the game" and institutions of governance or "the play of the game" [Clague: 1997; Dejene Aredo:1999, 2009a; Gibson *et al* 2001; Leftwich 1995; North 1991; Williamson 2000]. Applying this analytical scheme to Ethiopia, under the imperial regime of Haile Sellassie [1930-1974], Ethiopia was emerging from a fragmented traditional polity towards centralization under absolute monarchial rule with social norms dictated by religion and age old tradition. Side by side, modern education, nascent industry and formal modern institutions in the form of civil service and the army were making significant inroads[9].

[7] Since the study was undertaken in Addis Ababa, the capital and the melting pot of the nation, if at all operational, the local/indigenous institutional aspects in the process have only been implicit and not explicitly incorporated in the study proper.

[8] The full research has several paragraphs as commentaries on the state and its changing role in the development process. A recent discourse in this realm is the concept of the "developmental state" [see chapter 2.7 of the Draft Research report by Dejene Aredo cited above.

[9] Detailed exposition of the policy frameworks and the economic outturns of the different periods is found in Tenkir Bonger (ed), 2009a.

This apparent reformist autocracy[10] was, however, interrupted by the coming to power of the military regime [1974-91]. The revolutionary transformation ushered in a period of uncertainty and instability arising from highly volatile institutional environment, wholesale expropriation of medium and large firms and the attendant outright limitation of property rights. During this period, there was very little formal control of neither power nor systems of checks and balances opening the way for excessive political rent-seeking behavior on the part of political leaders.

Unexpected and often changing regulations, unpredictable government interventions, lack of consistent enforcement of contracts and the absence of rule of law were the defining characteristics of the military regime. This institutional uncertainty led to undesirable behavior and attitude on the part of actual and potential economic agents including a retreat to personal transactions with private enforcement mechanisms, an almost entire dependence on social networks in lieu of markets, and a strong preferences for present consumption at the expense of intergenerational equity reinforcing the traditional saying "yenegewin egziabher yawkal" i.e. only God know about tomorrow– that of tomorrow will be known by [only] God. The Ethiopian economy experienced the lowest total and per capita growth rate. These outcomes were inimical for the emergence of ICBE to propel the economy towards reducing information and transaction costs, lowering uncertainty in human exchange, assisting individuals to make choices on the basis of their mental models - all of which are essential components of a conducive ICBE to drive the development process.

Given the above scenario, when the modern policy regimes of Ethiopia are taken together at the onset of the ICBE study period, the Ethiopian economy had traversed ideological swings, political and policy reversals and abrupt macro, meso and micro management system changes all of which did not augur well to drive it towards stability, sustained growth and productivity11. The ICBE in the baseline period of this study has thus been overlaid on abruptly changing policy regimes.

This paper has six parts. Following this Introduction, the next section briefly discusses the Methodology and the Sample Size Distribution followed by the Formal Regulatory Frameworks [rules of the game] and the Broad Outcomes [play of the

[10] These two seemingly contradicting elements of the ***ancient regime*** are deliberated on in some detail in the Draft Research Report, Tenkir Bonger 2009a, Chapter One, Section 4, State and Economy in Ethiopia in the pre-1991 period.

[11] A 2002 survey by the World Bank (2007) showed very low labour productivity in Ethiopian firms partly accounted for by the poor ICBE. China's average wage was three times that of Ethiopia, but China's labour productivity was nine times higher. The investment climate constraint is said to have accounted for about 16% of the low level of productivity.

game] towards ICBE in the study period. The core of the article in Section Five, ICBE Promotion Performance Indicators are discussed under **governance, expansion of services**, **standard and quality**, **possible efficiency gain**, **effectiveness of the ICBE social and physical infrastructure, regional and gender equity**, **accountabilit**y, **innovativeness**, **development and sustainability**. Section Six outlines the main Emerging Issues and Challenges. Derived from some of the ramifications of the operation of ICBE in the study period as reported on in Sections Five and Six, the Way Forward in Section Seven concludes the paper raising issues calling for fine tuning of policy, institution building avenues and implementation modalities.[12]

2. Methodology and sample size distribution

The survey encompassed eleven categories of interviewees which can be broadly classified into five vis.

Private higher education [PHE] and health service providers	[2]
PHE & health service provider staff	[2]
Direct beneficiaries of services – students, patients & alumni	[3]
Indirect beneficiaries of services – employers and parents	[2]
Government regulatory authorities	[2]
Total	[11]

Under private higher education, four separate assessments have been designed to collect data from the education firms, staff of the education service providers, students (direct beneficiaries) and their parents (indirect beneficiaries) of the education services. Similarly, under the private health institutions, three different surveys were structured to obtain information from private health firms and their staff and patients (direct beneficiaries). In the third targeted institutional category, employers of and the alumni themselves, the survey was designed to compare the outputs of graduates from PHEs with those from Government colleges. The survey also included education and health regulatory institutions which as per the scope of the study, was confined to offices of the respective Federal and Addis Ababa Regional Governments.

A total of 424 sample sizes were selected using structured questionnaires. Although this was an institutional study, to meet the minimum criteria for statistical inference, a sample size of 30 was adopted for institutions, parents and employers. Instead of

[12] Part of the explicit and implicit conclusions and recommendations emanate from the larger Draft Research Report cited under footnote number 6. The regulations and proclamations on which the discussion is based are listed in the reference.

interviewing just one, two each of staff [education and health separately], students, patients and alumni were interviewed from among the respective institutions giving a total of 60 interviewees each in these four categories. Among regulatory authorities, one each of the Federal and Regional health and education authorities were interviewed. From a total population of 467 private health institutions of 103 lower clinics, 146 medium clinics, 99 higher clinics, 94 special clinics and 25 hospitals; a stratified sample was selected for interview. Similar procedure was employed for PHE institutions. Given the limited time and the large number of employers, it was impractical to construct a full list of all firms that employed graduates of private higher education institutions. Instead, a random sample of 30 were selected from a list of 100 firms that were commonly known to have employed graduates of private higher education institutions.

Accordingly, 30 samples each from PHE and health institutions and 15 reserves for each that approximate the above distribution were selected. The names of the actual 30 firms each from among the health and PHE institutions that gave the required information through structured interview is attached in the Annex 1. The names of the 30 employer firms are listed in Annex 2. Once the institutions were selected in this way, the corresponding students, staff, parents and alumni were selected at random for each respective PHE and health institutions. Patients were interviewed on the day of their show up at the health institution sampled. The breakdown is shown in the following table.

Table 1: Breakdown of the Total Sample Sizes

No	Targets of Questionnaire	Sample Size
1	Education Firms	30
2	Health Firms	30
3	Staff of Service Providers –Education	60
4	Staff of Service Providers – Health	60
5	Students	60
6	Patients	60
7	Alumni	60
8	Parents	30
9	Employers	30
10	Regulatory Authorities – Education	2
11	Regulatory Authority – Health	2
	Total	424

The institutional responses to the outcomes of the ICBE collected using the above set of questionnaires from the PHE firms, their staff, customers, indirect beneficiaries and supervising government agencies were categorized under governance, expansion, quality and standards, possible efficiency gains, effectiveness in the physical and social infrastructure, regional & gender equity, accountability in the service delivery process, indicators of innovativeness and development and sustainability.

3. The formal regulatory frameworks: The rule of the game

By privatizing a myriad of corporations previously owned by the state, the post 1991 Government of Ethiopia down sized the role of the state in economic activities and elevated the share of the private sector to enable it to operate within a market-led economy. This was a significant departure from the military regime's state-centered and centrally planned development policy.

The initial formal business climate change began following the Investment Proclamation No. 15/1992, which attempted to promote investment and lay a ground for private property. It encouraged investing domestic private capital in all sectors including in the production sector. Particularly after amendments in Proc. No. 7/1996 and the subsequent regulations, investments in private higher education and private health institutions have increased. The regulations grant different types of incentive packages for investment projects. It includes the education sector as one of promoted sectors and establishes eligibility for investment incentives in such areas as income tax exemption and duty free import of capital equipment.

By further amendment, in Regulation No. 36/1998, education is considered as a pioneer investment with more income tax incentive for general, secondary, technical, vocational and higher education. On their part, regional governments[13] have also played significant roles in promoting the service sector in general and sub sector in particular, education by making available suitable plots of land with relatively fair lease price in order to attract the private sector. The consecutive investment codes of Ethiopia since 1991 show that the educational sector is fully open to both local and foreign investors.

The main formal features for improving the investment climate as enunciated in the Program for Accelerating Sustainable Development and Ending Poverty [PASDEP: 2005] include:

[13] See paragraphs below on decentralization of power to regional governments.

(i) continued simplification of business processes & licensing requirements
(ii) strengthening of the regulatory framework and establishment of a level playing field through judicial strengthening, implementation of competition policy and enforcement of contracts.
(iii) Financial sector reform to increase the availability of capital and working finance
(iv) progressive withdrawal of state entities through privatization program and increased competition;
(v) continued reforms to establish land tenure security
(vi) maintaining macro-economic stability and
(vii) where appropriate, government provision of support to the private sector in partnership and in some instances when a catalyst is needed to overcome initial barriers.

With specific reference to institution creation to facilitate dialogue, the Public-Private Consultative Forum [PPF] was created by the Ministry of Trade and Industry and the Chambers of Commerce and Sectoral Associations. This serves the private sector as a venue to participate in reviewing and commenting on the government's strategies. The Consultative Forum involves owners from health and education sectors. It provides an opportunity for them to interact with Government & with each other.

With a population of about 73 million [CSA: 2010], the second largest populous country in Africa after Nigeria, and diverse geographical and cultural entities, another important policy outcome of the post-liberalization period is the decentralization and consequent power devolution to lower levels of administration. Unlike in the preceding decades of centralism, Ethiopian administration has shifted into a more proto type decentralized structure. Decentralization was operationalized with the establishment of regional governments in 1992. That Proclamation empowered regional states to have legislative, executive and judicial powers in respect of all matters within their geographical areas except in currency, foreign affairs, defence and inter-regional infrastructure, areas which have remained under the authority of the Federal Government.FDRE:1994]

In order to create a conducive environment for business among others, the Government has also carried out Judicial and Legal Reforms. According to PASDEP [2006], new laws are to be drafted and enacted in a number of key domains including revisions to civil and commercial laws. In addition, to provide better access to information on the justice system, a National Justice Information Centre is to be established.

The PASDEP document discusses two major elements of the civil service reform process - staffing and incentives, and setting service standards for responsiveness to

the public. They are being tackled under a medium-term remuneration policy at both Federal and Regional governments' levels. A performance planning and management system, a human resource management policy and supporting rules and regulation including job evaluation and grading, terms of service, and a civil-service-wide HR management information system are being put in place. Gender-responsive recruitment mechanisms and measures to make the working environment more women-friendly are expected to be instituted. To strengthen top management, a program of annual management training and bulk training of civil servants are targeted in the PASDEP.

To improve service delivery, in addition to the Business Process Reform and Public Service Delivery Improvement Policy already completed, performance and service-delivery baselines are expected to be established for (a) core government functions and (b) key services. These are to be publicized at the national, regional, and local levels. A Public Servants' Code of Conduct and supporting systems are currently under development. The Public Service Delivery Improvement Policy (PSIP) was adopted by the Council of Ministers in 2001. Most federal civil service reform offices have established Customer Services and Complaints Handling units and prepared service standards. Some regions have already adopted and are implementing it while the emerging regions are still in the process of adapting it to specific regional contexts. The effectiveness and efficiency of all of these interventions remain to be evaluated by the targeted customers.

2. The broad outcomes: Play of the game

A full ***ex poste*** appraisal of the impact of the above regulatory and reform frameworks (play of the game) will need some more duration of implementation. The following section provides only some general anecdotal review of their outcomes. The results of detailed interview based evaluations of ICBE and its outcomes from randomly selected PHE and health firms follow in sub-sections Four and Five below.

Five key federal Ministries (the Ministry of Finance and Economic Development [MoFED][14], Ministry of Trade and Industry [MOTI], Revenue and Customs Authority [ERCA], Ministry of Infrastructure, and Ministry of Agriculture and Rural Development [MoARD] together with their affiliated agencies have already undertaken service improvement measures resulting in the much reduced service time for licensing & customs clearances. The improvements are well observed in the shorter time it takes to obtain investment license by the Ethiopian Investment Agency. [World Bank: 2007].

[14] Implicit in the fore of the federal ministries is the Federal Democratic Republic of Ethiopia which is the forerunner in the references..

The decentralization process has devolved both legitimate power and fiscal decentralization at regional and down to *wereda*[15] level. In this context, both the health and education sector services are decentralized. Moreover, National Action Plan (NAP) on gender, Citizens' Charters have been developed and publicized by all federal institutions during 2006-07. Minimum service standards at the *wereda* level, defining indicators, norms and standards are meant to strengthen the above efforts.

As a contribution to the dialogue, a consultative research forum led by one of the major private university colleges, Saint Marry, undertakes studies related to the features and the environments of the private education institutions [Alebachew Truneh: 2005; Ayenew Tessera: 2005; Ashcroft and Rayner:2004; Damtew Teferra: 2005; Messai Girma; 2007; Tesfaye Gugsa: n.d.; Wondossen Tamrat: 2005]. The studies presented in 2006 & 2007 focussed on quality of higher education, the role of PPP in promoting quality, the need for research in PHE institutions, national laws on Government incentive structure, government policies and institutional responsibilities, PHE institutions & Industry Relationship etc. These are meant to enhance the information and institutional capacities of PHEs.

There are however, other lines of communication between the private sector and the government. One way is through annual consultation workshop between the respective ministries and the private sector. The Ethiopian Chamber of Commerce and the Ministry of Trade and Industry meet in a formal meeting after the end of the fiscal year. There are similar forms of consultation in the Ministry of Education [MoE] and the Ministry of Health [MoH] focusing on issues like quality & accreditation for improving the development of the private sector.

The outcomes have also been reflected in the passing of the Trade Practices Act and the adoption of competition laws and regulations. An important supporting activity is sustaining the rule of law – strengthening the legal framework and contract enforcement so that businesses can have confidence in their dealings with other businesses and the safety of their investments. This is ongoing as part of the judicial reform and strengthening activities under the capacity-building initiative.

While the above are the general settings of the rules and play of the game for ICBE in the post 1991 period, the followings section offers more detailed performance measures of the ICBE improvement outcomes set in motion by the process in the post 1991 period in the realm of PHE and health.

[15] The lowest decentralized administrative unit below zone. A number of zones make up a regional state.

5. ICBE improvement performance indicators

5.1 Governance

One of the core areas for the assessment of investment climate is the relationship of government and business firms. Good economic governance in areas such as regulations, business licensing and taxation is a fundamental pillar for the creation of a favorable business environment. Effective regulations address market failures that inhibit productive investment and reconcile private and public interests through enhancing investment by providing various incentive schemes and by protecting firms from informal practices and unfair competition. The number of permits and approvals that businesses need to obtain, and the time taken to obtain them affects the level of investment and transaction cost. Moreover, unpredictability of policy directions and inconsistency of regulations, lack of proper enforcement and negative perception about the tax environment may limit the operation and growth of the private sector.

Accordingly, first attempts were made to measure the ability and consistency of the government officials' interpretation of laws and regulations affecting private health institutions and how firms perceive this situation whether as constraint or opportunity for the operation of business. 70% of the respondents do not perceive the knowledge and consistency of government officials in interpreting laws and regulations as a constraint. 75% of survey results depict the familiarity of the private sector firms with government policies.

Another set of indicators focused on the relationship of private health firms with the government at Local, Regional and Federal Government levels and the extent to which this relationship has been helpful in the smooth operation of their day-to-day business and creating a viable investment climate for private sector development. The survey result illustrates that in Ethiopia, governments at all levels have been found to be helpful in creating a good business climate for private sector development[16].

With such premises, 81%, 88%, 86% of the firms have indicated the helpfulness of the government at Local, Regional and Federal levels respectively. However, Federal Inland Authority, Customs Authority, Ethiopian Telecommunication Corporation, Ethiopian Electric Light and Power Corporation, Water Supply and Sewerage Authority are the first 5 Government organizations which are relatively inefficient in providing services required by private health institutions in Addis Ababa. On the other

[16] Some of the survey results in these respects may have to be taken with a pinch of salt as firms would consider that it is not in their best interest to criticize the Government.

hand, tax administration, license and permit, macro-economic instability and corruption are the first five problems that are seen to have created minor obstacles for the growth and expansion of private health firms in Addis Ababa.

In addition to being familiar with government policies, private firms also participate in policy discussions directly or through their representatives at different levels (federal, regional and/or local) of government. **But the response about government regulations and enforcement predictability is inconclusive as half of the firms said they were predictable in most cases and the other half said they were not.**

There are a considerable number of firms that agree (52%) about the existence of informal gifts to government officials in order to make things done but its effect as obstacle is ranked as minor by the respondents. The majority of firms identified that their relationship with government as helpful for their business, but when it comes to the different levels of government from federal to regional and then to local, the number of firms identifying the relationship as helpful decreases. This may lead to a suggestion that either problem solving decisions are still centralized or the service rendering capacity of regional and local governments are not sufficiently developed or they are not providing friendly services.

The majority of firms have identified the existence of all types of inspection in the typical year, 2006/7, except the tax office. Relatively, the visits identified for inspections seem more (84%) by quality and standard office of the Ministry of Education, followed by Labor and Social Affairs (65%), the Federal Quality/Standard Agency (64%) and finally the Incomes Tax Office (47%). The reported senior managers' time spent in dealing with government regulations varies from none to 75%, but the average is 22% with significant variations in firm responses.[17]

Crime is also a key constraint in the governance investment climate. Crime increases transaction costs. Crime, theft and disorder are not only personal concerns but also of investors. Crime drives up the cost of doing business. This is because crime and disorder lead to loss in productivity and destruction of property. Only few firms in investment and business environment survey have indicated the existence of this as a major problem. Thus, street crime, theft and disorder are not found to be major problems in doing business in Ethiopia. As a result, the corresponding annual cost that went to finance security as percentage of total operating cost was low.

[17] According to Enterprise Survey Data [World Bank: 2006] generally in Ethiopia, business firms' management time spent in dealing with requirements of government regulations is 3.8 %. The result above shows that PHE and health institutions' managers take far more time.

On the other hand, commercial disputes between firms and their clients occur in the course of doing business. When legal institutions are weak or non-existent, resolving these disputes can be challenging. However, few firms recognize the function of the judiciary system as constraints to their operation. According to the result of the survey, 43% of the health firms stated the existence of minor obstacles within the judicial system. The second set of indicator along this line is the direct costs of security incurred by firms as well as their direct losses due to crime, theft and disorder. These resources represent opportunity cost since they could have been invested in productive activities. Due to low rate of crime, theft and disorder, there was not much cost incurred by either education or health firms. The reported prevalence of default payment and loss as a result of theft, robbery, vandalism are low.

To evaluate the functioning of the judiciary system in general, four indicators, speed, fairness, impartiality and judicial system's cleanliness from corruption were used. In all the four cases, firms' ranking for fairness is greater than the other choices. The better indicator that is ranked as either agree or strongly agree by 85% of firms are the justice system's affordability and ability to enforce decisions. [18] The final four scales of measurement used to assess the functioning of the judiciary were their perceptions as no obstacle, minor obstacle, major obstacle and severe obstacle. 29.4% of the respondents stated that the judicial system was not an obstacle at all, and 70.6% of respondents identified them as of minor obstacle.

Crime and street conflict are minor or no obstacle in general. Those few firms involved used the formal justice system rather than the *'shimgilina'*[19] to resolve their disputes. Eventhough their own experiences are limited, most agree that the level of the justice system's fairness, impartiality, quickness and affordability and enforceability have not been obstacles for their business[20].

With respect to governance at firm level, unlike the previously state-run entities, at micro level, a new and diversified form of ownership and governance by nationals is emerging. While six of the surveyed firms are solely owned, the rest and the majority are established in the form of partnership. Forty percent of the establishments'

[18] Since our sample firms have had very limited experience related to court action, the evaluation is based on their general experience.

[19] In Ethiopia, apart from the formal courts, there are other mechanisms of conflict resolution. One is '*Shimgilina'* whereby cases between the two parties will be handled by elders or individuals selected by both parties. No resort to this venue of conflict resolution was reported.

[20] This mainly arises from their non-involvement. Case studies of those involved could have been a much better indicator along this line.

response shows that the firms are part of a larger firm. The share of individuals and other businesses in the surveyed firms varied from ten percent up to eighty five percent, the average falling around fifty percent. In terms of classification of ownership by nationality, except one firm, all are registered as domestic firms, implying that the views and perceptions about investment climate and business environment presented in this paper represent mainly that of domestic firms.

Firms' top management experience and level of education similarly show variations from totally inexperienced managers to others with thirty years of experience in the field of education at an average of 8.6 years. The managers' level of educational qualification varies from first degree (20%) to Masters/PhD abroad (34%). From the sample taken, there are only four firms that have employed expatriate staff and even then at non-managerial level. Indigenous governance is the defining characteristic of PHEs and private health institutions.

In order to gauge the ease of operation of horizontal linkages between firms for self governance, firms were asked in which associations they were involved in and associated with. The result shows that almost all higher education firms (96%) identified themselves as members of professional associations but not in others. The three most identified services that firms expect from the associations are providing market information (25%), support for accreditation process (22%) and support on training and workshop (23%).

5.2 Expansion[21]

Since private higher education and health firm trainees come from the public sector, the following paragraphs survey expansion in the public domain as a background to the PHE and private health institutions. In the age category of children 7-14 years [lower and higher primary in grades 1-8], in 2006, primary school total enrollment reached 12,657,342 (MoE: 2007) from a mere 2,466,464 in 1991 (World Bank: 2007). The primary gross enrollment ratio at national level became 85.8 %, with 78.5% for female and 92.9% male (MoE, 2007). When alternative basic education is included, the gross enrollment rate for primary reaches to 91.3% (98.6% for boys and 83.9% for girls). In the consecutive years from 2001/02 up to 2005/06, at national level, the average annual growth rate was 11.7%. Starting from far behind, primary enrollment

[21] Most expansion has taken place in the state sector. But nearly ¼ of the newly constituted Technical and Vocational Education Training [TVET] pragrammes are in the private sector. The data for this section heavily relies on the chapter by Demmelash Habte in Tenkir Bonger [ed] 2009a.

rate is now approaching that of the level of the Sub-Saharan Africa regional average of 86%, in Ethiopia recently reaching more than 95% [World bank:2010].

In 2006, the secondary school total enrollment reached 5,061,872 from 720,825 in 1992 (World Bank: 2007). The total gross enrollment rate rose to 37% by 2006 from only 13% in 1991. The female gross enrollment rate also rose to 28% in 2006. Implementing the Technical and Vocational Education Training (TVET) program, in 2005/06 at national level, the government TVET institutions reached 113 and non-government institutions increased to 156 (MoE: 2007). By 2006, the total actual enrolling capacities of both institutions were 123,557, including both regular and evening programs (MoE: 2007). The percentage share of vocational and technical enrollment from the total secondary enrollment increased from 0.18% in 1999 to 2.38% in 2006, (World Bank: 2007). The total secondary education teachers increased from 23,319 in 1991 to 95,590 in 2006, a nearly fourfold increase.

The high growth rate, absolute levels of attainment in enrollment rate in the pre-primary, primary and secondary levels have also been achieved at tertiary level too. In this case, a more than fivefold increase from 34,076 in 1991 to 191,165 in 2005 was achieved (World Bank: 2007). The non-governmental higher education institutions enrolment in 2005/06 was 39,691, which is a share of 22% from the total (MoE: 2007). The number of tertiary level teachers increased to 4,847 by 2005 from only 1,690 in 1991.

The average total enrollment of students in PHE per firm in the academic year of 2006/07 was found to be 1,590 with a standard deviation of 2,107 for degree and 1,328 for diploma students with a range from the minimum 24 up to maximum of 7,606 students. Similar to the size of the academic staff, the average enrollment in PHE is affected by few firms which have higher enrollment capacity. Those that had higher enrollment capacity in the period mentioned were with student populations of 7,606, 6,283, 5,217, and 4,355. The average enrolment per firm for each level was bachelor degree (971), diploma (858), and certificate (172). This indicates that bachelor program takes the larger number of enrollment per firm. There were distance education programs both in diploma and degree with average enrollments per firm of 36 and 283 respectively. Nationally, if the average of the last five years trend is maintained, there is a real prospect of reaching the MDG goal with respect to primary education even before 2015. If the current trend continues, gross enrollment at primary level will be 100% by 2010 (MDG Report: 2004:19).

5.3 Quality & standards

The post-liberalization reform, particularly the one in 2003 established two autonomous public institutions. They are the Higher Education Relevance and Quality Control Agency (HERQA) and Higher Education Strategic Centre (HESC) which are expected to control quality through external audit, guidance and overseeing both public and private institutions. With regard to standards and quality, only 17.2% of PHE institutions said that they have services which are of internationally recognized quality and certification. This is however at variance with alumni, 41.1% of which claimed that their alma mater had internationally recognized quality certification

Despite significant increase in the provision of health services both by the public and private sectors, the progress achieved in health in terms of quality and quantity has been much slower. In the face of population size of about 80 million, in the year 2005/06, there were 5,955 health posts, 1,206 health stations, 635 health centers, 138 hospitals and 13,922 beds - about one hospital bed for over 5,390 people which is very low by any standard.

The majority of basic health indicators in the country show that the health status of the population in Ethiopia is worse than the average for Sub-Sahara African countries. Life expectancy at birth averaged only 48 years. Infant mortality rate (IMR) is 97 per 1,000 live birth, child mortality is 50 per 1,000 children and maternal mortality ratio is 673 per 100,000 live births (CSA: 2005). Compared to education, achievements in terms of improving the coverage and quality of health services have been modest. Many of the rural health institutions are understaffed and lack appropriately trained and experienced manpower.

Private sector health firms reported that they could not attract enough patients. The obvious reason is the economic demand with patients looking for lower fees, inability of the private health institutions to meet the minimum standard and the problem of recognition as a medical establishment. Very few of the sampled firms have reported to have internationally recognized quality certification. Even though the service quality of private sector health institutions is better than equivalent government institutions, the absolute quality of their service leaves much to be desired[22].

[22] The only consistent proxy measurement of quality in the study was a comparative one between Government and PHE/private health institution by employers [for PHE graduates] and patients in which the private ones were reported to have been at par [2/3 of all respondents] with those of Government. Those who said that the private ones were better were significantly more than those who said that they were worse. The value of this is of course dependent on absolute measurement by professionals.

Between 1992 and 2006, some 5.5 billion Birr worth projects were licensed by the Investment Authority for 432 projects in the health sector. Of this total capital intended for investment in the sector, only 31.6 % was in the implementation phase and even fewer [5.4 %] started services. In the same period, only 10.8 % with a capital share of 49.48 % of all the investments licensed in the health sector were owned fully or partially by foreigners. Both the quality and standard of private health and education leave much to be desired. Despite numerous attempts by the government to particularly encourage foreign investors, private foreign investment in Ethiopia is at a very low level.

It appears that given the rapid speed of expansion especially in the education and to some extent in health is enveloped by limited resources at disposal, a mere drive towards achieving universal primary education, at higher education levels may come at the expense of quality of education [Damtew Tefera:2005; Ayenew Tessera : 2005; Ashcroft 2004] and health.

5.4 Efficiency gain

Private sector development involves stimulating domestic enterprise creation, growth and attracting more foreign investment. Legitimate investment needs an enabling environment. Investors invest where they find profitable opportunities and try to avoid risks or at least minimize them. Thus, good investment climate is an important determinant of a country's success in raising investment levels but also for firms to grow and develop through competition.

Efficiency gains in the process are both internal when firms employ new technologies and adopt healthy competitive practices, and external which are induced by ICBE improvement measures external to the firms emanating from Government and/or global practices. When competition results in reduced costs [mostly transaction ones such as time spent in acquiring licenses and other services], its obverse is increased productivity, and gains from competition accruing both the consumers and suppliers of the services.

In this regard, with respect to the external efficiency gains, sample-licensed projects from manufacturing, construction and service sectors found that the average license approval time of projects over the period 1994-2003 showed a falling trend. The average number of days it took to get investment license in 1995 and 1997 were 41 and 22.8 respectively. This time drop shows that the Ethiopian Investment Commission has improved the efficiency of offering licenses [World Bank 2007].

The 2002 Ethiopian Investment Climate Survey by the World Bank showed that tax rate, tax administration, access to land, electricity, corruption and regulatory policy uncertainty (in decreasing order) were the first five major constraints (World Bank: 2004). A similar survey of 2006, which covered 600 firms[4], showed that there was improvement in investment climate in Ethiopia compared to what it was in 2002 (World Bank: 2007). The study confirmed that improved conditions prevailed in business registration and licensing, customs clearance, telecommunication services and labour regulations. The update also signaled concerns in areas such as access to land, the firms' perceptions of the overall tax regime, access to credit and utilities.

Taking successful competitive attraction of teachers and students by the private firms as a proxy for efficiency gains, firms reported to consider a variety of possible options including rumors, lowering fees, increasing salaries and/or manipulating prices and improving services. Though two or more of the methods are exercised by most of the firms, the dominant mechanisms are rumors (63%)[23] and lowering prices (59.3%). Run by bureaucrats, whereas fee charging public institutions take time to respond to conditions of demand and supply, private sector health and education firms appear to increase the producer and consumer surpluses by responding to prices more rapidly.

Education firms enrollment fee is also considered to show the degree of competition. It gives a signal for the existence of competition especially in the bachelor and diploma programs both in day and evening offers. There is large variation between per credit hour cost, ranging from 40 (35) to 120 (400) for bachelor degree by day (evening) and from 35 (35) to 300 (260) for diploma day (evening) programs. This may be partly explained by the nature and type of the course and partly as a mechanism of dislocating other competitors from the market. In order to reduce cost, firms reported to economize on one or more of the inputs: academic staff time, class room and teaching materials.

The other indicator for the efficiency of firms to increase service quality and productivity is capacity utilization. For the majority of firms in the health sector (86%) capacity utilization is 75% and above, but there are also 11% of firms whose capacity utilization is less than 50%. The main reasons that these firms mentioned for the underutilization of capacity is mainly lack of demand and working capital. Although they are operating at below capacity owing to various reasons, it can be inferred that

[4] Included 360 manufacturing, 125 services and 115 informal sector firms taken from six major urban centres of six regions, including Addis Ababa and Dire Dawa.

[23] Nonetheless, according to the result of the survey, these practices have only created minor obstacle to the smooth business operation of most other firms who reported to not practice them.

private health sector firms in Ethiopia are more efficient than their counterparts in government institutions. The underlying reasons for the private sector firms efficiency is the economic use of the available resource, for which rent and salaries [costs] have to be paid in relation to return/revenue, that can be expressed in terms of the efficient use of operational space, staff time and materials mainly related to overhead costs. Competition and resultant efficiency are also implied when private firms share the market with dominant monopolist supplier, Government. Private hospitals can survive only if they actually provide or perceived to provide a better health service.

5.5 Effectiveness[24]

Taking institutional reforms to improve ICBE, their **effectiveness** will hinge on the proper functioning of the facilitating physical and social infrastructures in place. A strong infrastructure enhances the competitiveness of an economy and makes a business environment more effective for firms' establishment, growth and development. Good infrastructure efficiently connects firms to their customers and suppliers and enables the use of modern technologies. On the contrary, deficiencies in infrastructure create barriers to productive opportunities and increase costs for firms. Both the physical and social infrastructure considerations include the state of land access & ownership, power, water supply and communication services particularly e-mail and web.

Access to plot of land is a major obstacle to education firms. Only 10% of firms from the total respondents fully owned their establishment, while the other 13.3% own partly and the majority of firms provide their services by renting buildings. By their very nature, private education in general and higher education in particular are businesses which have a long payback period especially if the objective of private firms includes serving the community. When most firms work on rental bases, it leads to the question whether the businesses are just at their infant stage, their targets are the short term benefit that arises from the accumulated backlog demand or whether there exists obstacle in accessing investment capital on land. The sizeable number of respondents ranked land availability as a major obstacle (44.4%) and very severe obstacle (25.9%).

The next set of government services related to making businesses effective are the provision of different services which are essential for running businesses. These

[24] Some aspects of effectiveness which enhance or otherwise of ICBE were spelt out under Governance.

services affect their efficiency and competitiveness more directly. The services[25] include supply and repair of telephone, electricity, water, and different licensing and permit service providers. Firms were asked to give information about the waiting periods they take in order to get such services and evaluate the services in general based on their experience. According to the responses, the average waiting periods in days for the three utility services are telephone repair (6.5), electric connection (5.4), and water connection (9.3). But the waiting periods for construction permit, operating license from Ministry of Trade and Industry [MoTI] and operating license from Ministry of Education [MoE] are 21.4, 28.9 and 67.7 days respectively.

The service that takes the highest average waiting period is for obtaining operating license from the Ministry of Education [MoE]**.** In order to see the operational efficiency and honesty of public service agencies including the central government, seven public institutions were evaluated by higher education firms based on four scale ordinal variables: very good, good, bad and very bad. The result shows that, all the institution efficiency and honesty is ranked on average 33% as very good and 57% as good which implies that 90% of the education firms are satisfied by the operational efficiency and honesty of these listed public services including the central government.

Since the majority of PHE firms are not backed up by generators, they identified the existence of power interruption as a major obstacle. In the consideration of electricity, transportation, water supply and communication taken separetly with the degree of being obstacles, electricity supply is the major obstacle and communication is the least. Thus, taking the average of the four as potential obstacles in infrastructure, the reported average negative effect on business is minor.

Transport is comparatively a moderate obstacle for the majority of all groups except for patients who visit health centres near their homes where the obstacle is rated as minor. However, the majority percentages of parents rank it as major obstacle. Telecommunication infrastructure is a minor obstacle for the majority of all groups; relatively few, less than 17%, consider it as major obstacle. Water supply is considered as moderate obstacle for the three groups, but the majority of staff considers it as minor problem. The study conducted being for firms in Addis, the infrastructural constraints appear to be relatively minor. E-mail is widely used in business but not the web.

[25] FIRA = Federal Inland Revenue Authority ETC = Ethiopian Telecommunication EEPCO = Ethiopian Electric & Power Authority WSSA = Water & Sewage Authority MoTI = Ministry of Trade and Industry MoE = Ministry of Education CenGov = Central Government

Another indicator for the existence of favorable infrastructure and better effectiveness in the delivery of educational services is the availability of recreational and sport facilities. A wide range of facilities like football, volley ball, basket ball, etc were considered. The aggregate response of the groups shows that 51% of respondents reported that there are one or more of sport and/or recreational facilities. Given the premium on space, outdoors facilities are far less than indoor ones.

Regarding the effectiveness of the ICBE improvement measures in the provision of health services, close to one-fifth of the total population (18 %) who had health problem and sought medical assistance reported that the service was too expensive to consult. Problem of long waiting time is reported by 18% followed by about 16% that reported the unavailability of drugs and 14% reported lack of laboratory facilities in the health institutions. Among the survey population, 22% reported shortage of personnel & medical equipment.

Although there is not as such a major problem in obtaining electricity connection in Addis Ababa, the results of investment climate survey in the private health sub-sector in Addis Ababa indicates that 77% of the firms reported to have experienced power outage ranging from 1 day to 111 days. Dealing with health matters which are more sensitive to the absence of power, 70% of the firms were forced to own or share a generator with its all attendant impact on their operational performance and profitability. Likewise, the source of water being from public sources, 87% of the firms reported to have faced an average disruption of water supply for 15 days. The finding in the health survey reveals that 97% and 30% of the firms have indicated the existence of respectively electricity and telecommunication infrastructure problems posing obstacles on the road to delivering effective services.

5.6 Gender & regional equity[26]

Patriarchy and early marriage are in the social fabric of most communities in Ethiopia which have been contributing towards a lower participation rate for the girl child. Even when some improvements in enrolments are made at lower levels of education, high dropout rates following early marriage by young girls opens up the sex disparity in educational attainments. Limiting the minimum age of marriage and concerted awareness efforts by Government and rural communities has somewhat narrowed the gender gap, but differences still prevail.

[26] Since private goods and services are offered on the basis of the ability to pay, level of equity on social grounds is not dealt with.

The regional distribution of primary gross enrollment of 2005/06 is markedly disproportionate; with the highest in Addis Ababa (148%) and least is the Afar region at (22%). Ratio of female to male net enrollment in primary, secondary and tertiary are 0.89, 0.61 and 0.35 respectively. In spite of this, the PHE institutions have played a significant role by creating access to high proportion of women students. More females in health and education by distance, evening and adult education has produced a better spread of educational attainment by age group giving adults a second chance in education. There is now more parity between the sexes both in admission and alumni in the private sector but not yet among teaching staff showing the backlog of gender gap and perhaps also of females preference and better capacity to access employment in non-teaching jobs in the economy. While gender parity between the sexes among students is 52:48 in favour of men, the ratio slides down to 72:28 among the teaching staff [Tenkir Bonger.(ed).2009a].

Given that a bulk of the GDP originates from Addis Abeba, most PHE and health service firms are also located in the capital city. While 20 of the privately owned hospitals are found in Addis Ababa, in regions like Afar, Somali, Benishangul-Gumuz, Gambella and Harari, there are none. The distribution of private health facilities is skewed towards the urban areas. The growing size and scope of the private health sector, both for profit and not-for-profit, offers an opportunity to enhance the health service coverage through such measures as subsidy and more focus by government towards the rural areas. One of the problems in emerging regions is low demand for private health services which is also true for public services in health and education.[27]

Despite the clearly stated objective of the government to undo regional imbalance in economic growth, new private investment is still attracted to areas where sufficient infrastructure is available and the demand for goods and services is more concentrated. These issues apparently figure more in investors' decisions about where to locate their projects than tax and other incentives (for example easy access to land) that regional governments provide to new investors compared to the incentives provided in Addis Ababa. Disparity in spatial location is evidenced in both approved and operational investment projects. More than 89 % of the licenses issued are for domestic investment projects intended to be located in Addis Ababa. With regards to operational projects, of those operational domestic investment projects in the health sector 29 % and 27 % are found in Addis Ababa and Amhara regions respectively. Out of the total 9 operational foreign projects, 7 of them [78 %] are located in Addis Ababa.

[27] See details in Gezahegn et al. 2010. "Assessing Progress by the Developing Regional States in Implementing Their Development Plans". Draft Report Submitted to UNICEF.

Unlike in education, the prevailing inequality in health services does not seem to augur well for the attainment of MDGs. A lot of effort and resources will be required to accelerate the current slow progress to attain the MDGs. Although infant and child mortality rates have been declining over the last five years, the rates still remain very high. At the current slow rate of decline, attaining the child survival Millennium Development Goals (MDGs) will be quite challenging. The private sector's contribution in this regard is far from adequate. With profit motive as the par excellence motive of private investment, public policy need to ameliorate the shortfall in the provision of especially health services.

5.7 Accountability

Perhaps the most important finding which emerges from the study is the higher level of accountability by PHE graduates compared to those from Government higher education institutions as consistently attested by employers[28]. This is critical in the realm of governance, service delivery and performance at work.

None of the employers rated PHE graduates as 'worse' than those of government in terms of the very important attributes of consciousness about rights, obligations, friendliness and cooperativeness. As many as 39% and 38% of the employers rated PHE graduates as 'better' than public sector graduates with respect to cooperativeness and friendliness. When the proportion of those respondents who rated the PHE institution graduates as 'worse' [which were in all cases less than 10%] are deducted from those who rated them as 'better', the net gains are 33%, 30%, 26% and 25% for self improvement, flexibility, willingness to take more responsibility and punctuality respectively. There was no statistically significant difference between the responses of employers and alumni in this regard.

The source for such better outcomes can be ascribed to the fact that given PHE students and patients are fee payers, they are conferred with more rights to seek accountability from the service providers in terms of both the provision of the services and the creation of a better social environment to attract more client students. Value for their money is embodied in their receipt of the services which they in turn pass on upon employment [by the graduates] and to their patients [by health institutions]. The current alumni of the PHE institutions had to simultaneously meet the academic standards on their part and unfettered payment of their fees resulting in the

[28] See Tenkir Bonger. 2009b. "Employers and Patients Performance Evaluation of Private Higher Education [PHE] Graduates and Private Health Service Providers Compared to that of Government". Paper Presented at the 17th Conference of Ethiopian Studies, 2-5 Nov 2009, Addis Ababa.

recognition to demand rights in conjunction with responsibility which appear to have been taken to the world of work. In order to attain a higher rate return for investment in education, public providers may need to take some cues from the modalities of the PHE institutions

5.8. Innovativeness

Entrepreneurs are more creative, innovative and risk taking people/firms in their businesses and, therefore, they are supposed to perform better, faster and cheaper. Their creativity and effectiveness enable them to manage uncertainties and become successful**.** However**,** like in public institutions, the main value of PHE firms has been found to be the usual teaching which on average makes up 90% of the value of their output. 60% of respondent firms reported to have been engaged in research taking 7% share of their total services**.** Thirteen firms reported to have been engaged in consultancy services making up 5% of the value of their services. There are also around 50% respondent firms that have engaged in publishing services which amounted on average to 4% of their total services.

On more positive side, unlike in the past, local text books and business profiles are being published by scholars in the country. Compared to government colleges, these may be considered as new shoots from traditional offers of higher education. Several institutions are also participating in various extracurricular activities such as annual higher institutions sport, greening and beautifying the city, providing scholarships, sponsoring social duties and national programs in television and radio entertainments and shows. Private investors in education and health are not only among the fastest expanding services throughout the country, they have been crossing international boarders to serve Ethiopians abroad through distance education. Private higher institutions are the ones which started entrepreneurship as a common course in all their programs indicating their pro activeness to come up with new solutions for life other than being employees. The entrepreneurship seed is now being planted in Ethiopia through radios, televisions, newspapers and others because of the initiatives first undertaken by private higher institutions.

There is a new generation joining the business community especially amongst the graduates of the private colleges as compared to those who graduated from public institutions. Entrepreneurial private business owners in education and health enterprises of Ethiopia are not only creating wealth for themselves, but also producing new breeds of entrepreneurs for Ethiopia. They are becoming seed beds of new entrepreneurial blood in the country. Yet, 84.6% of new entrants said that they did not introduce new practices, which means that these new comer firms employ the same practices that other old education firms use. But the source of entrepreneurship

is not always visible and apparent. To the question whether they have plans to introduce new practices for the coming period, 43% reported yes.

5.9 Development and sustainability

73%, PHE institutions and private health service providers which emerged as self improvement programs starting from very low base of capital and employment. Some private hospitals are now bigger than government ones and include training of health personnel and consultancy treatment. The top four PHE institutions enroll tens of thousands of students including offerings at post-graduate levels. Almost half percentage of the valid respondent firms have conducted curriculum design, teaching material improvement programs Of the rest of improvement programs, on average, 30% of respondents claimed to have had improvement programs for sustainability.

About 80% say that they have plans of one or more type related to pay, space, equipment and social environment. The result shows that it is improvement for better equipment and more pay/return that are cited more by the majority of staff, students and firms. For employers and parents, improving social environment is the major future target area for improvement. There are also a considerable number of firms' responses (48%) who aim to work with foreign partners in order to introduce new products. In the last three years, 37% (11) firms reported new method of teaching or programs. Almost all firms' expectation for the coming one year is either increase the service capacity (75%) or maintain the current level (21%). This implies that firms expect that there is still potential demand that can be attracted.

Although growth appears to have been tapering, between 1999 and 2007, private health institutions in Addis Ababa registered an average growth rate of 4.7%. However, the growth and operation of these firms is not up to the expectation. This is because the growth in number has not been accompanied by internal growth and development of the firms

28%, 24% and 8% respectively of the parents have obtained Diploma, BA and Masters degree. Those parents with a first degree or above going up nealy one third and rose up to 60% when the Diploma holders are included. This is quite high given the low level of education in the country among their generation. That most students come from educated families means they benefit from academic and social tuitions boding well for the sustainability and development of the PHE sector in the generation to come.

6. Emerging issues and institutional challenges

In order to see the existing opportunity and constraints for investing and doing business in PHE and private health in Addis Ababa, eighteen indicators that are related to the smooth functioning or otherwise of businesses were listed. These are electricity, transportation, access to land, tax rates, tax administration, customs and trade regulations, education of work force, labour regulations, licensing and permits, access to financing [availability and need for collateral], cost of financing [interest rates fees etc], macro-economic stability, political instability, corruption, street crime and disorder, practices of competitors, the functioning of the judiciary and others to be specified. The interviewees [firms, staff and employers] [29] were then asked to identify those three deemed to be the most and least obstacles to their businesses on the one hand and those which have resulted in the three most and least benefits to the firms on the other.

Access to land, electricity, access to finance and corruption and possible political instability are mentioned as the top obstacles. According to staff, the three least benefits from the reform are with regard to corruption, transportation, access to land & practice of competitors[30]. This result is consistent with the firm responses. Staff response has brought into picture corruption as one big problem and as the least benefit from reforms. The employers of graduates cited electricity, the practice of competitors, and access to land, tax rates and macro-economic instability as the major problems. They also said that the least benefit from the reforms are related to transportation, corruption, electricity and the functioning of the judiciary.

Regarding the opportunities (benefits from reform) education business firms identified the following as top three - macro-economic and political stability, licensing and permits [excepting education] and access to finance. Staff response for the top three benefits from the reform are electricity, access to land and political stability. According to them, the least three problems which are considered as opportunities are practice of competitors, electricity, street crime and disorder with equal weight for labor and regulation. It is only among education firms that licensing and permit is one of the top five problems. This may be because of the fact that while getting license from the Investment Commision has impoved considerably, getting the professional competence and standard license from MoE takes much longer. Access to finance

[29] Firms refer to private higher education establishments whereas employers are those business firms that hired graduates from higher education establishments both from government and private.

[30] One common propaganda is spreading rumours about the impending closure of a competitor due to loss.

and macro-economic stability are viewed as problems by education firms and staff but not by employers. The big problem unique to employers that is not identified among the top five in other cases is competitors' practices. Both staff and employers consider transport and corruption among five big problems which is not identified in the top five's by education firms.

All the three groups similarly recognized that the reform regarding licensing and permit, land access, electricity and macro-economic stability as well as political stability have brought benefit to businesses. The paradox here is that except macro-economic and political stability, the aforementioned areas especially electricity, access to land and finance also remain as major problem areas though to some extent benefit is obtained from the undergoing reform. Firms and employers also perceive that there is benefit related to access to finance.

Private businesses need an institutional structure that allows them to collectively voice views on policy, programs and institutional reform for delivery of efficient services. There is a dearth of evidence to indicate whether or not the PPP forum of the education and health private sector has had sufficient dialogue. The challenge is to invigorate them when as now developmental institutions such as PPP forums, PHE institutions, parents associations, which at the moment are weak, nonexistent, or not oriented towards improvements. The institutions to facilitate these kinds of forums can be the MoE and MoH. Unlike in education, a body coordinating the private health has not been yet established.

The existing institutional facilities, whether in regulatory or supporting role are predominantly public. MoE and MoH are structured in such a way that they accommodate the roles expected of them in regulating and supporting both private and public service rendering institutions. Such Departments could have been too engaged in public institutions to undertake their required roles in the equivalent private sectors**.** As a result, unlike other private sector engagement such as manufacturing, the private health and education sectors have had less interaction with the government, among themselves and with society. For a long time, there was not established viable partnership with sister colleges at home as well as with the business enterprises and the local community. However, the recent move to establish Association of Private Health Institutions on the one hand, and the recently established private education institutions on the other are positive developments. A lesson can be learned from the experience of the manufacturing and other service sectors that demonstrate the positive role of associations as significant steps towards the attainment of PPP objectives.

In anticipation of the increasing role of the private sector in health, Federal MoH has assigned the development of Private-Public Partnership to the Service Department. On the ground, however, there is very little opportunity for private sector participation in the policy dialogue. Indeed, the private sector in health (both for-profit and not-for-profit) needs to become involved more actively.

7. The way forward

7.1 The broad economic outturn

Driven by the ongoing restructuring of world economy with massive incremental output and demand in the BRICs [Brazil, Russia, China and India] countries in particular, in the last seven years, the Ethiopian economy has been experiencing a remarkable growth rate. The growth rate in the post 1991 period as a whole has been significantly higher than the previous periods. This is the more interesting because it is posited on a small holder based agriculture without much of, albeit the 'curse, of minerals' such as in Angola and Nigeria. To take advantage of this global change, the GoE has been taking several institutional and policy reforms spelt out in Section Three of this paper. With respect to PHE and private health, the policy reforms appear to be bearing some fruit as expressed in the expansion figures and the responses of service provider firms on different measures of aspects of the dynamics of ICBE.

7.2 Broader policy issue

Genuine and effective partnership between government, the private sector and employers need to be remodeled with a certain level of autonomy for each. Government needs autonomy to ensure that its social goals are not subsumed by the profit objectives of PHE firms. The latter require autonomy to tailor their services in order to meet the specific demand of the market. The ultimate beneficiaries of the process, employers, students and patients can enrich the institutional packaging through bringing in their up-to-date need in the state of the art and the content of service delivery**.**

7.3 Institutional and policy fine tuning[31]

Notwithstanding the positive achievements under 5.1-5.9 above, there are several areas which require fine tuning of policy and institutional reforms.

[31] Some of the recommendations in this sub-section can be traced as having been derived from the wider Study report.

7.3.1 Privately educated employees are more conscious of both their rights and obligations. Since fees have to be paid, with the right to choose and ensuing demand for better services, the more rights and obligations consciousness appears to be a carryover of more accountability practiced in PHE colleges. This implies more effectiveness and efficiency in service delivery in the PHEs. Government may have to take some cues in studying and implementing a policy modality of making public funded institutions to be accountable and transparent to their students and tax payers[32].

7.3.2 Given the still low level of the economy, tremendous growth in private health and education may have proceeded at the expense of quality. Using selected measures, this study compared the quality of delivery between the private and the public institutions which is only relative. There is a need to use absolute benchmark to compare and monitor quality.

7.3.3 What emerges from this study is that the check on quality and standard appears to be very weak. There is a need to classify and ascertain minimum standards, not just for levels such as lower, medium and higher clinics, hospitals, primary, secondary schools etc. but also grades within so that service buyers can make informed choices and rational decisions for given resources at their disposal.

7.3.4 The partnership between PHE and private health institutions, on the one hand, and the government on the other, does not appear to be sufficient and effective. Similarly the partnership between PHE institutions and employer agencies seems to be weak and this can hamper further investment in the private health and education sector unless noticeably competent institutions are in place providing such services.

7.3.5 Unlike in the manufacturing sector firm associations and sectoral associations in general, there has hardly been a dialogue between the government and the private education and health sectors. Except the already existing publicly established institutions that facilitate service delivery by both public and private institutions, there is a need for the emergence of new innovative and supporting institution.

[32] This is the gist of the findings which emerged from comparing at the work place PHE graduates with that of government with respect to 13 evaluative criteria cuts employment using a scale of About the Same, Better and Worse where the PEH graduates clearly outscored those from government. The full report is found in Tenkir Bonger (ed):2009a and Tenkir Bonger 2009b.

7.3.6 Improving the quality of education at all levels and strengthening the public – private partnership in the field of private health and education are the main areas of challenge that all stakeholders must consider and accordingly deal with in the future.

7.3.7 Among education firms, obtaining licensing and permit is still a major problem which needs to be looked into as soon as possible.

7.3.8 The response about government regulations and enforcement predictability is inconclusive as half of the firms said they were predictable in most cases and the other half said they were not. This is a cumulative expression of the quality of the services in ICBE which requires the immediate attention of those concerned.

7.3.9 That health services are more essential than education, the growing size and scope of the private health sector, both for profit and not-for-profit, offers an opportunity to enhance the health service coverage through such measures as subsidy and more focus by government towards the rural areas.

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Annex 1 Private Health and PHE Firms Interviewed

No.	Name of Health Firms Interviewed		Name of PHE Firms Interviewed
1	Abinet Clinic	1	Addis Ababa Polytechnique College
2	American Ghibi Clinic	2	Admas University College
3	Arat Kilo Clinic	3	Africa Health College
4	Arsho Laboratory	4	Atronus College
5	Asegedech Mother and Children Hospital	5	Ayer Tena Health Science College
6	Awash Dental Clinic	6	City University College
7	Aynalem Clinic	7	CPU College
8	Blue Nile Clinic	8	Dynamic International College
9	CMC Michael Clinic	9	Ethiopis Distance Education College
10	Connel Clinic	10	Hayat Medical College
11	Dashen Clinic	11	Hilcoe Computer Science College
12	Dr. Akalewold Special Dental Clinic	12	Infonet College
13	Dr. Yeshihareg Dental Clinic	13	Keamed Medical College
14	Eldina Clinic	14	Kunuz College
15	Empire Clinic	15	Micro link IT College
16	Entoto Godana Clinic	16	Miracle Health College
17	Genet General Hospital	17	National College
18	Kidist Mariam Clinic	18	New Abyssinia University College
19	Luck Clinic	19	New Generation University College
20	Master Dental Clinic	20	Nolicom College
21	Megenagna Clinic	21	Orbit Information Technology College
22	Raey Clinic	22	Roha College
23	Selam Teklehaimanot Clinic	23	Royal University College
24	Sengater Clinic	24	St. Marry University College
25	Seyoum Special Eye Clinic	25	Tropical College of Medicine
26	St. Michael Clinic	26	Unity University
27	Tensae Clinic	27	Universal Medical College
28	Tesfa Kokeb Clinic	28	Yanet Health Science College
29	Tezena General Hospital	29	Yardstick Distance Education College
30	Toneam Dental Clinic	30	Yenegew Sew University College

Annex 2 Interviewed Employer Organizations

1	AB Plast PLC
2	Abyssinia Bank S.C
3	ACOMEX PLC
4	Addis M.F
5	ADS Pharma
6	Africa Insurance S.C
7	Africa Printing Press
8	Alliance Flowers PLC
9	Ambassador Textile and Garment PLC
10	ASA PLC
11	Awash International Bank
12	Chamber Printing Press
13	Comet Trading PLC
14	Commercial Bank of Ethiopia
15	Dream Flowers PLC
16	Ethiopian Insurance Corporation
17	Ethiopian Telecommunication Corporation
18	Finfine Furniture Factory
19	Global Insurance S.C
20	Jupiter Trading
21	Lion International Bank
22	Meweda Academy
23	Myungsung Christian Medical Center
24	NAS Foods PLC
25	Nib International Bank S.C
26	Nile Insurance S.C
27	Raselase Diversity School
28	SNAP Computers
29	United Bank S.C
30	Wogagen Bank S.C

INVESTMENT CLIMATE AND MANUFACTURING PERFORMANCE IN ETHIOPIA

Kefyalew Endale[1]

Abstract

The objective of this study is to show the effects of investment climate variables on the operation of manufacturing firms with emphasis on small scale producers in Ethiopia. Investment Climate Survey dataset of World Bank (2006) is used. The findings are complemented from other recent survey-based studies and annual reports of Central Statistical Authority to cross-check the relevance of the data source and timing. The data is analyzed through descriptive and econometric techniques. The descriptive analysis shows that infrastructural costs share to the yearly sales account 52% in the small size firms. The quality of infrastructures is also not adequate. Access to formal sources of finance is not easy due to requirement of high value collaterals. Taxes and tax administrations are macropolicy-related major constraints to the small size firms. Instituions services more specifically that of the municipal are not satisfactory. The institutional aspect doesn't necessarily hold for the recent conditions due to BPR implementations. Education status of workers and managers, under capacity use and low involvment in R&D are observed especially in small size firms. The econometric result is also consistent with the descriptive evidence. A significant labor variable is one indicator of size advantage. Alternatively, firm size dummies are used and found with the expected signs. A negative significant for power interruption dummy unveils the effects of poor infrastructures. Value of collateral requirement and access to overdraft facility are finance-related variables that affect the performance of firms. In sum one can say that the investment climate is at least not attractive and measures need to be taken to improve infrastructures, cost and quality, revisiting collateral value in the formal credit markets to address financial constraints. Supports in the form of training opportunities and market search are advantageous especially to the smaller firms.

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1. Introduction

Manufacturing is defined as physical or chemical transformation of material components into new products (ISIC Rev 4, 2008). The definition also includes the assembly of component parts of manufactured products as a manufacturing activity whether the production is done at factory or home, sold at retail or wholesale, and whether power driven machine is used or not. Success experiences of developed countries show that manufacturing is the pillar behind a sustained growth.

The contribution of the Ethiopian manufacturing sector to the economy is low. Its average share of GDP in the years 2005-2009 was 4.85% (Table 1). The share to total manufacturing export stood at 7.31%. These performance statistics are among the lowest when compared to other countries or regions. The share to GDP was below half of the other countries/regions under consideration (see Table 1). The share to total merchandise export was below one fourth of the averages of Sub-Saharan African countries and other regions. The average growth rate is, however, encouraging. The weak performance despite the higher growth rate of the subsector is probably due to the weak manufacturing base since the Derg regime and the increased share of the service sector.[2]

Table 1: The Performance of Manufacturing Sector during 2005-2009 (average in %)

Country/Region	Share of Manufacturing value added from GDP	Share of manufacturing exports from total merchandise exports	Annual growth rate of manufacturing value added
Ethiopia	4.85	7.31	10.63
Kenya	12.01	8.27	5.23
SSA (all)	13.23	31.87	2.79
Low income	12.62	49.19	6.64
South Asia	16.25	69.55	9.21

WDI (2010)

The manufacturing subsector of Ethiopia is dominated by the low technology, consumer good production, and small sized firms (Admasu, 2005, Getnet and Admit, 2005). About 57.3% of food and beverage, and 72.4% of wood and wood products, 46.3% of leather and footwear were small sized in the years 1996-2002 (Admasu,

[2] The share of service sector has increased over time (see NBE, 2007/08).

2005). The lower capital per worker is a major reason for the lower level of technology in the subsector (Admasu, 2005; Getnet and Admit, 2005).
One major question at this issue is why the manufacturing sector is contributing a low level to the overall economy? The answer to this question is not straightforward. It requires studying the factors that affect the operation of firms which are engaging in manufacturing activities. Macro level studies give limited insight about the root problems of the sector. With regard to this, Smith and Driemier (2005) argued that aggregate indicators offer limited insights about the effect of different institutional arrangements on firms' investment decision. Smith and Driemier (2005) further emphasized that economic analysis from a micro-economic perspective is a new frontier that focuses on the firm as a lever of growth, instead of aggregate numbers.

There have been increasing emphases to the roles of investment climate in the study of factors affecting manufacturing firms. Micro level study offers better opportunities to gather information from the firms about their major constraints especially about the investment climates. This helps to trace the impact of the investment climate variables on the decision to invest at firm level. It also enables to study the factors affecting different types of firms such as small and large scale manufacturing. This is because the effect of investment climate does not necessarily be similar for different size firms. It is expected that small size firms are likely to suffer more compared to the large size firms. This is particularly important to Ethiopia due to the large number of small size firms.

Though there are many studies on the manufacturing sectors of Ethiopia, comparative analysis of the effect of investment climate variables among small, medium and large sized industries are scant. The smaller sized firms are particularly ignored. Productivity, efficiency, source of growth and export intensity are some aspects of manufacturing focused in the previous studies (see Admasu, 2005; Getnet and Admit, 2005; Kefyalew and Tsegabirhan, 2010).

This study aims to contribute on the effect of investment climate on the performance of manufacturing sector of Ethiopia. Some of the performance indicators include the costs of infrastructures to annual sales, capacity utilization and the returns to input uses (Vachon, and Klassen, 2005). The returns to inputs can be estimated through a multivariate regression. The study gives emphasis for comparing the large, medium and small scale manufacturing firms. This helps to examine the magnitude of different constraints for each firm size type and to recommend policies accordingly.

The study uses the Investment Climate Survey Data of World Bank (2006). The survey covered a wide range of issues including firm size, infrastructural and institutional variables, R&D, employment and capital for the fiscal year 2004/05. The

data is collected from food, beverage, textile, garment, leather and leather products, wood and furniture, and others[3]. It enables to use descriptive as well as econometric techniques. The rest of this study is organized as follows; section 2 reviews related literatures and section 3 addresses the data presentation and analysis and finally the last section concludes the study.

Review of literature

Finding a precise definition of investment climate is difficult (World Bank, 2003). Its definitions vary from one literature to another. But the central elements of the different definitions are more or less similar and centering on policy, institutions and regulatory factors that affect the incentives and opportunities of private investors. For example, Smith and Driemeir (2005) defined investment climate as a set of factors that affect incentives and opportunities for firm investment and growth. Similarly, Stern (2002) as cited in Mahmood (2006) defined investment climate as *"policy, institutional, and behavioral environment, both present and expected, that influences the returns, and risks, associated with investment".* Three important elements in investment climate are macro-economic environment, governance or institutions and infrastructures (Mahmood, 2006; World Bank, 2003). World Bank (2003) mentioned the issues under each of these three elements as follows;

> *"Macro-economic (or country-level) factors include such issues as fiscal, monetary, and exchange rate policies and political stability. Governance relates to government interactions with business, which typically mean regulation and corruption. Infrastructure refers to the quality and quantity of physical infrastructure (such as power, transport, and telecommunications). More broadly, it can also refer to financial infrastructure (such as banking)—or access to finance."*

Infrastructure

Infrastructure is one of the major factors for industrial development. Power, transport and communication are its key elements. It matters a lot for competitiveness of firms. Acquiring information, input procurement and getting market require more resources of the firm in countries of poor infrastructures (WB, 2003). It increases the cost of operation and reduces the degree of competitiveness and at a worst case it can be an entry barrier (Mahmood, 2006; WB, 2003).

[3] Others include sectors such as printing and coffee roasting which account 5% of the total samples.

Infrastructure affects firm performance both in a direct and in an indirect way (Adenikinju, 2005; Haughwout, 2001). The direct effects are associated with the nature of infrastructure as an intermediate input in the production process. Therefore, its cost and quality affect the activity of firms directly. Infrastructure also induces overall productivity growth indirectly by improving the productivity of other inputs. It also facilitates agglomeration and clustering and this has spillover effects between firms. Empirical studies show a strong link between infrastructure and manufacturing growth. Hulten, Bennathan and Srinivasan (2006) found a strong link between physical infrastructure and manufacturing productivity in India. Adenikinju, (2005) showed that the poor state of electricity supply imposed significant costs on the business sector in Nigeria. The study further showed that the small scale operators are heavily affected due to poor financial position to deal with power interruptions. Escribano, Guasch and Pena (2008) found that 30-60% of the adverse effect on firm productivity in Africa is due to deficient infrastructure and the power sector accounts for 40-80% of the infrastructural impact.

Finance

The economic theory of cost – benefit analysis whether to invest or not works only in enterprises that have no credit constraint (WB, 2003). This depends on the development state of financial sectors. Mahmood (2006) stated that a healthy financial sector improves access to finance and further allows expanding production as per the expected potential. Firms in developing countries suffer largely from shortage of finance. Harhoff and Korting (1998), Saibal (2007) argued that lack of external sources of finance is a major constraint for investment. Saibal (2007) listed three major problems associated with the external sources; information asymmetry between lenders and borrowers, managerial agency problem[4], and high transaction costs. Gale and Hellwg (1986) also emphasized the problems of adverse selection and moral hazard as a cause for credit rationings. Binks and Ennew (1996) highlight the importance of collateral as a means of mitigating the information asymmetry to credit access at banks. In the case of Sub-Saharan Africa, Biggs (2007) argued collateral values and interest rates are very high and loan approval processes are inefficient. Mbekieani (2007) emphasized the inadequacy of trade finance as another constraint for exporters' capability. His study further emphasized that high transaction costs, lack of expertise in financial markets and lack of information communication technologies are a feature of the financial markets in SSA.

[4] Differences between managers' and owners' goals

Institutions

North (1990) defined institutions as constraints that are imposed by human beings themselves. This definition, however, lacks universal acceptance (Adebiyi and Obasa, 2004). Recent works defined institutions in a broader sense, linking different measures of institutional quality to development outcomes from various angles and disciplines (Johannes, 2003 in Adebiyi and Obasa, 2004). The institutional constraints arise due to interaction of firms with government to comply with government regulations (World Bank, 2003). This has effects on the activities of firms like the infrastructure and financial constraints. The influence of institutions on economic development is highly acknowledged. Rodrik et al. (2002) finding shows that the direct effect of good institutions on income is positive and large. The indirect effects of institutions are also numerous. It can increase investment, manages conflicts and ethnic diversity and hence an incentive for higher productivity and efficiency (Baumol 1990).

Alaba (2006), Lyakurwa (2007), Biggs (2007) are among the studies that showed the effect of poor institutions on the manufacturing sector in SSA. They found that delays associated with license and work permits, larger number of documentations and signature requirements are some of the features of institutions in SSA. Lyakurwa (2007) further stressed on the corruptions associated with the larger number of documentations and procedures.

Firm specific characteristics

The operation of firms is also affected by firm level characteristics aside from the investment climate. For a better analysis of the firms operation, it is essential to examine the firm level characteristics too. It should be noted that the firm specific characteristics themselves are influenced by the investment climate.

Firm specific characteristics include firm size, R&Ds, nationality of ownership, human resource, capacity utilization among others (see Biggs, 2007). These features are poor in developing countries and this in turn affects the operation of firms. Firm-size may represent the degree of horizontal or vertical integration which serves as a proxy for the variety of goods produced and economies of scale. This enables firms to acquire firm specific assets such as financial capital (Ryan, 2008). Ho, Tjahjapranata and Yap (2006) pointed out that R&D has a strong effect on firms' growth opportunity especially in large sized firms. Ownership structure can be government, private, foreign or joint ventures. While the effects of foreign ownership on growth of firms are controversial, government-owned firm growth is generally poor (Beck et al., 2005). The positive effect of human capital is confirmed in many studies. Almus (2002) found

a significant effect of university degree or above on fast growing German firms. Poor education status of managers is a special human resource problem especially in technology adoption and selection (Maunda, 2005). Maunda (2005) further added that less educated managers face difficulty of considering consumer needs/preferences especially oversea markets.

Most of the studies conducted in Ethiopia are consistent with other literatures. Kefyalew and Tsegabirhan (2010) show dissatisfaction of exporting firms with the quality of infrastructure, finance and institutional services. However, their study revealed modest improvements over time with the exception of power supply. The econometric result revealed a positive effect of R&D and foreign/joint venture ownership. Admasu (2005) examined the distribution of productivity within an industry to determine whether patterns of firm entry, exit and survival are driven by efficiency differences. The study found that markets of Sub-Saharan Africa, as represented by Ethiopia, are efficient in selecting efficient firms and the tolerance of inefficient firms' declines with exposure to international market competition. Admit and Getnet (2002) showed that the main source of output growth in the medium and large scale industries is capital, followed by labor.

3. Data and analysis

3.1 Background about the firms

Table 2 reveals the characteristic of the firms under study. The survey was conducted to understand the effect of investment climate on business performance. The survey covered 360 manufacturing firms over 15 cities[5] of Amhara, Oromiya, Tigray, SNNP, Addis Ababa and Dire Dawa. The sample sizes followed by World Bank are stratified and proportional to number of firms in each city. About 47% of the samples are from Addis Ababa alone. Mekelle ranked second in terms of large numbers of samples with 10% share while other cities have a share below 10%. The small size firms have the largest share with 62%, followed by medium and large size firms, respectively. In terms of nationality of ownership, 93% are owned by nationals while the remaining 7% are owned by joint venture/foreign ownership. The degree of export participation is low which is observed only in 8.8% of the firms. The majority of the exporters are large size firms.

[5] These cities are Addis Ababa, Gondar, Adwa , Awasa, Bahir dar, Bishoftu , Dire Dawa, Shashemene, Mekele, Adigrat Nazareth , Harar, Modjo, Wonji, Dilla

Table 2: Background Information on manufacturing for the fiscal year 2004/05

Variable of interest	Firm Size
Total firms	360
Small sized firms (<50&>5 employees)	222
Medium sized firms (50-249 employees)	81
Large sized firms (250+ employees)	54
Domestically-owned firms	335
Foreign-owned firms	25
Exporting firms [a]	32
Non-exporters	328

Source: WB (2006)

Note: [a] direct export participation was observed in 28% large scale and 16% medium scale, while it was only 1.3% in the smaller firms (WB, 2006).

3.2 Cost and quality of infrastructures

The survey shows that infrastructural facilities are generally inadequate. The problem is worse especially in the power sector. Power rationing and interruptions are common features of the power sector in Ethiopia especially in recent periods (CSA, 2009). This is despite the huge potential of hydroelectric power in the country. Though the efforts of production and distribution are improving, the existing level has not been enough. The actual use of the potential is by far below the demand for power in the country. The smaller firms are more likely to be exposed to power problems. The survey shows that 86.43% of the small sized firms have not been using generators. The corresponding figures for medium and large sized firms were 63% and 42%, respectively. This is an important indicator of the larger effect of power problems on smaller compared to the larger firms.

Table 3: Average Annual costs of Public electric grid, communication and fuel including generators in Birr (2004/05)

Type of service	Firm size		
	Small	Medium	Large
Power from Public grid	111,969.00	582,317.30	1,511, 378.00
Communication (telephone)	143,530.00	193,279.00	7,888,179.00
Fuel including generators	213,664.00	233,939.00	4,434,188.00
Transporting goods and workers (excluding fuel)	25,349.00	194,960.00	1,849,700.00
Annual Revenue	936,540.80	11,082,210.00	66,608,230.00
Infrastructural Costs to Annual Revenue (in %)	52.80	10.87	23.55

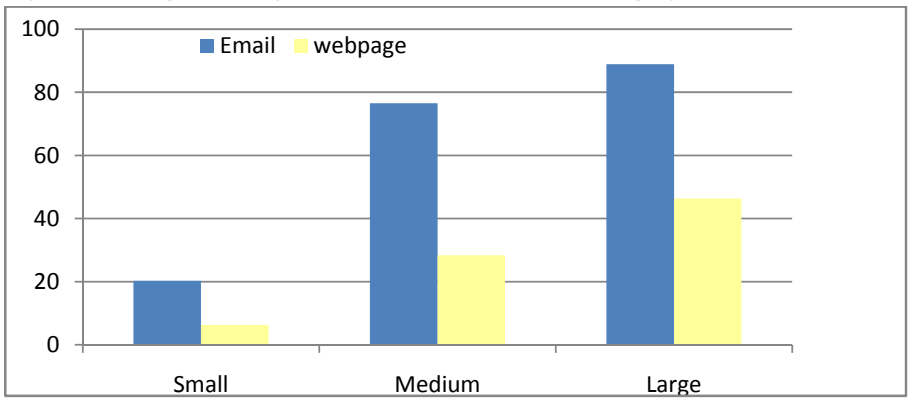
Source: WB (2006)

The cost of public electric power is very high in absolute as well as relative terms compared to other costs. On average the annual cost of public grid ranges from 111,969 Birr in small sized firms to 1.51 Million Birr in large size firms (see Table 3). Some firms also use generators as a substitute to deal with power interruptions and rationings. Thus the cost of fuel adds simply to firms' expenditure. This affects the profitability and competitiveness. The costs of major infrastructures are exceptionally high in the case of small scale manufacturing firms. Power, communication, fuel and transport costs account more than 50% of the total annual revenue of small size firms while it is 21.28% and 10.87% in the large and medium size firms, respectively. The challenge of expensive electric power on business performance is also reported in recent years. CSA (2009) shows that cost of electric power has been introducing challenges on the working environment of 51% large and medium establishments for the year 2009/10. This supports the increases in the power-related problems over years.

In the large size firms, communication cost has a large share out of the total revenue, averaging 11.8% of their total revenue while transport and electricity together account 5% on average in 2004/05 (Table 3). This is probably due to larger networks of larger firms than the medium and small scales. Further disaggregation of cost of communication by exporter-non exporter category shows that exporters average annual cost for communication is about 13.2million Birr, which is very high, while that of non-exporters is 230,000 Birr (WB, 2006).

The adoption of communication systems such as e-mail and webpage are low especially in the small size firms. About 43.3% of the total firms have used email and it was 17.5% in webpage (WB, 2006). The comparable figure of SSA was 22% in the same period (WB, 2006). Exporting firms are better in use of information and communication technologies. All of them have been using email and 88% of them have webpage (WB, 2006). Out of the total small size firms, only 20% of them have email and 6% have webpage. Thus the small size firms are less adaptive to information communication technologies. Figure 1 shows the percentage of each firm size group that uses email and webpage services.

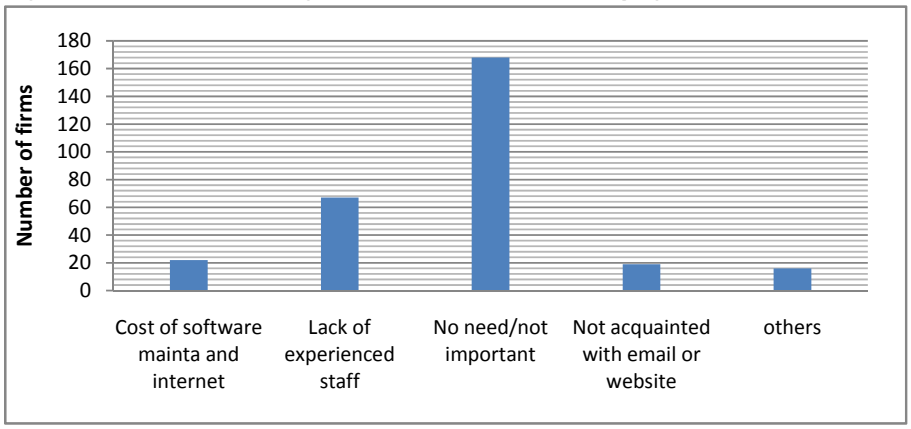
Figure 1: The percentage of firms with email and webpage



Source: World Bank (2006)

The major reason for not using latest information technologies is due to the perception that it is not important for the activities. About 70% of the small size firms replied that the services are not important to their activities (WB, 2006). This shows how the smaller firms are poorly integrated in input and product markets. The second important factor is the lack of skilled manpower and it accounted 21% in the smaller firms (WB, 2006). The problems are similar in the medium and large scale firms. Figure 2 displays the different factors affecting use of e-mail and webpage in the total firms.

Figure 2: Factors affecting the use of email and webpage



Source: WB (2006)

Transport is a third important infrastructure like power and communication. Though it is improving over time, the road density of Ethiopia is low when compared to other

regions/countries. Ethiopia's road network in 2000 was 29,571 km, which was below half of Kenya's road network of 63,942 km in the year (WDI, 2006). The road density has been increasing and stood at 42,429 km in 2007 (WDI, 2010). This is a good trend but not enough for Ethiopia's large area and fragmented urban and rural areas. The low road density limits access to efficient and cheap transport means especially to large size (see Table 3). The small sized firms' cost of transport is relatively low may be due to the poor integrations in input and product markets.

The quality of infrastructures affects the business activities like the costs. Annex-1 shows the perception of firms about power, transport and communication services quality constraint. A large number of firms are dissatisfied with electric power services. It is a major constraint in 22% of smaller firms, 24% of medium and 20% of larger firms. Kefyalew and Tsegabirhan (2010) also found a high degree of dissatisfaction on exporters of manufactured and non-traditional primary products for the fiscal year 2007/08. CSA (2009) quarterly business survey on large and medium scale industries found that power interruption affects the business environment of 82.7 percent of the establishments negatively. The report further pointed out that 81% of the under capacity utilization was due to power shortage. These recent evidences unleash the deteriorating trend in the power supply in Ethiopia.

Transport is a major problem especially in large sized firms (Annex-2). About 22% of large sized firms reported that it is their major constraint. The figures for small and medium scale firms on transport as major problem were 8% and 12%, respectively. The degree of dissatisfaction is roughly equal in all of the three different size firms. Quality of communication was poorly rated in the medium scale with about 18% respondents.

In sum, costs of infrastructures per unit of annual sales are very high in the small size relative to the large and medium size firms. Communication is expensive within the large size firms compared to transport and electricity. The percentage of firms that evaluate power supply as poor are roughly equal in firm size groups. This suggests the seriousness of power supply for business environment in all types of firms with no exception. Transport and communication services are rated poorly in the large and medium size, respectively. This does not necessarily imply that the small firms are satisfied with these services. It is highly associated with their small scale operations and limited market integrations than in the large and medium size firms.

3.3 Financial services

The study revealed interesting aspects in the financial structures. Most of the small size firms rely on retained earnings unlike the medium and large size firms (Table 4). From the smaller firms, about 94% haven't taken any credit from state-owned banks and 77% of them haven't got access to private commercial banks. The disengagement from state-owned banks were 61% and 75% in the medium size firms and 72% and 61% in the large size firms.

Table 4: The Disengagement of firms from Formal Banks

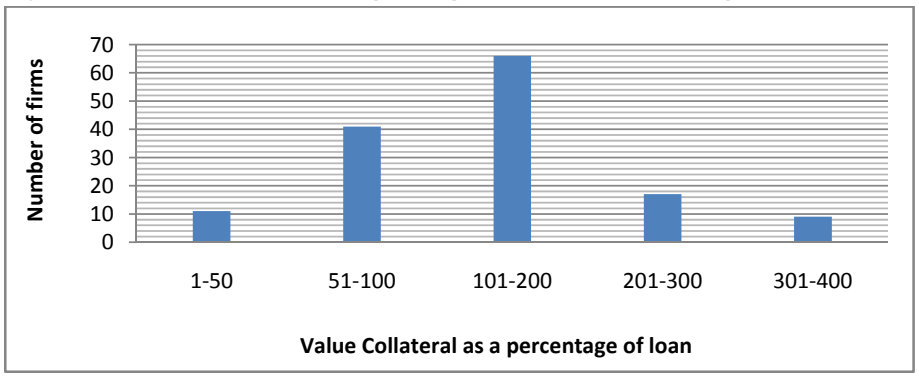
Source of finance	Small	Medium	Large
Retained earnings	5.86	18.52	16.67
Private Commercial Banks	77.03	61.73	72.22
State-owned Banks	94.14	75.31	61.11

WB (2006)

It might be not good to argue that the smaller firms are rationed out of the formal credit market just by looking at the rates of disengagement. This might be due to the lower demand of smaller firms from the formal sector and may be using family saving for it or other alternative sources. But the credit market itself is not attractive to the firms[6]. The required values of collateral are larger than the size of loans with an average of 179% of the loans (Figure 3). It is larger compared to the SSA and South Asian average of 140% and 95.2%, respectively (Lyakurwa, 2007). In such scenarios, firms are reluctant to take risks that may result personal property loss and unable to take advantages of opportunities created by changes in the market. In addition the loan size will be very small and thus unable to change production and marketing decisions significantly (Lyakurwa, 2007).

[6] The government indeed has also allocated substantial amount of finance for investors who would be engaged in this manufacturing sector especially in export-oriented products. There is an incentive to finance up to 70% of the total project cost with a loan agreement provided that the investors have made 30% of the total. This incentive is, however, not without limitations. Given the high cost of doing business in Ethiopia, much of the investors are less likely to take such risks on the 30% requirement.

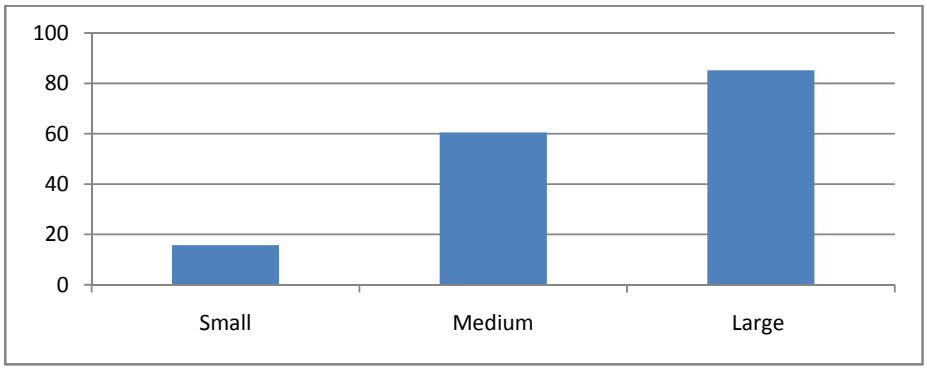
Figure 3: Value of Collateral required (as % of the Loan value)



Source: WB (2006)

Lack of modernization is another feature of Ethiopian financial sector. Modern systems of payments like visa cards are at early stages and available in few banks and branches. Overdraft facilities are among the useful services in periods of temporary cash shortages. The small sized firms have a lower participation in this facility while more than 80% of larger firms have access to overdraft (Figure 4).

Figure 4: Overdraft facility use among firms (in %)



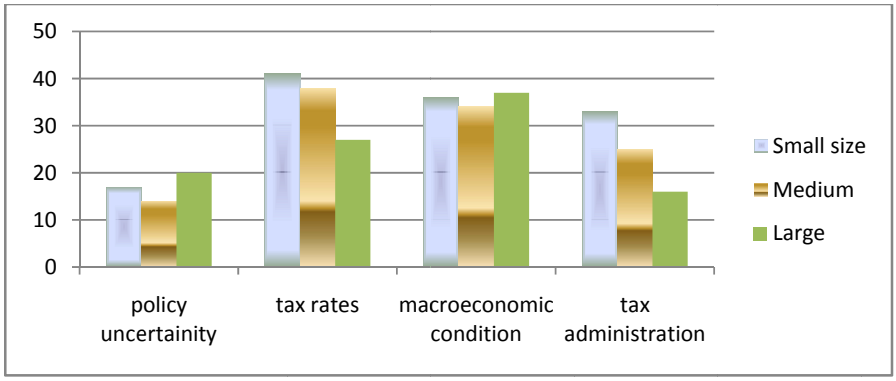
Source: WB (2006)

3.4 Macro-economic factors

Macro-economic factors include among others policy uncertainty, tax rates and administrations, and macro-economic conditions such as inflation. These variables affect the production and marketing decisions in many ways. The qualitative evidence shows that tax rates and macro-economic conditions are major problems for roughly about 35% of the total firms. Tax administrations are also major problems for nearly

30% of the firms. The problem with policy uncertainty is stated as a major problem in less than 20% of the firms (WB, 2006). Disaggregation by firm size reveals that both tax rates and tax administrations are relatively high constraint on the small size firms (see Figure 5). This could be attributed to arbitrariness of tax rates as most activities of small business are less likely to have formal accounting records.

Figure 5: Percentages of firms that report macro-economic factors as major problems



Source: World Bank (2006)

3.5 Institutions

Firms ranking of service delivery shows poor ranking of the institutions. The data is, however, before the implementation of the business process re-engineering (BPR)[7]. The study is reserved from concluding about the current institutional services. The study is unable to get survey data to complement the evidence with the changes after the BPR implementation. It should be noted that an immediate change might not happen even with the BPR. It takes time to adjust the new system accordingly. The evidences from this survey can also be useful to examine the changes in institutional service delivery in another time when survey data is available.

The analysis works for the earlier period only and for comparing the services at that time with the SSA. In the case of customs authority, the average days to clear exports and imports in 2004/05 were 4.3 and 14.06, respectively. The comparative figure for

[7] Government organizations have now adopted BPR and are delivering services based on the new system. For example, on average it used to take 26 working steps and 35days for a firm to secure a trade license in the Ministry of Trade and Industry. After the BPR, it takes 6 steps and 34 minutes to get the trade license. For others see http://www.grips.ac.jp/forum/af-growth/support_ethiopia/document/May09_berihu_bpr.pdf

SSA in the same time period was 5.14 and 8.74 days (WB, 2006). The survey has only 32 exporting firms and less likely to represent exporters. But exporting and non-exporting are dependent on imported inputs and raw materials in production though there exists a variation in the magnitude of dependency import dependency. The import clearance is not an easy service. The delays of import clearance caused 13% of the firms to cancel their sales due to failure to deliver shipments on time. Cost of custom clearance is as high as 10% of average consignment value (WB, 2006).

Reported delays in different institutions are also large especially in the municipality (Table 5). On average, it takes more than eight months to acquire land. The lease cost for land acquisition was expensive with an average of 1 million Birr and the average upfront payment was 24.1% (WB, 2006). This is a big entry barrier to new entrants in the manufacturing business. Number of days taken to get access to telephone, power and construction permits are larger than the SSA average while water connection, import license and operating license are below the average of SSA.

Table 5: Delays (in number of days) reported at various government institutions in 2004/05

	Number of firms who reported delay (Out of a total of firms)						
No of days taken	**Land acquisition**	**Telephone connection**	**Electric connection**	**Water connection**	**Construction permits**	**Import license**	**Operating license**
<=90	26	123	69	55	48	34	61
91-300	15	5	6	1	4	0	0
301-600	14	4	0	0	3	0	0
>600	6	3	1	0	0	0	0
Average	240	58.51	44.22	19.44	61.36	13.85	11.35
SSA	-	54.14	38.21	42.24	54.35	14.30	15.40

Source: WB (2006)

Firms' level of satisfaction/dissatisfaction is also tabulated in Table 5. Large numbers of firms reported that the municipality service is the worst followed by the Inland Revenue. The municipal case is due to the too bureaucratic process of land access. The Inland Revenue is associated with discontent of requirements such as filling out tax form, audits and related activities to meet their obligations. These have tradeoffs with the managers' and other employees' work time. It is found that on average 4.5% of the senior management weekly work time is used for addressing issues relating to government regulations (WB, 2006).

Table 6: Evaluation of the services given by different organizations in 2004/05

	Very Good	Good	Fairly Good	Bad	Fairly Bad	Worst
Inland Revenue	41	103	99	31	12	16
Customs authority	22	65	62	17	4	9
Ethiopian Electric Power Co.	76	164	63	31	16	10
Telecommunication Co.	68	152	80	41	10	9
Water and Sewerage	54	140	88	29	9	11
Ministry of Trade and Industry	83	160	71	8	4	1
Municipal Administration	36	95	112	44	23	29

Source: WB (2006)

3.6 Firm specific characteristics

Firm specific characteristics are other major impediments to firms' performance. Some of the firm specific characteristics include experience and education status of managers, and employees; access to work-related trainings, capacity utilization, R&D (Biggs, 2007; Yoshino, 2007). It is found that 20.5% of firms are run by managers with education status of below secondary and 28.3% by secondary school completed managers. Managers with BA and above qualification are few. The disaggregation of managers' education status by status shows that most of the small size firms are again with less educated managers (Table 7).

Table 7: Education Status of Top managers

Education Status	Small	Medium	large
Below secondary	31.53	4.90	1.85
Secondary school	39.2	14.81	3.7
Vocational training	13.06	8.64	1.85
Some university training	7.2	8.64	9.26
Graduate Degree (BA, BSc., etc)	7.66	55.56	51.85
Masters Degree and Above	1.35	7.40	31.48

Source: WB (2006)

Employee's education profile is also low like the managers. The majority of them are secondary school and below and only few firms have employees with Vocational and University degree (see Table 8). Industry level trainings to employees are important to enhance productivity. The available opportunities of trainings are few in the firms under consideration. In-house trainings to skilled workers were offered only in 23% of the total firms and only few portion of the employees got the training (WB, 2006). Possible reasons might be resource constraints, labor turnover and lack of awareness.

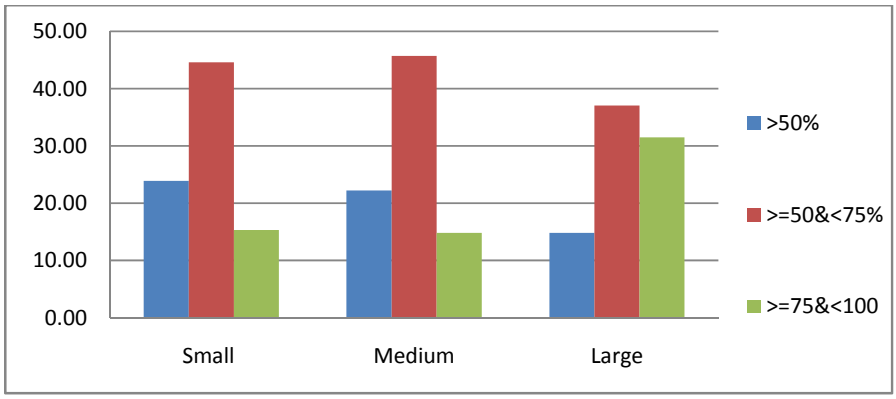
Table 8: Average educational status of skilled production workers in 2004/05 (%)

Education status	Firm size		
	Small	Medium	Large
0-3 years of education	5.87	0	1.85
4-6 years of education	8.56	4.94	12.96
7-12 years of education	65.32	66.67	51.84
13 years and above of education	4.05	11.11	11.11
vocational school training	9.01	17.28	22.22

Source: WB (2006)

Under capacity utilization and lower R&D are also investigated. About 36.4 % of the total firms operated below 50% and those that operated at full capacity are only 16.6%. The capacity use by firm size shows most of the small and medium size firms are using below 75% of their capacity (Figure 6). The large size firms are better in the capacity use as expected. The causes of under capacity use are shortages of demand, working capital, raw materials and intermediate inputs in the order of importance. Out of the total firms, 32.8% reported demand constraint and 16% of them attribute to the shortage of working capital, and 11.7% of them to the shortage of raw material and intermediate inputs. The factors behind under capacity utilization in the recent periods are changed. The significance of demand and raw materials has declined and it is attributed to electric power at a large degree. Kefyalew and Tsegabirhan (2010) also found that power problem is a major reason for under capacity utilization in about 41% of the firms for the fiscal year 2007/08. And a more recent report by CSA (2009) shows that about 81% of large and medium establishments' under capacity use is caused by electric power shortage in 2009/10.

Figure 6: Capacity utilization (in %)



Source: WB (2006)

Technology use, as measured by use of licensed technology from abroad or internationally recognized certification, is low and they are concentrated in the large scale ones. Out of the large scale firms, 11.11% of used licensed technology from abroad and 16.67% of them have internationally recognized certificate while the respective figures for the smaller firms are only 2.25% and 0.9%. The comparative figure of SSA for internationally recognized certificate was 11.9%. There are no changes in terms of technology from earlier periods. WB (2002) survey showed that about 13% of the firms were involved in small scale R&D for the 2000 fiscal year. UNCTAD (2002) study also showed that investments in R&D are more on imitation and copying. Kefyalew and Tsegabirhan (2010) found only 19% of the exporting firms engaging in R&D. This is mainly concentrated in foreign-owned flower exporters. This shows the lack of emphasis in developing R&D by national-owned firms.

Table 9: Technology use among firms in 2004/05 (in %)

Technology indicators	Firm Size		
	Small	Medium	Large
Licensed technology from abroad	2.25	4.94	11.11
Internationally recognized certification	0.9	4.94	16.67

Source: World Bank (2006)

3.7 Econometric evidences

3.7.1 Theoretical model

The theoretical model is based on the theory of profit maximization. Bernard et al. (1999), and Yoshino (2007) used such approach to develop a model for the decision to participate export of manufacturing firms. This study reformulates their approach in the sense that firms decide to produce in the short-run if they expect positive net profit from their activities. Such models are based on restrictive assumption such as zero sunk costs. The decision to enter a business can be given as follows;

$$p_i q_i - c_i(X_i, q_i) > 0 \qquad 1$$

Where, *p* is the unit output price, *q* is the volume of production, *c* is the cost of producing q and x is vector of investment climate and firm level characteristics.

Applying Hottelling's lema[8] to the profit maximization problem yields the supply function of a firm given by equation 2 as follows;

[8] Hotelling lema states that differentiating the profit function with respect to output price gives the output supply function

$$q_i = f(p_i, x_i) \quad 2$$

Though the profit maximization approach is mathematically plausible, it is argued that firms are less likely to reveal their profit (Yoshino, 2007). The preferred way is, therefore, to use the annual sales, which is relatively less sensitive to tax and other government regulations. Therefore, the equation 2 can be modified as follows;

$$R_i = P_i q_i = f(x_i) \quad 3$$

3.7.2 Empirical model

Based on a Cobb-Douglass[9] specification of revenue and the set of firm specific and climate investment variables, the following model is specified for estimation;

$$\ln(R_i) = \beta_0 + \beta_1 \ln(K_i) + \beta_2 \ln(L_i) + \beta_3 ln(MGEXP_i)\, \beta_4(MGEDU_i) + \beta_5(RD_i) + \beta_6(CPU_i) + \beta_7 \ln(HRS_i) + \beta_8(INTSO_i) + \beta_9(MGTIME_i) + \beta_{10}(POWERI_i) + \beta_{11}(WEBPAGE_i) + \beta_{12}\,(COLLATERAL_i) + \beta_{13}\,(OVERDRAFT_i) + \varepsilon_i 3$$

[9] Cobb-Douglass production functions are criticised for assumptions of constant returns to scale and perfectly competitive assumptions. Though the alternative translog specifications are free from the assumption of constant returns to scale, the estimates suffer from such specifications suffer from multicollinearity. Therefore, the final model is reduced to Cobb-Douglass specification

Table 10. Variable Definitions and Expected signs.

Variable Name	Variable Definition	Expected Sign
Ln(R)	total annual sales adjusted at 2000 prices in logarithm	
$\ln(K_i)$	the netbook value of buildings, machinery and equipments in logarithm	+
ln(L)	the number of permanent employees in logarithm. It is used to denote the effect of firm size on productivity.	+
ln(MGEXP)	total number of years of manager's experience in logarithm (both within the firm and other employers)	+
MGEDU	Dummy for the education status of manager. It takes 1 if the manager has BA and above and zero otherwise	+
RD	Dummy that takes 1 if the firm invested on Research and Development and 0 otherwise.	+
CPU	Capacity Utilization in percent	+
ln(HRS)	Number of working hours of the firm per week in logarithm	+
INTSO	The percentage shares of internal sources of finance out of total working capital	+
MGTIME	The amount of managers time spent for government regulations in a week as a percentage of its total weekly working hour	-
POWERI	Dummy that takes 1 if the firm reported a power interruption over the year and zero otherwise	-
WEBPAGE	Dummy that takes 1 if the firm uses webpage and zero otherwise	+
COLLATERAL	the value of collateral as a percentage of loan size	-
OVERDRAFT	Dummy which is 1 if the firm has access to overdraft facility and 0 otherwise	+

3.7.3 Estimation and discussion of results

The necessary diagnostic tests are conducted. An attempt was made to use lagged values of labor and capital as instruments to deal with a possible endogeneity problem. The Hausman test of endogeneity shows that endogeneity is not a problem. Normality test statistics of the variables are presented in Annex 2. Breusch-pagan test of heteroscedasticity and mean VIF indicates that the estimated coefficients are free from heteroscedasticity and multicollinearity. Normality test statistics of the variables in the econometric model are reported in Annex 2. The estimation result is given in Table 11.

Most of the variables are significant and with the expected sign. A dummy for each size was created and used to account for size differences. The dummies are found to be highly collinear with the labor size[10]. Using both labor and firm size dummies would bring misleading results of the size indicator variables. This is because the classifications of the firms into small, medium and large sizes are based on the size of labor employment. In such instances labor input can serve as an indicator of size advantage. Therefore, labor size is an important candidate to show the effect of firm size on productivity. The number of full time workers is significant at 1%. It implies that firms that have larger employees have higher productivity. This is consistent with the descriptive analysis that show the small size firms operations are highly affected relative to the medium and large scale manufacturing. Temporary workers are excluded due to large number of missing values.

Table 11: The Estimated Result (OLS Regression)

Independent Variables	Coeff.	t-value
$\ln(K_i)$	0.137	3.08***
ln(L)	0.320	3.89***
ln(MGEXP)	0.080	0.87
MGEDU	0.467	2.33**
RD	0.160	0.78
CPU	0.824	2.67***
ln(HRS)	0.436	2.45**
INTSOU	0.07	3.04***
MGTIME	0.07	0.58
POWERI	-0.36	-1.9*
WEBPAGE	0.476	2.07**
COLLATERAL	-0.423	-2.85***
OVERDRAFT	0.555	2.20**
Constant	6.78	7.38
Number of obs=135	F(11,121) = 43.92	R-squared=0.7097
Breusch-Pagan/Cook-Weisberg test for heteroskedasticity chi(1) = 0.61[b]		
Mean VIF=1.39[c]		

Notes: [a]***, ** and * refers to significance at 1%, 5% and 10%, respectively

[b] The null hypothesis states that the residual has constant variance. Thus it cannot be rejected

[c] A common rule of thumb is that if VIF is greater than 10, then multicollinearity is high.

[10] Pairwise correlations of labor are -0.81 with small size dummy and 0.69 with large firm size dummy.

Another three alternative specifications are specified so as to explore the effect of firm size by in such a way that there is no collinearity with labor (Annex-3). Model 1 shows a negative significant coefficient of dummy for small size firms. It suggests that the low size firms are less productive compared to the large size firms. In this model labor is insignificant which is due to its collinearity with size dummy. Similarly, model 2 dummy for small size is excluded and it brought insignificant coefficient for size dummies of medium and large size firms. Labor is significant in model 2. A third model is estimated by excluding labor from the model. It is found that size dummies of medium and large scale are significant and positive. It means that large and medium size firms have better productivity in comparison to the small size firms. The other variables are more or less stable in all of the three different alternative models. Therefore, size of a firm matters for increased productivity.

Capital input is also significant at 1%. This is as per expectations because better capital such as machinery, equipment and buildings are important tools for business growth. The percentage of capacity use has higher elasticity compared to other firm specific characteristics. It indicates that firms that use larger proportion of their capacity have higher revenue than those that operate at lower capacity. The number of working hours of the firms within a week, which is closely related to capacity utilization, is also positive and significant. The extent of capacity use is associated with the competitiveness of the firm in the market and the extent of investment climate constraints. The descriptive analysis shows that most small scale firms operated at low level compared to the large and medium scale. The investment climate constraints are costly to the small scale in relative terms.

Higher educated managers have significant effect on productivity as expected. Higher education improves leadership and better know-how to the manager. This increases the probability of competitiveness of the business. The experience of managers' is insignificant, meaning they are less likely to learn from past experiences. Though the survey has little to say, the problem might be associated with management frequent turnovers between different employers due to lack of proper incentives to managers. Research and Development is also insignificant. This could arise due to little attention to the R&D in the firms' side. A survey based study by Kefyalew and Tsegabirhan (2010) on manufacturing exporters showed that most firms, even those that have R&D, don't have dedicated personnel responsible for the research activity. Even those firms that have R&D unit are not serious in allocating a labor and other resources dedicated for R&D activity only. It is unlikely to benefit unless a due emphasis is given to the research and development.

Power interruptions and webpage use are among the infrastructural variables. Power has been a major problem in Ethiopia especially with the increases in industrialization

and urbanization. Its trend has been deteriorating over time (see Kefyalew and Tsegabirhan, 2010; CSA, 2009). Therefore, the expected negative sing is a reflection of this severe constraint to business growth. Dummy for generator use was used but it was insignificant and excluded for parsimony purpose. The insignificance might be due to the poor qualities of generators used by most firms. Webpage dummy, to account for access to modern means of communications, is positive and significant. Access to modern information communication systems reduces transaction costs. The lower transaction cost implies that more transactions can be made, possibly both on local, regional and global levels. This increases the probability of business success and also the growth of the overall economy.

The collateral value as a percentage of loan has a negative effect on the productivity of firms. Though collateral requirement is appropriate to deal with moral hazard and adverse selection, the increase in the value of the collateral relative to the loan size drives out risk averse investors. Moreover, the small size firms are less likely to provide acceptable collateral relative to the large size firms and likely to suffer more from collateral constraints. Alternative sources of finance for firms are the retained earnings especially in small scale firms. It is shown in the descriptive analysis that the small size firms' disengagement from the formal banks is much higher than in the large and medium sizes. Though the large and medium can got relative access to bank credit, the loan approval process is not efficient that require large number of visits (Kefyalew and Tsegabirhan, 2010). This would harm the progress of business activity. Therefore, internal sources of finance are more appropriate and safe as they do not require bureaucracy to process and invest in the business. This is also confirmed by a positive coefficient of internal sources of finance as a share of total working capital. So the internal sources seem most important to such firms. This is also supported by the significant coefficient of internal sources of finance. Overdraft facility is a third finance related variable which is positively related to manufacturing productivity. This is an opportunity that allows businesses to withdraw beyond the amount they deposited in time of excess cash need at an agreed interest rate. This opportunity can help businesses a lot in time of temporary liquidity constraints.

Institutional variables, as stated in the literature, are among major restraints to businesses. The available proxies such as number of delays in different offices are, however, characterized by a large number of non-response and this affect the degree of freedom of the econometric estimation. The only suitable variable with appropriate number of observations is the proportion of manager time spent on government regulations and it is insignificant. This does not necessarily imply that institutions are efficient. It only shows that this variable is not a good proxy for institutions.

3.8 Conclusion and policy implications

The study shows the effects of investment climate constraints; infrastructural, financial, institutional, macro-economic factors and firm specific characteristics on the performance of different size firms. It is found that power is a major infrastructural constraint to most firms. The costs of infrastructures as a percentage of annual sales are also high especially in small size firms with 52% in smaller firms while it was 21% in the large sized firms. Alternative sources of power such as generators are not available in the majority of the firms especially in the small size. The supply of power service has also been deteriorating over time over time (Kefyalew and Tsegabirhan, 2010; CSA, 2009). CSA (2009) reported that power shortage is a major cause for under capacity utilization in 81 percent of the large and medium scale industries.

Adaptations to modern information communication services like email and webpage are low. The quality of transport is a major restraint especially in large and size firms. The values of collaterals are large relative to the loan size. Credit access from formal banks is low especially to small size firms. Major sources of working capital come from internal sources of finance. This might be associated with the values of collaterals and lack of acceptable collaterals. Tax rate as well as its administrations are macro-economic factors that affect the small size firms relative to the large and medium ones. The rankings of firms about the services of different institutions show sort of inefficiencies especially in getting access to land. The data is, however, before the implementation of BPR. Latest data are not found to compare the status of service deliveries for current periods.

The firm specific variables also showed useful insights. Generally there is poor education status of managers and employees, lower level of industrial trainings, lower research and development efforts. These problems are especially relatively more severe in the small size firms than in medium or large size firms. The econometric result is also consistent with the descriptive evidence. The significance of labor is one indicator of size advantage for business growth. Alternative regression models based on firm size dummies also unveil the effect of firm size on productivity. These suggest that being a large size is an advantage to improve productivity. Capital, Managers' educational status, capacity use, hours worked per week, and internal sources of finance are positive and significant. Value of required collateral and power outage are negative and significant. In sum, investment climate constraints affect the business activities negatively. The magnitudes of negative effects are high in the small size firms.

Though the data used seem a for study seem a 6 years earlier data, attempts are made to complement with other studies and reports to examine whether there exist

major changes in investment climates or not. It used a survey based study of Kefyalew and Tsegabirhan (2010) and CSA (2009) report on industry business survey to examine recent status of investment climates. The former study focused on exporters of manufactured goods and cut flower for the fiscal year 2007/08. The latter a quarterly report based on the large and medium scale manufacturing for the fiscal year 2009/10. Both studies show that there are not much changes in the investment climate. There are even deteriorations especially in the power sector over time both in cost and quality. Therefore, the data from the 2004/05 can enable to draw policy lessons. This dataset is particularly important as it shows the effects of investment climate on different size firms which the previous studies fail to give emphasis to. The following are suggested to improve the business environment especially for the small size firms;

i. A need to continue the ongoing efforts on the supply of power to ensure stable supply of power and also on communication and transport. Aside from quality, costs of infrastructures are too high especially in the small sized firms. It will be advisable for the Ethiopian Electric Power Corporation and Ethiopian Telecommunication Corporations to work with industrial associations to deal with tariff rates in such a way that it is an incentive to the small size firms.
ii. The Information communication/Telecommunication sectors should strengthen their links with the firms to facilitate the adoption of latest means of communications. The major reason for not adopting email/webpage is the perception that the services are not necessary. This might be due to inadequate information about the services. Higher adoption rate reduces transaction costs and increases number of transactions.
iii. BPR is already under use to improve the service delivery of different public institutions. However, it is necessary to study the changes in the quality of services after the BPR for better actions improvement in service delivery.
iv. Revisiting collateral requirements; higher value of requested collaterals and problems associated with movable properties are major challenges. There is a need to visit the collateral values. Small size firms are also less likely to have an immovable property that serves as collateral due to high cost of monitoring movable collaterals in the banks side. There has to be an improvement in the collateral issues for the movable properties.
v. Firms in general, and small ones in particular, require access to basic training opportunities for managers and employees. Industrial associations can do their part in this aspect. This is essential to deal with the problems of less educated labor force. Efforts in linking domestic firms with successful foreign firms can help for the transfer of new technologies.
vi. Market information support both for output and raw materials can serve to deal with the under capacity utilization.

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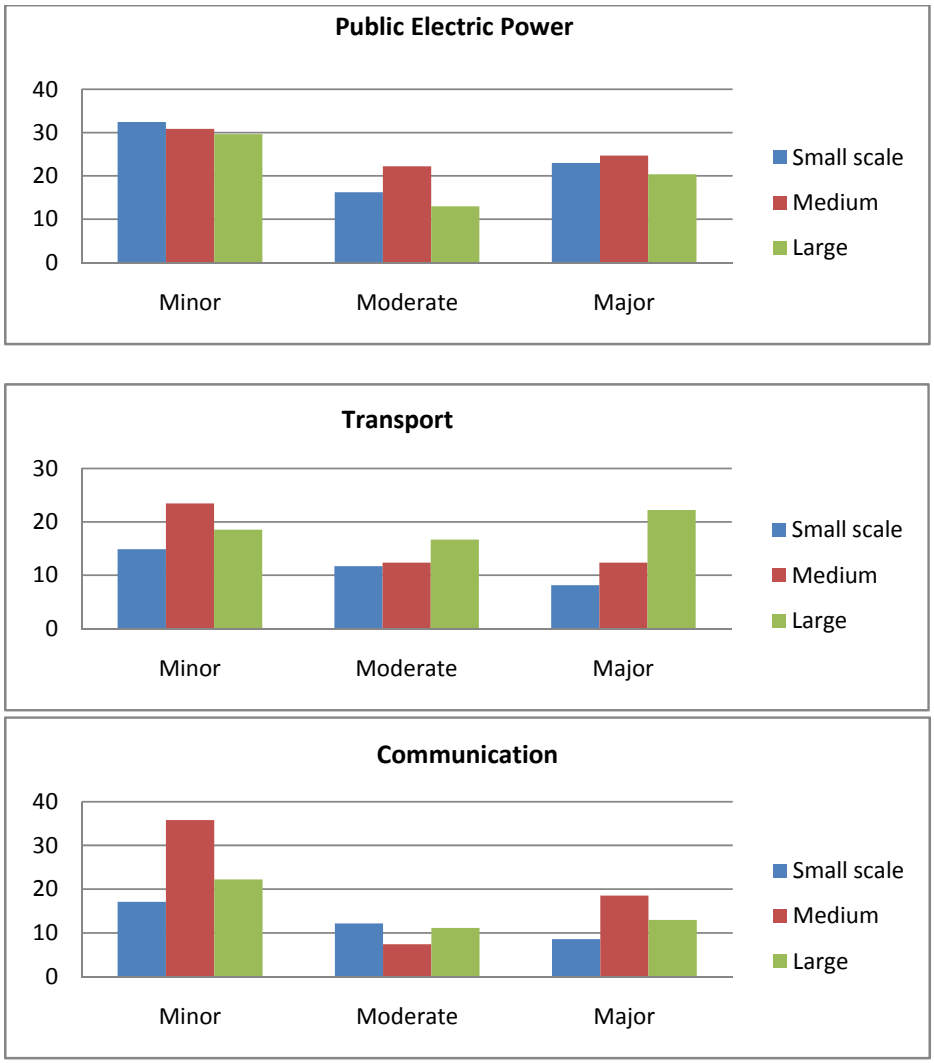
Annexes

Annex 1: Firms perception on the effects of infrastructures



Source: WB (2006)

Annex 2: Shapiro-Wilk W test for Normal Data

Variables	obs	W	V	z	prob
Revenue (in log)	357	0.9699	7.49	4.77	0.0000
$\ln(K_i)$	287	0.9896	2.13	1.77	0.0382
ln(L)	360	0.9539	11.54	5.79	0.0000
ln(MGEXP)	357	0.9623	9.38	5.30	0.0000
MGEDU	360	0.9945	1.39	0.77	0.2201
RD	359	0.9667	8.33	5.02	0.0000
CPU	360	0.9903	2.43	2.11	0.0176
ln(HRS)	360	0.8702	32.52	8.24	0.0000
INTSOU	360	0.9770	5.77	4.15	0.0000
MGTIME	356	0.7909	51.86	9.35	0.0000
POWERI	359	0.9940	1.50	0.96	0.1694
WEBPAGE	359	0.9782	5.45	4.01	0.0000
COLLATERAL	154	0.8722	15.21	6.18	0.0000
OVERDRAFT	354	0.9969	0.77	-0.63	0.7368

Annex 3: Regression Results of Alternative Models

Independent Variables	Model 1		Model 2		Model 3	
	Coeff.	t-value	Coeff	t-value	Coeff	t-value
$\ln(K_i)$	0.18	3.56***	0.18	3.57***	0.20	4.01***
ln(L)	0.23	1.61	0.25	1.7*	--	--
ln(MGEXP)	0.10	0.72	0.12	0.84	0.10	0.72
MGEDU	0.53	1.72*	0.50	1.64	0.59	1.92*
RD	0.17	0.55	0.16	0.55	0.21	0.72
CPU	1.16	2.55**	1.18	2.64***	1.24	2.76***
ln(HRS)	0.50	2.09**	0.51	2.14**	0.51	2.12**
INTSOU	0.01	2.55**	0.01	2.55**	0.01	2.46**
MGTIME	0.01	0.46	0.01	0.39	0.01	0.39
POWERI	-0.58	-2.15**	-0.53	2.01**	-0.54	-2.02**
WEBPAGE	0.64	2.16**	0.63	2.18**	0.68	2.35**
COLLATERAL	-0.55	5.33***	-0.55	-5.33***	-0.56***	-5.37
OVERDRAFT	0.61	1.96*	0.68	2.23**	0.79	2.63***
GENERATOR	-0.05	-0.16	0.00	0.00	0.00	-0.01
LOANRATE	0.02	0.31	0.04	0.57	0.03	0.34
FIRMSIZE1 (1 if small size)	-0.96	-1.67*	--	--	--	--
FIRMSIZE2 (1 if medium size)	-0.40	-1	0.50	1.38	0.78	2.4**
FIRMSIZE3 (1 if large size)	--	--	0.88	1.56	1.52	3.58***
Constant	2.97	1.79	1.69	1.24	2.35	1.79

Note: Model1: dummy for large size firms is excluded
Model 2: dummy for small size excluded
Model 3: dummy for small size and labor are excluded

EXPLORING ALTERNATIVES TO THE MIDDLE-EAST MEAT MARKET FOR ETHIOPIA: EVIDENCE FROM SIMULATION MODELS

Mohamadou L. Fadiga[1] and Samuel Amare

1. Introduction

Ethiopia is endowed with abundant resources and relatively good climatic conditions for crop and livestock production. Paradoxically, the country is consistently faced with chronic food shortages. While the shortages of food, for the most part, can be attributed to vagaries in weather conditions, ineffective organizational structure, inadequate agricultural policies, and limited investment over the years are important factors explaining the state of the agricultural sector (Ofcansky and Berry; 1991). With an agrarian population of 82% of the overall population, agriculture has a central role in the Ethiopian government development strategy. Yet, investments in modern animal husbandry are very limited. The limited investments in the agricultural sector lead to limited value addition on agricultural products currently exported. The country's exports are dominated by unprocessed crop products such as sesame, coffee, live animals. Oil seed and coffee alone account up to 56% of total exports in 2005/06 up from 51% in 2003/04 (National Bank of Ethiopia, 2005). The inter-sectoral linkages in the overall economy are weak, which reduce the potential of the agricultural sector for job creation, thus hampering the role it could play in government strategy in reducing unemployment.

The total livestock in Ethiopia is estimated at 47.5 million heads of cattle, 26.6 million sheep, and 21.5 million goats (CSA, 2008). Livestock rearing remains one of the principal economic activities that sustain most communities throughout Ethiopia. Ethiopia's high stock is not leading to higher exports of either live animal or meat. The example of Botswana illustrates this paradox quite well. With 1/20th of the Ethiopian livestock herd sizes, this country is able to export meat at average volumes between 2006 and 2009 2 times higher than Ethiopia (FAO, 2010). Cattle are reared primarily for draught power and milk production. The secondary importance of meat in the smallholder's production strategies explains the low offtake rate and the high proportion of cattle aged between three and ten years. About 64% of the cattle herd is in this category. In this age group, 36% are females and 34% of the cattle are aged below three years (CSA, 2009).

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The major constraints preventing Ethiopian livestock sector reaching its full potential are feed, animal disease, genetics, recurrent droughts, and market policies. These are the main factors that are hindering productivity gains. How livestock is perceived in household production strategies is also a major hindrance to its development. The case of livestock in the highlands, which is primarily for used for draught power and milk production, illustrates this conundrum. The breeds are not categorized as beef and dairy cattle and as a result, the average milk and meat productivity per animal is lower even by sub-Saharan Africa standard.

Current stock level relative to available biomass is becoming a major constraint for livestock development. Smallholder livestock keepers rely on pastureland and crop residues to feed their stock, implying that the livestock population is more likely to remain undernourished unless adequate interventions strategies curbing this trend are found. Despite recurring droughts, the country's agro-ecology is suitable for crop and livestock production as current stock level and crop diversity indicate. There are some opportunities for the livestock sector to yield greater benefit for Ethiopia. This will require developing new market penetration strategies for Ethiopia's meat.

This paper explores some alternatives to the Middle East market using simulation models. Saudi Arabia, United Arab Emirates, and Yemen have been major importers of Ethiopia's meat and live animals. However, the Middle East market is highly unstable for various reasons some of which pertain to food safety and animal health issues as illustrated in two consecutive bans of Ethiopia's livestock by Saudi Arabia following a Rift Valley fever outbreak in 1998 and 2000 that lead to significant loss in income, up to 60% drop in exports (Nin-Pratt et al., 2005). Additional restrictions of Ethiopia livestock have occurred because of Rift Valley fever outbreaks in the East Africa Region particularly in Kenya and Tanzania (Rich, 2008). As a result, Ethiopia exports have been erratic over the last decade. From a historical high of 2,323 tons in 1983, beef exports have been sliding ever since, falling to zero in 2001. Despite a slight recovery in 2004 with just 144 tons, Ethiopia beef exports never reach the threshold of 100 tons from 2005 onwards (FAO, 2010). The yearly average for the period between 2007 and 2009 was 40 tons of beef, 730 tons of sheep meat, and 3439 tons of goat meat Meanwhile, Africa as a continent is a net importer of meat. Between 2002 and 2007, the average yearly imports amounted to 28,551 tons of beef, 50,754 tons of sheep meat, and 3,843 tons of goat meat. About 10 countries, Algeria, Angola, Benin, DRC, Congo, Egypt, Gabon, South Africa, Cote d'Ivoire, and Mauritius, concentrate about 60% of all imports. Equatorial Guinea is also a potential importer as per capita income for this country is rising because of high oil price.

Clearly there are some opportunities for Ethiopia meat exporters in the African market although there may be some limitations pertaining to the nature of the import mix, which is dominated by low grades and frozen beef and Ethiopia beef, which is primarily chilled beef (Rich, 2008). However, Ethiopia has exported to some of these countries in the past. As livestock disease profiles between Ethiopia and these countries are, by and large, similar and the countries share similar concerns with respect to food quality and safety, we conjecture that if Ethiopia manages to penetrate these markets in a significant manner, its exports volume is more likely to be stable for the subsequent years. There are some clear upsides for Ethiopia within Africa as demand is more than that of the Middle East, thus large enough to sustain an export program.

The potential impact of this market penetration strategy can be measured relative to the baseline situation obtained by simulating the outlook of the Ethiopian livestock sector over the next 10 years. It is important to stress that no specific policy process is being evaluated; this exercise is merely an ex ante analysis of an alternative scenario that Ethiopia could explore and if she decided to do so, what would be the distributional effects of such an initiative.

2. Modeling framework

The basic structure is a dynamic partial equilibrium multi-market model with an explicit crop-livestock integration, which will be used for the purpose of simulation to have a clearer medium and long term overview of the Ethiopian livestock sector. The structure of the model is a series of behavioral supply, demand, prices, and trade equations for crop and livestock. These endogenous variables are all interlinked in the model so that any changes in one sub-sector will be felt throughout the entire agricultural sector through adjustments dictated by the relative elasticity of each explanatory variable with respect to the corresponding dependent variable. The crop component of the model includes teff, barley, wheat, maize, sorghum, pulse, and oil crop. The livestock component encompasses cattle, sheep, goat, dairy (milk and butter), and feed (maize used as feed and oil cake). The third part of the model is comprised of price linkages that include dynamic producer price models that are dictated by supply, demand, and inventory adjustments. Additional price linkages are contemporaneous relationships between retail and producer prices. A detail representation of the model structure is presented in Appendix A. 3. **Database Development**

A database was developed from secondary sources that include the Ethiopian Central Statistical Agency (CSA), the Food and Agricultural Organization (FAO) of the United Nations, various reports, and authors' own calculations. The collected data can be divided into three groups: endogenous variables, exogenous variables, livestock demographic parameters based on the purpose of this study. The endogenous variables include supply side variables (area, yield, production, beginning stock, and imports), demand side variables (consumption, exports, and ending stock), and price variables (retail prices and producer prices). The exogenous variables involve macroeconomic variables (consumer price index, producer price index, and gross domestic product), population, rainfall, and transportation cost. The livestock demographic parameters represent indicators of herd structure, mortality rate, fertility rate, share of lactating cows, and share of lactating cows that are milked. The livestock demographic parameters are relatively stable over the years and may only be altered in a significant manner by unanticipated shocks such as disease outbreaks.

The exogenous variables contain both historical data and projected data through the year 2020. Where projections were not available, we derived our own projections based on similar variables or our best estimates of their corresponding growth rates. In this study, Ethiopia is assumed a price taker with limited contribution to the world crop and livestock market. For this reason, world price of meat and live cattle are assumed exogenous. World meat price is proxied by the Australian export price of beef while that of sheep and goats are proxied by the New Zealand export prices of sheep and goats. Australian beef prices, including their projected values over the next ten years are collected from the Food and Agricultural Policy Research Institute (FAPRI) website (FAPRI, 2009). The New Zealand export price of sheep and lamb

meat were gathered from FAO statistics and their projected values were derived using the growth rate of world beef prices. Live cattle, sheep, and goat exports are the Ethiopian border price adjusted to transportation cost and expressed in US Dollars. It is projected to increase by 3% annually as transportation cost.

Producer and consumer price indices are collected from the CSA. Producer price index is expected to revert to its long run trend and appreciate by 4% annually for the next ten years while consumer price index is expected to increase by 5% annually for the next ten years. Ethiopia's GDP is also exogenous and was collected from the CSA. While we believe that the Ethiopian economy will continue to grow, we projected its annual growth rate to revert to its average between 2004/05 and 2008/09 at 7.5% a year because of high energy prices and continuous inflationary pressures on the economy, making a sustained double-digit economic growth less likely. The population data, including their projected levels over the next ten years are collected from the CSA.

The model also includes rainfall as exogenous variable, which we collected from the Ethiopian Meteorological Agency. Projected values of rainfall were derived using a four-year moving average process. Export of cattle meat and informal export of live animal merit some elaboration. While export is generally included as endogenous variables in studies with similar focus, cattle meat export was exogenized in this study as their historical levels were erratic, thus, difficult to capture in the model and their values in the latter years were also negligible. We assumed export of cattle meat would remain at its 2008 level over the next ten years. Estimates of informal trades are varied, ranging from 325,000 heads (Livestock Marketing authority, 2001) to 400,000 heads of cattle (Little, Azeze, and Gebremariam, 1999). We adopted a more cautious approach by using information available in the literature, current stock level, and volume of formal trade and estimated it to be about 392,000 heads of cattle, 215,000 sheep, and 179,000 goats were informally exported from Ethiopia in 2008. We assumed informal export of live animals would continue to grow at 2% rate a year over the next ten years.

The specified model was estimated simultaneously using SAS proc model procedure. This procedure allows for the estimation and simulation of dynamic simultaneous equation systems. In instance where the parameters lacks of economic sense or had difficulty converging, the model was constrained using parameters readily available from secondary sources in Ethiopia, if not available, in country with similar production system. This process was applied in a limited fashion in this project and was proved useful in improving the convergence of the model. The goal of the estimation is to derive the parameters used to compute the elasticity estimates summarized in Appendix B.

3. Policy shock and assumptions

The analytical framework followed in this study assumes alternative situation in which Ethiopia captures 12% of African beef market and subsequently increases its share by 5% each year over the next ten years while all other things remain unchanged. The effects of this strategy are compared to the baseline scenario in the short-, medium-, and long-run. Some impacts due to

the policy shock are noted on few variables, including animal inventory, cattle slaughter, live cattle exports, meat production, and export earnings.

Animal Inventory: Our baseline findings indicate that Ethiopia's cattle stock is projected to reach 51 million heads by the end of 2010 based on our short term projections. It is expected to grow at an average of 1.65% a year over the next ten years to reach 56.5 million heads by 2015 and 61.

1 million heads by 2020. Sheep population is expected to be relatively stable, growing on average by 0.59% per year over the next ten years, from 27.8 million heads in 2010 to 29.1 million heads in 2015 and 29.3 million head in 2020. The evolution of the goat population is similar to that of cattle more so than that of sheep with an average annual growth rate of 1.48% over the next ten years. It is projected to reach 22.01 million heads by the end of 2010, 24.95 million heads by end of 2015, and 25.80 million heads by the end of 2020. Animal inventory includes newborn calves, lambs, and kids. Projected newborn calves is relatively stable, hovering around 7 million heads per year with an estimated average growth rate of 0.75% a year over the next ten years. Newborn lambs hovers around 9.8 million heads over the next ten years, averaging 1.63% while newborn kids grow at an average by 2.1% and hover around 10.2 million per year over the next ten years.

If Ethiopia managed to increase its share of the African beef market, as described above, cattle stock would drop by 0.05% in the 2011, amounting to 26,000 heads of cattle in the short term.. The effects would be more pronounced in the medium and long term, dropping by 0.24% (136,000 heads below its projected baseline value) in 2015 and by 0.47% (378,000 heads below its projected baseline value) in 2020. On average, cattle stock is expected to decrease by 183,000 heads per year following an increase in exports (Table 1). Although cattle stock decreases, the newborn has increased because the breeding stock is unaffected. The lag structure in the model explains why newborn population is not changing in the first short term. The projected population of newborn calves is expected to increase by 0.05% (3,020 heads) in the medium term and by 0.07% (5,300 heads) in 2020. On average, the population of newborn calves is expected to increase by 3,040 a year over the simulated periods (Table 1). There is limited effect on sheep and goat stocks following the increase in beef exports.

Table 1: Impacts of 12-percent increase in beef exports

	2011	2015	2020	Average Impact[1]	
New Born Calves	0.00%	0.05%	0.07%	0.04%	3,040
Slaughter Volume	0.65%	0.84%	1.12%	0.87%	41,940
Live Cattle Exports	0.00%	-1.09%	-1.27%	-0.85%	-1030
Cattle Stock	-0.05	-0.27%	-0.62%	-0.31%	-183,150
Carcass Yield	0.00%	0.00%	0.00%	0.00%	0
Meat Production	0.94%	3.54%	5.21%	3.49%	19,220

Note: (1) indicates average impact for newborn calves, slaughter volume, cattle stock, and live cattle exports is in percent and in number of heads while that of meat production is in percent and tons.

Live Animal Utilization: Live animals are utilized in different commercial activities, which are summarized into two categories: the demand for slaughter and exports of live animal. The demand for slaughter determines the quantity of meat produced for both domestic consumption and exports. For cattle, total animals slaughtered are expected to reach 3.81 million heads in 2010, 4.48 million heads in 2015, and 4.91 million heads by 2020. This amounts to an average annual growth rate of 2.7% per annum. Sheep and goat slaughters are expected to follow their historical trends over the next ten years, averaging 3.94 and 3.12% annual rate, respectively. In absolute terms, total slaughter for sheep is expected to reach 9.2 million heads in 2010, 11.24 million heads in 2015, and 13.38 million heads by the end of 2020 while slaughter for goats are expected to reach 8.72, 10.69, and 11.81 million heads over the same periods. Cattle slaughter volume is expected to increase to accommodate increase in beef exports. On average, the total animal slaughtered to accommodate both domestic demand and the export market amount to 41,940 heads that is 0.87% above the baseline average.

Live cattle exports meanwhile remain vibrant although it has weakened in 2008 and 2009. The 2010 projected number (89,000 heads) indicates it is on a path to recovery. Live cattle export is expected to follow an upward trend to 133,000 heads in 2015 and 182,000 in 2020, averaging 7.7% growth rate per annum. Despite this high growth rate, live cattle exports volume is expected to surpass its historical high (173,000 in 2005) no sooner than 2019. However, the increase the growth in the meat export market has a negative effect on live cattle export, reducing it by 0.85% relative to its yearly average. In absolute number, this will correspond to a reduction of live cattle export by 1.030 per year

Meat Production and Consumption: Meat production is determined by two factors: slaughter volume and carcass yield (Appendix A). Carcass yield is projected to remain relatively flat for cattle, sheep, and goat. Thus, the expected growth in meat production will essentially come from growth in slaughter volume. For cattle meat, historical high in production was reached in 2004 at 352,000 tons. This was followed by a drop in production in 2004 although it has been trending up since. The rise in per capita meat consumption combined with population growth are the main factors contributing to higher slaughter volume; thus to higher cattle meat production as slaughter for export remain virtually nil. Meat production is expected to grow at an average annual rate of 3.02% to keep up with rise in consumption, reaching 428,000 tons in 2010, 510,000 tons in 2015, and 604,000 tons in 2020. Because of increase exports under the scenario, slaughter volume is expected to increase and so is production. Total production is projected to increase by 4,040 tons (0.94%) relative to its baseline level in 2011, by 18,390 tons 3.54%) in 2015, and by 32,320 tons (5.21%) in 2020. On average, meat production is expected to increase by 19220 tons (3.49%) relative to its average baseline value over the simulated periods.

In our baseline findings, Ethiopia's per capita cattle meat consumption is expected to hover around 5kg per year, slightly higher than its historical average derived using total consumption data from FAO and Ethiopian population from CSA as previously described. Population growth fuels much of the anticipated growth in consumption, which is expected to be around 1.93% per annum on average. Cattle meat consumption is projected to be slightly above 383,000 tons in 2010, grows to 428,000 tons in 2015, and is expected to be around 604,000 tons in 2020.

While consumption mirrors production in the baseline scenario because of weak export, the rise in exports under this scenario does not affect per capita consumption of beef, sheep meat, and goat meat. Goat meat and sheep meat production are not affected either.

The scenario analysis shows some gain in exports earnings, which amount to USD 15.8 million computed using the average world price and exports over the simulated periods. While this is significant for Ethiopia, it does not warrant new investment in abattoirs because capacity will likely to be under-utilized, as additional slaughter remains modest. The scenario presented in this study is realistic although higher than any level of beef exports Ethiopia has ever managed to achieve. The study recommends Ethiopia to pursue new market exploration in addition to the Middle East market while retaining live cattle exports as an option in its animal export mix. While this approach would require some efforts to address the concerns of importing countries, which are achievable, it would help smooth livestock trade shocks that have plagued Ethiopia in this decade.

2. Conclusion

Ethiopia has been seeking to expand its meat exports; however, export levels in recent years have been disappointing because of contingencies such as failures to meet export markets' requirements, difficulties finding good quality cattle, high cost of feed, and rising cattle prices in the domestic market. We hypothesized that the African market may be an alternative to the Middle East market and if Ethiopia manage to penetrate the African market in a significant way, it could benefit considerably as the markets would likely be more stable than the Middle East market given the similarities between the importing countries disease profiles and quality and safety standards to those of Ethiopia.

We used a baseline generated by a structural model of the Ethiopian livestock sector, which we subsequently shocked using scenario under which Ethiopia would capture 12% of the African market and further expand its market share each year over the simulated periods. We measured the impact of the simulated shock relative to the baseline and found the magnitude of the changes to be relatively modest for live cattle exports and newborn calves, increased slaughter volume, hence, meat production to accommodate the higher export level under the scenario. While the simulated results show relatively significant gain in exports earnings, they do not warrant additional investments in export abattoirs, as the assumed export volume under the scenario is not significant enough for higher capacity utilization. We concluded that while important, the African market can be used as a complement to the Middle East market, that is, Ethiopia should pursue both markets in addition to live cattle exports for the time being and perhaps seeks to control illegal exports of live animals to gain more of its livestock population.

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Appendix A: Equations used in the Structural Model of the Ethiopian Livestock Sector

Crop and feed components

(1) $Area = F(Lagged\ area, Producer\ prices\ of competing\ crops, Time trend)$

(2) $Yield = F(Lagged\ yield, Producer\ price, Rain fall\ deviation, Draft\ power, Time\ trend)$

(3) $Production = Area \times yield$

(4) $Feed = F(Producer\ price\ of\ maize, Producer\ price\ of\ cake, Index\ of\ productive livestock)$

(5) $Crees = F(Price of\ crop\ residues, Index\ of\ productive livestock)$

(6) $Food = F(Retailer\ price, Retailer\ price\ of\ other crops, Per capita\ income)$

(7) $stock\ adjustments = F(Retail\ price, Crop\ production\ level)$

(8) $Production + Adstock + Imports \equiv Consumption + Exports$

Livestock component

(9*a*) $Breeding\ Stock = F(Lagged\ Breeding\ Stock, Cattle\ Price)$

(9*b*) $Newborn = F(BreedingStock, Time trend)$

(10) $Slaughter = F(Lagged\ total\ stock, Retail\ price\ of\ animal)$

(11) $Live animal exports = F(Lagged\ of\ live animal exports, Retail\ price\ of\ animal, Export\ price\ of\ animal)$

(12) $Current\ stock\ of\ animals \equiv Lagged\ stock\ of\ animals + Newborn + Imports\ of\ live animals - Exports\ of\ live animals - Slaughter$

(13) $Carcass\ yield = F(Lagged\ rainfall, Time\ trend)$

(14) $Meat\ production = Slaughter \times Carcass\ yield$

(15) $Per\ capita meat consumption = F(Retail\ price of\ meat, Retail\ price\ of\ other meat, Per capita\ income)$

(16) $Meat\ consumption \equiv Meat\ production - Meat\ exports$

Dairy component

(17) $Yield = F(Rainfall, Producer\ price\ of\ milk, Producer\ price\ of\ maize, Producer\ price\ of\ oil cake)$

(18) $Milk\ production \equiv share\ of\ milked lacating cows \times yield$

(19) $Milk consumption = F(Retail\ price\ of\ milk, Proportion\ of population\ below\ 6\ years of\ age, Per capita\ income)$

(20) $Butter\ production = 0.4 \times \frac{Milk\ production}{16.5} \times 1.03$

(21) $Butter\ consumption = F(Retail\ price\ of\ butter, Retail\ price\ of\ oil, Per capita\ income)$

(22) $Milk\ for\ other\ use = Milk\ production - Milk\ consumed\ as\ fluid - Milk\ used\ for\ butter\ production + Imported\ milk$

(23) $Butter\ consumption \equiv Butter\ production + Butter\ imports - Butter\ exports$

(24) $Producer\ price = F(Lagged\ producer\ price, Adstock)$

(25) $Producer\ price\ of\ milk = F(Producer\ price\ of\ maize, Producer\ price\ of\ oil\ cake)$

(26) $Producer\ price\ of\ butter = F(Producer\ price\ of\ milk, butter\ imports)$

(27) $Retail\ price = F(Producer\ price, Transportation\ cost, Dummy\ 2007)$

Livelihood indicators

(28) $Crop\ total\ sales = \sum_i Producer\ price\ of\ crop_i \times Production\ of\ crop_i$

(29) $Livestock\ total\ sales = \sum_i Producer\ price\ of\ livestock_i \times Offtake\ rate_i \times Livestock_i$

(30) $Total\ value\ of\ livestock\ asset = \sum_i Producer\ price\ of\ livestock_i \times Livestock_i$

Appendix B: Elasticity Estimates for Crop and Livestock Components

Table B1. Price Elasticity Estimates of Supply

Acreage	Price						
	Teff	Barley	Wheat	Maize	Sorghum	Pulse	Oil Crop
Teff	0.3076	-0.1998	-0.1230	---	---	---	---
Barley	---	0.2443	---	---	-0.1771	---	---
Wheat	---	---	---	---	-0.1141	---	---
Maize	---	---	---	---	-0.3400	---	---
Sorghum	---	---	---	---	0.0708	---	---
Pulse	---	---	---	-0.1354	-0.1425	0.2352	---
Oil Crop	---	---	---	-0.2034	-0.2439	---	0.4815

Notes: --- Indicates that corresponding crops are not competing in acreage decision model.

Table B2. Price and Income Elasticity Estimates of Crop Commodity Demand

Commodity	Price							Income
	Teff	Barley	Wheat	Maize	Sorghum	Pulse	Oil Crop	Per Capita
Teff	-0.2601	---	---	-0.1948	0.1683	---	---	0.5005
Barley	---	-0.3131	---	0.1718	---	---	---	0.2533
Wheat	---	---	-0.5077	---	---	---	---	0.6648
Maize	---	---	---	-0.5318	---	---	---	0.1039
Sorghum	---	---	---	---	-0.2082	---	---	0.1429
Pulse	---	---	---	---	---	-0.1884	---	0.1254
Oil Crop	---	---	---	---	---	---	-0.8235	0.9263

Notes: --- Indicates that corresponding crops are not specified in demand model.

Table B3: Price and Income Elasticity Estimates of Meat Demand

Consumption	Price			Income
	Cattle Meat	Sheep Meat	Goat Meat	Per capita GDP
Cattle Meat	-0.3710	0.4017	---	0.5205
Sheep Meat	-0.2675	-2.1313	2.9329	0.6426
Goat Meat	---	1.7882	-1.6973	0.4276

Notes: --- Indicates that corresponding products are not specified in demand model.

Table B4: Price and Income Elasticity of Milk and Butter Demand

Consumption	Price			Income
	Milk	Butter	Oil	Per Capita GDP
Milk	-0.3356	---	---	0.1686
Butter	---	-0.2314	-0.0308	0.2739

Notes: --- Indicates that corresponding are not specified in demand model.

IMPACT BASED PROJECTION OF POPULATION CHANGE ON DEVELOPMENT EFFORTS IN ETHIOPIA: OPPORTUNITIES AND CHALLENGES

Yordanos Seifu[1]

Abstract

The paper addresses the demographic transition potential in Ethiopia and the possibility of capturing the demographic dividend observed in some East Asian Countries, as well as, suggests mechanisms to facilitate this possible opportunity. It is based on the "Spectrum" Projection Model covering the period from 1994 to 2050. The age structure of the Ethiopian population has remained child and youth dominated for along time now, but with recent incipient fertility decline expected to be expediting, Ethiopia's demographic profile will see considerable shift in the next four decades.

Education and employment indicators witness that despite striking improvements in primary education and modest decline in unemployment rate over the past few years; there is still huge unemployment rate and low secondary school enrollment, as well as, wide gender disparity in both secondary education and formal employment. Projections under three different fertility scenarios reveal that fertility plays multiple roles in boosting Ethiopia to reap the demographic dividend through (1) reducing population size (2) changing the age structure and (3) raising the status of women. Thus it will determine Ethiopia's future development course including its prospects of joining Middle Income Countries, urging the Government of Ethiopia to reconsider aggressive population control in its development plans.

Nonetheless, the demographic dividend is not automatic, nor does the window of opportunity lasts forever. Hence it can be reaped if policies and programs in countries at the incipient stages of the demographic transition are focused on the needs, aspirations and expectations for a growing bulge of young people. These preconditions, among others, include training and job creation for youth, quality and efficient educational system, agricultural modernization and intensification, labor intensive production technology, healthier lifestyles, and institutional developments. Under business as usual scenario, however, the future is bleak and the youth would turn out to be given up burdens rather than grown up dividend.

Key Words: Incipient Fertility, Demographic Dividend, Demographic Transition, Projection, Enrollment rate, Urban Unemployment

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1. Introduction

There have been dramatic changes in size, distribution and age structure of the world population since the 19th century. In 1900, global population stood at about 1.6 billion. By 2000, those digits had reversed and global population reached 6.1 billion (Kent and Haub, 2005). The acceleration of population growth mainly in the second half of the twentieth century was caused primarily by a sustained reduction in mortality, mostly in less developed countries. Among other factors; improved living standards, better nutrition, greater investment in sanitation and clean water supplies, expanded access to health services, and wider applications of low-cost public health measures such as immunization (Bloom and Williamson, 1997) have played major role in bringing mortality down. These yielded very rapid mortality reductions while fertility lagged behind for some time. Later, fertility followed the path of mortality and the falling birth rate makes for a smaller population at young, dependent ages and for relatively more people in the adult age groups who comprise the productive labor force.

A glance at population and development linkages witness that there remained a continued hot debate among scholars as to whether population is an asset or liability. These scholars are generally categorized as optimists, pessimists and neutralists/revisionists, and can all fall back on theoretical models and more or less robust data to support their positions. However, by focusing on population size, density and growth, the debate has largely ignored a critical demographic variable, i.e., age structure of the population (Bloom and Williamson, 1997). Among varied theories of population, the change in age structure is well documented in the theory of demographic transition.

The theory states that as a nation develops its mortality rate declines first, while its birth rate, through the application of technology of birth and death control, is attenuated later. The lag in time between the decline in death and birth rates accounted for the rapid population growth observed in most developing nations, and also the subsequent change in age structure. Nevertheless, the timing of the onset and duration of the demographic transitions differ widely between and within regions of the world. Almost all developed countries have completed their demographic transitions while most developing countries are in the later stages of the transition. At the other end of the spectrum, most sub-Saharan African countries are still in the early or incipient stages of the transition as they have experienced only modest declines in death rates and virtually no or slight change in birth rates.

The less developed countries of Africa, Asia, and Latin America and the Caribbean are projected to increase by just fewer than 50 percent in the 41 years between 2009 and 2050, and the poorest of these are projected to double in population size over that period. Africa is the region with both the highest birth rates and largest percentage of population growth projected for 2050. The continent's current population of nearly 1 billion is projected to double in size by 2050 (PRB, 2009). Ethiopia's population profile is not different either. The country's population has increased from an estimated size of around 18 million in 1950 (UN, 2009) to around 80 million in 2010 (CSA, 2010) making it the second demographic giant in Africa, next to Nigeria.

On the other hand, Ethiopia is a small economy with GNI per capital income of USD 870 PPP (the lowest even by sub-Saharan Africa standards of USD 1950 PPP) (PRB, 2009). More startling is its Human Development Index[2] of 0.414 in 2008 that put Ethiopia in 171st place out of 182 countries (UNDP, 2009).These show that there are imbalances between population pressure and performance of the economy. The country's population has been growing rapidly and the age structure remained youthful. Accordingly, the population below age 15 is as high as 43% resulting in high age dependency ratio.

The recent incipient fertility reduction, however, is beginning to slow down the growth of the youngest population whilst the number of elderly people is not yet important because of the small dimension of past cohort and the relatively high level of adult mortality. CSA (1999) projected the age dependency ratio to fall to 0.76 in 2015 from its level of 0.95 in 1994. The United Nation Medium Variant Projection also put the figure to reach as low as 0.45 by 2050 (UN, 2009) further reinforcing the change in age structure of the Ethiopian population in the coming decades. Under these conditions, there is potential for Ethiopia to capture the demographic dividend that would be thrown open by the demographic transition process (Ringheim, et al, 2009).

Nonetheless, the demographic dividend does not last forever. Depending on a country's demo-economic situations, the period of the dividend differs from country to country. For example, the window period for China has lasted for over 30 years (Fang and Mason, 2005); projected to take 40 years for Jordan (Bloom et al, 2001) and 55 years for Egypt (PRB, 2007) making clear the fact that there is a limited window of opportunity. The window period for Ethiopia is alleged to have started in 1995 (PRB,

[2] Human Development Index is an index that combines three dimensions: life expectancy at birth (as an index of population health and longevity); Knowledge and education (as measured by the adult literacy rate and the combined primary, secondary, and tertiary enrollment rate); and Standard of Living (measured by the GDP per capital at purchasing power parity).

2007). More importantly, the dividend is not automatic (Ross, 2004). While demographic pressures are eased wherever fertility falls, some countries will take better advantage of that than others. Some countries will act to capitalize upon the released resources and use them effectively, but others will not. The countries that benefited most from the demographic transition process are Korea, Singapore, Taiwan, Hong Kong, Thailand and Malaysia (Bloom and Williamson, 1997). The same study also revealed that, different parts of the world took different advantage of the transition. For example, Latin America's demographic benefits were smaller than East Asians, although demographic contribution was almost identical to that of East Asian miracles.

These outcomes are not automatic but depend on the design and implementation of policies both on development and population sides. Faced with dual challenges from population and development front, the Government of Ethiopia has emphasized more on development without giving enough attention to issues of family planning and population policy. Low in-country funding for Family planning service*, lack of programmatic detail for family planning (USAID/ Health Policy Initiative, 2007) and the unfavorable policy environment that is not supported by public authorities such as the head of the government (USAID/HPI, 2009) are evidences for the lower attention given to family planning services in Ethiopia. From the institutional side as well, the dwindling in size & functions of the National Office of Population, the existence of a 17 years old population policy without rigorous evaluation and its weak implementation (Assefa and Sisay, 2003) are also indicators for the lack of attention to population policy and family planning service provisions in the country.

1.2 Objective

The objective is to examine the role population changes would have on development efforts in Ethiopia. It also looks at the possibility of capturing the demographic dividend[3], as well as, suggests mechanisms to facilitate this possible opportunity. The specific purposes are:

[3] The **Demographic Dividend** is a rise in the rate of economic growth due to a rising share of working age people in a population. This usually occurs late in the demographic transition when the fertility rate falls and the youth dependency rate declines. During this demographic window of opportunity, output per capita rises. It has been argued that the demographic dividend played a role in the "economic miracles" of the East Asian Tigers

* The amount of money for family planning purchases between 2000 and 2010 is around USD 1.2 million (http://rhi.rhsupplies.org) while the government of Ethiopia spent USD 426 million for the purchase of fertilizer between 1996 and 2004 (NFIA, 2004; EEA, 2009).

- To pinpoint the role fertility change plays in boosting or compromising future population and development interactions in Ethiopia.
- To measure the size of the working age population and its demand for education, employment, health etc. which are required to realize the emerging demographic potential.
- To review literature and data on the demographic transition process and take lessons from the experience of other countries which pass through the demographic transition.

1.3 Conceptual framework

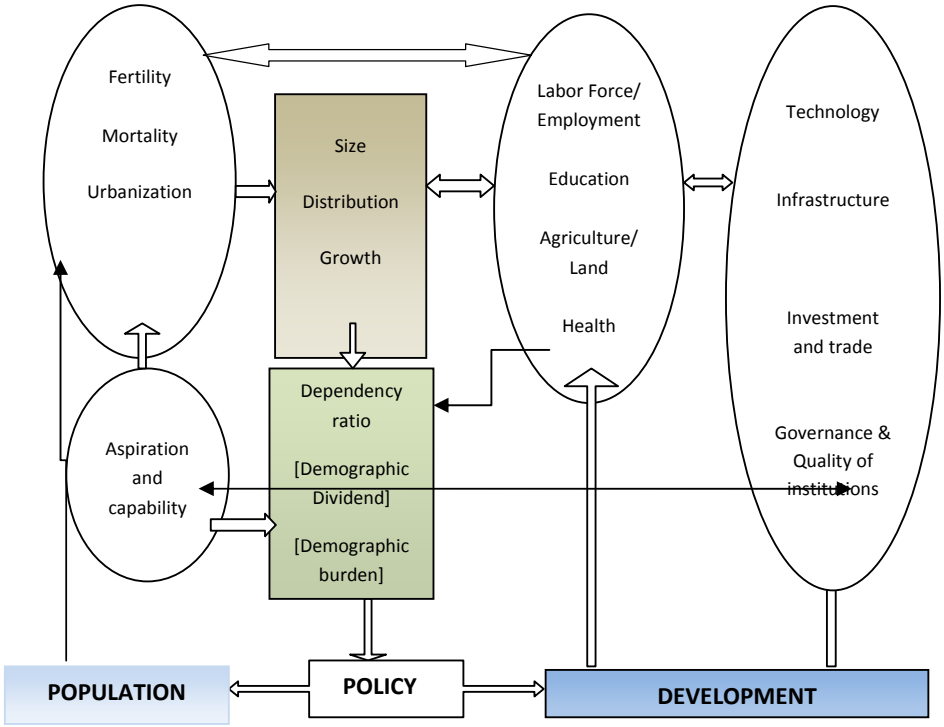
Policies are among plan or course of action of a government intended to influence decisions, actions, and other matters of people or institutions to achieve a goal or program tailored towards raising the standards of living. Favorable policies need time to establish and take effect. The same holds true for policies on population and development linkages. The mere existence of well-designed policies, however, does not guarantee improved standards of living or achievement of targeted goals for that matter. More important is the existence of quality institutions that are capable of implementing the policies so designed. The conceptual framework below therefore is meant to illustrate the interplay between demographics and other development variables in a dynamic context.

While high population growth, due to decline in mortality rate, puts initially a burden on economic growth and poverty reduction through higher dependency ratios, lower savings, and increased land pressure, it also generates favorable conditions for accelerated economic growth later on. When fertility rates begin to decrease rapidly, and do so faster than mortality rates, the proportion of working age people in the total population increases. The welfare benefits from this process could be substantial with increased household savings and investments, and accelerated economic growth.

Lessons from East Asian economic miracles provide the best evidence of the potential impact of the demographic dividend. As early as the 1950s, countries in this region developed strong public health systems that ensured child survival, promoted smaller families, and made contraception acceptable and easy to obtain (Bloom and Williamson, 1997). A strong educational system, sound economic management and well-built institutions made it possible to absorb large generation of young adults into the workforce. Therefore, taking a lesson from them, key policy actions needed throughout Sub-Saharan Africa in general and in Ethiopia in particular are those that expand youth opportunities (employment), give them the skills to participate fully in economy and public life (training and education), encourage them to value culture

and transform it into tangible asset (aspiration and capabilities), remove barriers that stand in their way from maximizing their potential, promote healthy behaviors (health) and equip them with technology.

Figure 1: Conceptual framework on the dynamic linkages between population and development variables.



Source: Developed by the author based on literature

The rural-urban linkages and subsequent economic development of Western Europe and the United States was closely associated with, and in fact defined in terms of, the movement of labor from rural to urban areas through the gradual relocation of labor out of agriculture to industry (Todaro, 1976). Migration can therefore play a major role in fostering growth and poverty reduction, by reallocating resources more efficiently both geographically and sectorally across the economy. China offers a spectacular example of the transforming role of migration where an estimated 16 percent of GDP growth over the period 1987-2005 has been contributed by migration (World Bank, 2007).

Ethiopia is one of the countries in sub-Sahara African that made slight decline in fertility (fertility declined from 6.4 in 1990 to 5.4 in 2005) and is at the incipient stage of the demographic transition. At the onset of the transition, when population growth takes off in response to decline in child mortality, the young age dependency ratio increases, yielding relatively fewer workers, while demand for social services, especially education and health, and thus fiscal pressures increase. Later, when followed by rapid decline in fertility, population growth will slow down, dependency ratios will decline, young people reaching working age will boost labor force, and savings and investment rates may increase.

Even when the above conditions are met, the dividend might not be fully captured because supply side policies or intervention will not be fruitful unless the youth/adult reveals their preference and are capable of utilizing the social services so provided. Motivations and beliefs in one's abilities to affect change in their life, which are developed during adolescence, have major consequences on adult well-being outcomes. As a result when there is a shift in social structure, for example, massive expansion in educational opportunities, the question that remain is: to what extent does an individual's life course agency influence his/her ability to navigate through those changes and benefit from them in the face of socio-cultural constraint? Optat (2009). Therefore in addition to supply side interventions, policies that influence the socio-cultural values and norms of the country/community including national and regional family law on age at first marriage, harmful traditional practices and women's right play crucial role in eroding the prevalent detrimental practices and mount the likelihood of countries to benefit from demographic potential.

1.4 Methodology

1.4.1 Data type and source

The data used are secondary that are derived from: CSA (1984, 1994 and 2007 Censuses; National Family and Fertility Survey, 1990; National Labor Force Survey, 1999, 2005; Urban Employment and Unemployment Survey 2003, 2004, 2009; Ethiopian Demographic and Health Survey, 2000, 2005), Ministry of Education's Statistical Abstracts (2002, 2008, 2009), Ministry of Health (2000, 2002, 2003, 2004, 2005), MoFED (2006), EEA/EEPRI CD-ROM (2009), the United Nation's World Population Prospects: the 2008 Revision (2009), World Bank Development Indicators (2009, 2010) and research studies at national, regional and global levels.

To project future changes in population structure and commensurate demand for social services, the **Spectrum** software is employed. Spectrum is a window based system of integrated policy models that analyzes existing information to determine the

future consequences of today's population program and policies (Future Group International, 1999). The integration in this paper is based on **DemProj**, which is used to create the population projection from 1994 to 2050, while the **RAPID** software is employed to bring population and development variables together.

The Fertility assumptions are based on the United Nation's Projection, National targets set in the PASDEP document as well as in the 1993 Population Policy. Accordingly, under the Fast Fertility Decline assumption Total Fertility Rate (TFR) will reach 4.00 in 2015 (MoFED, 2006), 2.65 in 2030 and 1.69 in 2050 (UN, 2009) and a Replacement Level Fertility of 2.1 by 2035. Medium Fertility Assumption uses a Total Fertility Rate (TFR) of 3.25 and 2.19 respectively for the years 2030 and 2050 (UN, 2009). Under the Slow fertility decline assumption TFR is assumed to reach 3.75 by the year 2030, 3.45 by the year 2035 and 2.69 by 2050.

The population projected under the above assumptions is linked with GDP and is related with the country's future to see the long-term population and development linkages. The most optimistic scenario assumption of 10.1% economic growth rate is also assumed to be maintained in the coming four decades. The impact of demographic variables on socio-economic attainment are measured using development variables such as education, health, number of new jobs required, per capita arable land, production and consumption gap in major crops and per capital GDP.

1.4.2 Measurements and definitions of variables

Labor force participation and unemployment rates are based on the "current"[4] activity status approach rather than the "usual"[5] one. The study also is based on the "relaxed"[6] or broad definition of unemployment. Educational attainments at primary

[4]This measures the economic activity status in relation to a short reference period, that is, the seven days prior to the date of interview

[5]This measures productive activities during most of the previous six months (CSA, 2009). Those populations aged ten years and over were presented with questions and the replies are used to divide them into three mutually exclusive categories: employed, unemployed and not in the labor force. The employed and the unemployed population together make up the labor force.

[6]It considers persons without work and who are available for work, including those who were or were not looking for work. The seeking work criterion is completely relaxed and unemployment is based on the "without work" and availability criterion only. The availability is tested by asking the willingness to take up wok for salary or wage in locally prevailing terms, or readiness to undertake self employment activity, given the necessary resources and facilities (CSA, 2009).

and secondary levels are measured using the Gross Enrollment Rates (GER)[7]; Net Enrollment Rates (NER)[8] and Gender Gap in Education.

1.4.3 Limitations

The RAPID model used to link population projections with the demand for socio-economic services does not consider reciprocal causality, i.e., it does not show the backward impact development variables have on demographic variables, and hence on controlling fertility. Moreover, the model does not give room for projections of variables such as energy demand and transport services which are timely and severe issues in countries like Ethiopia. Also, it does not internalize the role technology plays in encouraging or confronting the future population development linkages.

1.5 Findings and discussion

1.5.1 Ethiopia's demographic profile: Past and future

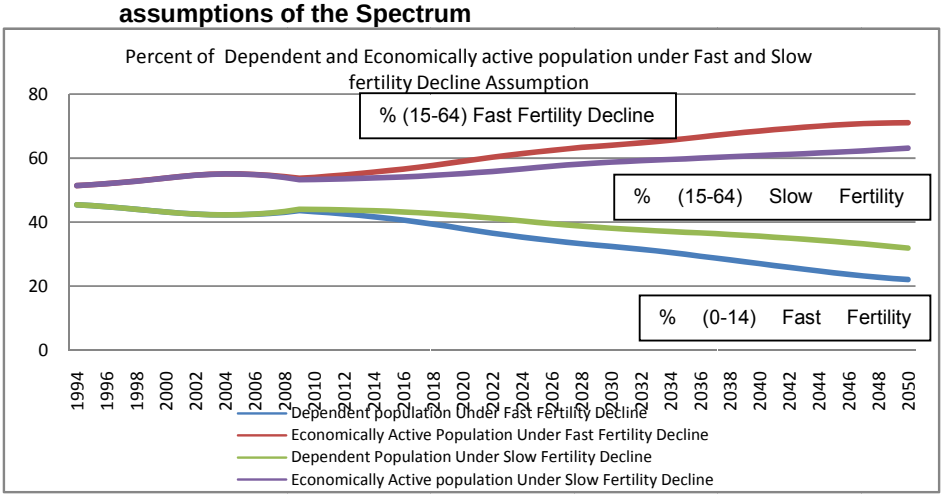
Although there was no significant change in the age structure of the Ethiopian population over the past 13 years (1994-2007), projections using the spectrum model reveal that there will be a significant shift in the age structure of the Ethiopian population in the coming four decades. Under the fast declining fertility scenario, for example, the population size of Ethiopia will reach around 140 million in 2040 while it will be 165 and 175 million respectively under the medium and slow declining fertility scenarios. A population difference of 35 million will be observed between the fast and slow fertility assumptions.

In addition to its impact on size, the difference in fertility will have considerable effect on the age structure of population. This is depicted in Figure (2) below, which shows the percentage differences in population age structure, which in turn reveal the difference in dependency ratios under the fast and slow fertility decline scenarios. Under the slow fertility declining assumption, for instance, the age structure will remain youth dominated as the percentage of dependents (less than 15 years) would show no significant decline, neither will the economically active (15-64 years) segment of the population show significant increase in the face of massive increase in absolute population size.

[7]Gross Enrollment Rate for primary level is the percentage of total enrollment in primary schools, irrespective of age, out of the corresponding primary school age population, that is, ages 7-14. (MoE, 2008).

[8] Net Enrollment Rate measures the enrollment of children of the appropriate age divided by the population of that age (MOE, 2008).

Figure 2: 1994 actual[9] and projections of age structure and dependency, 2007-2050, using the Fast and Slow declining Fertility assumptions of the Spectrum



Source: Author's Projection Based on the 1994 Census Data

The age dependency ratio as of 1984 was 0.112 (CSA, 1991) implying that for every 100 working people in the economy there were about 112 dependents to cater for. The respective figures for the 1994 and 2007 censuses were 0.95 and 0.91(CSA, 1999; CSA, 2008) respectively indicating a slight decline in dependency ratio. These figures however conceal large amount of information as they do not take into account the existing huge size of unemployment in the economy. If one has to consider unemployment rate in the economy, the magnitude of actual dependency would be higher than these figures suggest.

Ethiopia's demographic outlook is expected to be different however, and under the fast fertility decline scenario, age dependency ratio will decline by half from its level of 0.95 in 1994 to 0.47 by the year 2040, and two people in the working age group are theoretically expected to support one dependent only, reducing the burden by half. Under the slow fertility decline assumption, on the other hand, age dependency ratio will not decline significantly and remains at 0.64 without notably easing out the age dependency burden.

[9] The Ethiopian 2007 census triggered debate home and abroad as to its credibility. For instance the parliament debated on the reliability of the census result for Amhara region and Addis Ababa. Furthermore, the United Nations Revision of 2008 world Population considered the 2007 census as under enumerated by 6.1 percent. In situations like these, the author dwells mostly on the 1994 census and other National surveys for analysis.

Latent in changing age structure and diminishing family size, there is a change in the status of women as well. As fertility declines child bearing and rearing take smaller proportion of women's time leaving them free to pursue other previously unattainable activities such as education and employment (McNay, 2003). With fewer family size girls' prospect for receiving quality education also increases as there is enough resource to share with boys. They also are freed from the drudgeries of life and are relieved of their poorly rewarded multiple responsibilities such as taking care of younger siblings, fetching water, milking, collecting fire wood and other domestic and child labor.

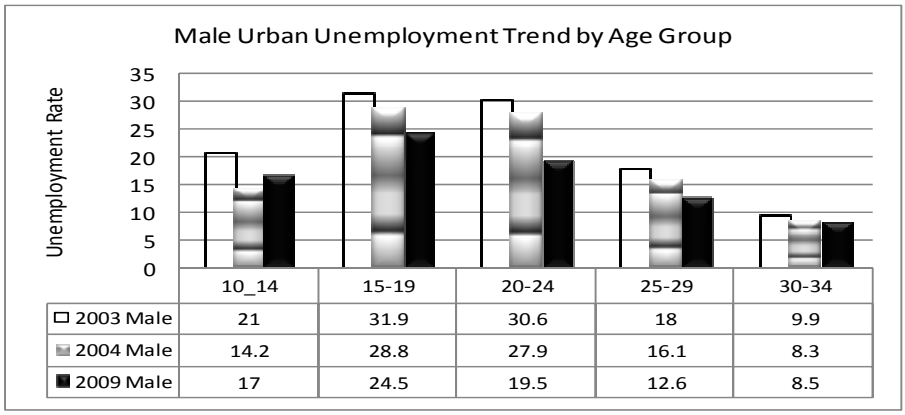
Nonetheless, the changing age structure that is brought about by fertility transition is a window of opportunity rather than a guarantee of improved standards of living by itself. Yet, it creates a potential for development when coupled with measures made in areas other than population. An in-depth analysis of the population development linkages in Ethiopia over the past 15 to 20 years, where data is available, witness that there are improvements, but a lot remains to be done. This is evident in the country's progress in terms of employment, education and other indicators as discussed below.

1.5.2 Population change, labor force and unemployment

Unemployment rate for the total economy is less than 10% (declined from 8% in 1999 to 5% in 2005). For rural Ethiopia, it is even below 3%. In urban Ethiopia, on the other hand, unemployment is huge where it was 26.1% in 2003 and slightly declined to 20.4% in 2009. Thus unemployment is mainly an urban problem (despite the severity of underemployment in rural areas). These show that urban unemployment is higher and relatively stable. However, disaggregating it by age and sex reveals that the youth in general and females in particular took the disproportionate share of the problem.

The unemployment problem in urban areas is in part an outgrowth of the rural underemployment in the country. Ethiopia's urban labor supply has been growing at a sustained annual pace of 3.5 percent, partly due to internal migration (World Bank, 2007)**.** Further increases can be expected due to population pressures on land and environmental degradation in rural areas, the momentum of the development process itself. Longer term determinants such as "regional imbalances in employment opportunity, improved communications, road and transport networks and changing aspirations of the younger generation" (Deshingkar 2005) also are reasons for the increase in urban labor force.

Figure 3: Male urban unemployment trend in Ethiopia by sex and age group using current approach

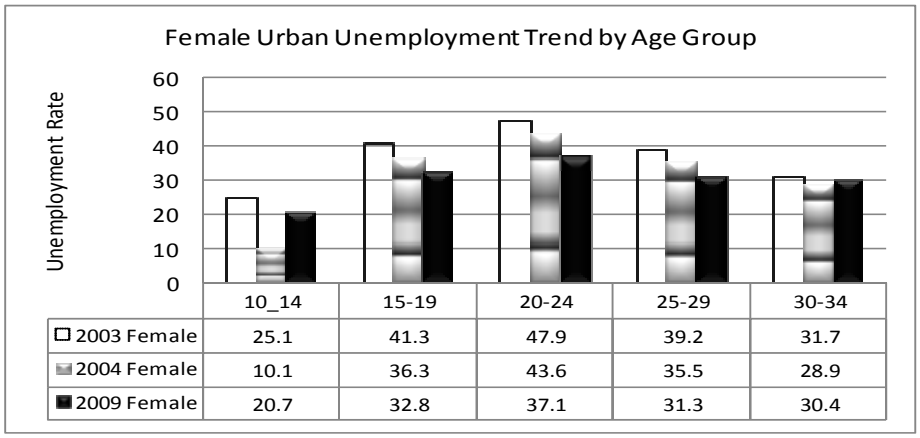


	10_14	15-19	20-24	25-29	30-34
2003 Male	21	31.9	30.6	18	9.9
2004 Male	14.2	28.8	27.9	16.1	8.3
2009 Male	17	24.5	19.5	12.6	8.5

Sources: Compiled by the author from CSA's Urban Employment and Unemployment Surveys, 2003, 2004 and 2009

In general, females are two times more likely to be unemployed than males. The problem is even severe when we consider females in the age bracket of 20-24 where female unemployment rates stay high (above 35% from 2003 to 2009). The decline in male unemployment rate is not only with the age of the person, but there is also a dramatic decline in male unemployment rate over time where it went down to 19.5% in 2009 from 30.6% in 2003 for the 20-24 age groups.

Figure 4: Female urban unemployment trend in Ethiopia by sex and age group using current approach

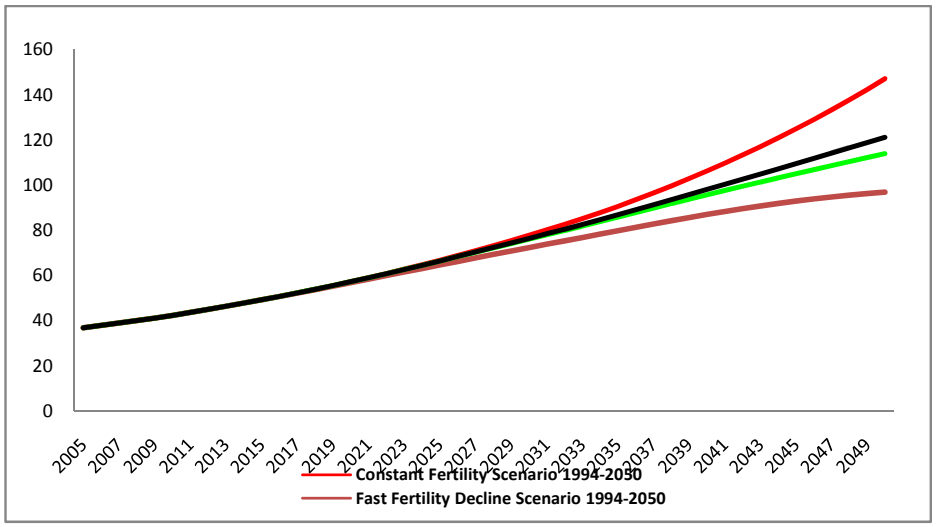


	10_14	15-19	20-24	25-29	30-34
2003 Female	25.1	41.3	47.9	39.2	31.7
2004 Female	10.1	36.3	43.6	35.5	28.9
2009 Female	20.7	32.8	37.1	31.3	30.4

Sources: Compiled by the author from CSA's Urban Employment and Unemployment Surveys, 2003, 2004 and 2009

Population growth and structure has been one of the major causes for the high rate of unemployment in Ethiopia. In the future too, population growth will have its effect on the growth of the labor force (and hence an increasing pressure on the demand for new jobs). For example, by 2040 the labor force will reach around 86 million under the fast fertility decline scenario and 98 million under the slow fertility decline, showing a labor force difference of 13 million. This is indicated in Figure (5) below. Between 2010 and 2050, the total size of the labor force increases dramatically. However, due to the inbuilt population inertia in the past, the labor force will keep increasing whichever fertility path the country is to follow. The difference in fertility scenarios starts to be felt in late 2020s and by 2040 the labor force will reach 86 million, 95 million and 98 million for the fast, medium and slow fertility declining assumptions respectively. The difference in labor force between the fast and slow fertility decline by then will reach around 13 million people.

Figure 5: Projection of Labor Force[10] (in million) under Fast, Medium and Slow Fertility Assumptions, 2005-2050.



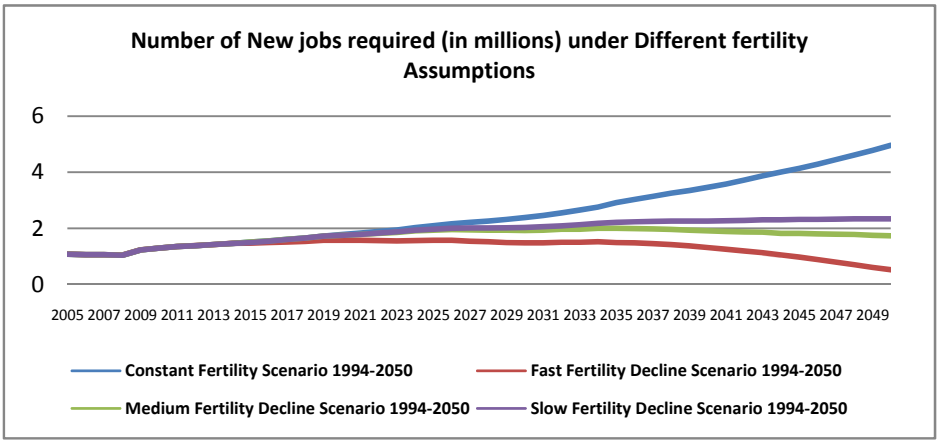
Source: Author's projection using the Spectrum Model; data from NLFS (1999 &2005)

[10] The Underlying assumption in this projection are (1) Reducing the labor force participation rate of Males $_{(10-14)}$ to 25% by the year 2035 and onwards from its level of 52% in 1999. The parallel assumption for Females $_{(10-14)}$ is to reduce it to 20% from its level of 38% in 1999. (2) Increasing the labor force participation rate of Males $_{(15-64)}$ to 90% by the year 2035 and onwards from its level of 81% in 1999. The parallel assumption for Females $_{(15-64)}$ is to raise it to 85% from its level of 64% in 1999. (3) The Economic growth rate of 10.1% is also assumed to be maintained for the next four decades.

The implication is that even with the most optimistic economic growth rate scenario, i.e., 10.1% per year assumed to continue in the next four decades, between 2010 and 2050 the economy needs to create on average 1.3 million, 1.7million and 1.9 million new jobs annually under the fast, medium and slow declining fertility scenarios respectively to absorb the emerging labor force. In other words the economy is expected, on average, to create more than half a million new additional jobs annually, over the projection period, if fertility is to follow the slow decline scenario against the fast one.

The finding here is in sharp contrast with previous research (Daniel, 2003; Page-35) where the additional new jobs required per annum on average was estimated to be over a million. This is partly attributable to the difference in the fertility assumption taken. Also, in that paper, comparison was made with the constant fertility assumption (fertility was assumed to continue at the then 5.9 rate for the next five decades, which is highly unlikely). Furthermore, the differences in economic growth rate and the labor force participation rates taken might explain the huge difference observed in the number of new jobs required.

Figure 6: Projection of new jobs required (in million) under fast, medium and slow fertility assumptions, 2005-2050.



Source: Author's projection using the Spectrum Model; data from NLFS (1999 &2005)

In addition to mere increase in labor force participation rates, there are also concerns of increasing demand for jobs driven by positive forces such as massive expansion in education. Given the Government's huge investment in education over the past two decade; the recent expansion of new universities; improvements in intake capacity of existing universities; and the proliferation of private colleges of various kind, the demand for job is expected to increase in the future because labor force participation

in the economy increases as the educated (youth) become more active in searching for job. Findings in other countries prove this where the highest rates of unemployment in Egypt have now shifted to university graduates. There are two reasons for this shift: university students were the fastest-growing group among new entrants and the group most dependent on government employment, which is not growing as fast or might even be shrinking (Assaad and Roudi-Fahimi, 2007).

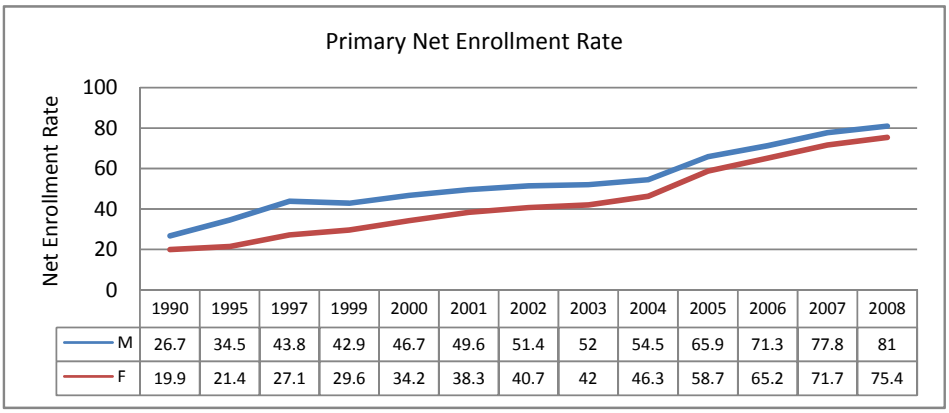
The Ethiopian labor market is changing in terms of quality and quantity of labor supply due partly to the increasing skill level and improvement in individual mobility. In Ethiopia every year approximately 600,000 people, mainly youth, are entering the labor market, and roughly 550,000 are already sitting unemployed in Ethiopian cities and towns (WB, 2007; Page 70), of whom about half been jobless for more than 12 months. On the other hand, a MoFED (2006) report show in 2004/05 alone the small-scale manufacturing enterprises (SME) has created fixed and temporary jobs for 107,283 people. Despite data disagreements between the World Bank and MoFED, the jobs created in either case are far from the number of jobs needed to absorb the emerging labor force.

Under this condition it is very clear that there is huge gap between demand and supply of labor as well as between entrants to the labor market and those who exit (as retirees or leaving the market due to competition) from it. In the long run, as indicated above, the problem will get more pressing if population is to follow the slow fertility scenario, restraining the prospect of the youth to obtain employment opportunities, and the country's opportunity of capturing the demographic dividend. Thus in addition to other causes of unemployment, the population structure (geographical distribution and age profile) and growth (size) in the country has played their role in the past and will continue to do so for some time in the future. Therefore, in the medium to long run, reducing population growth (mainly in rural Ethiopia) will at least ease the demand for new jobs required to absorb the labor force, as shown in Figure (6) above. It also creates enabling environment to invest in the youth by shifting resources away from child dependents that is brought about by change in the age structure.

5.1.3 Population change, educational achievements and gender gaps

Ethiopia has made impressive progress in primary school enrollment over the past two decades. More interestingly, primary gender gap is narrowing with time and in 2008 net primary gender gap was 5.6% only from its level of 16.6% in 1997.

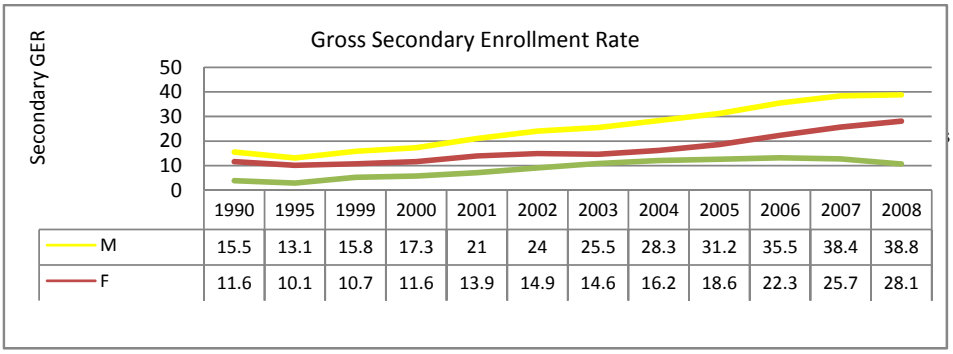
Figure 7: Trends in net primary school enrollment rate in Ethiopia by sex, 1990-2008



Source: World Bank, Education Statistics Annual Abstract, 2009

However, Ethiopia's track record in terms of secondary school enrollment is not pleasing. Unlike the case in primary education, secondary school enrollment is relatively lower on the one hand, gender gap in secondary education increased over time on the other, growing from 3.9% in 1990 to 10.7% in 2008 as shown in Figure (8) below.

Figure 8: Trends in gross secondary school enrollment rate, 1990-2008 by sex.



Source: World Bank, Education Statistics, 2009

Particularly, gender disparities intensify in secondary education, as cultural attitudes reinforce the norm that girls do not need further education after primary school. Pathfinder International (2006) found out that female early marriage is one of the major causes for denial of education. The Ethiopian Demographic and Health Survey also indicate that, girls who marry young tend to drop out of school and are more likely to bear children during adolescence (EDHS, 2006).

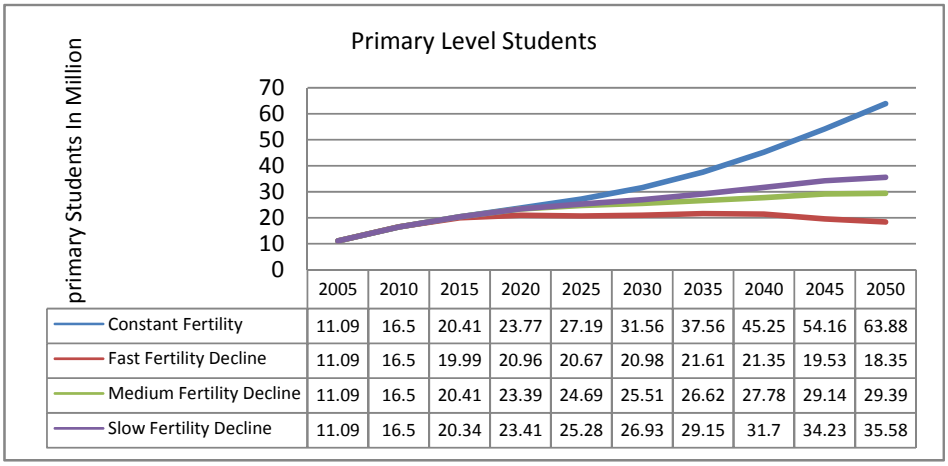
From supply side as well, the concentration of secondary schools in urban areas, inhibiting rural women from attending schools through renting house and living alone, widens gender disparity in secondary education. This is evident from a report by MoFED on proximity to schools. Accordingly, for almost all households in the country (95%), there is a primary school available within a distance of less than 10 km. Access to secondary schools is very poor compared to primary schools. Secondary schools, on the other hand, are available within 5 km radius for only 27% of total households in the country, and more than 50% of the rural households live 15 km or more away from a secondary school (MoFED, 2006).

Despite these performances (gaps) in primary (secondary) education in the past two decades, future achievements in education sector, in the next four decades, will highly depend on measures to be taken in reducing fertility, mainly in rural areas of the country. This is evident in differences between the number of students, teachers and schools required at primary and secondary levels under different fertility scenarios (see Figure 9 below).

Ethiopia will have 6, 10 and 17 million additional primary level students in 2030, 2040 and 2050 respectively if the slow fertility scenario is taken as opposed to the fast one. As shown in Figure (9) below the projected figure for fast fertility decline seem to be almost constant over the period 2015 to 2040. This is attributed to the population inertia of past generation. In other words, even if fertility is to decline rapidly, the gain in fertility reduction is compensated for by the broad base of pupils/students entering primary school age population. From early 2040 onwards the primary school age students show dawn ward trend. This is due to the change in the age structure and subsequent smaller cohorts born during fertility decline.

The same holds true for secondary level students where the respective additional secondary level students for the stated years are 1.2 million, 2.3 million, and 5.6 million. The effect of fertility is felt earlier at primary level students than in secondary ones as shown in the two Figures (9 and 10). Again this is due to the change in age structure that follows the rapid fertility decline, and concomitant reductions in the number of children joining primary school age population.

Figure 9: Projection[11] of primary school level students (in million) under four different fertility assumptions, 2005-2050.



	2005	2010	2015	2020	2025	2030	2035	2040	2045	2050
Constant Fertility	11.09	16.5	20.41	23.77	27.19	31.56	37.56	45.25	54.16	63.88
Fast Fertility Decline	11.09	16.5	19.99	20.96	20.67	20.98	21.61	21.35	19.53	18.35
Medium Fertility Decline	11.09	16.5	20.41	23.39	24.69	25.51	26.62	27.78	29.14	29.39
Slow Fertility Decline	11.09	16.5	20.34	23.41	25.28	26.93	29.15	31.7	34.23	35.58

Source: Author's projection using the Spectrum Model

The implications are that these additional students need additional schools, teachers and other teaching facilities putting further strain on government finance. This will compromise quality of education and hamper the expansion of tertiary education. Due to continued fertility decline and the consequent slower growth rate of the school-age population, governments in Middle East and Northern African countries face less pressure to increase the number of seats in primary schools, and, with some time lag, secondary schools, and therefore had the opportunity to focus on improving the quality of schooling as well as expanding higher education (Assaad and Roudi-Fahimi, 2007). In the Ethiopian case, until early 2040s no major decline is to be seen in the absolute number of primary school students (and no decline at all in secondary) whichever fertility path is taken, but still there are enormous gains to be secured from reducing fertility including improvements in quality of education and expansion of higher education.

[11]The underlying assumptions related to Education are: (1) Attaining Universal Primary Education (100%) by the year 2015 and maintain it till 2050, and reaching a secondary enrollment rate of 60% by 2035 and increasing it to 80% by 2050. (2) Increasing recurrent expenditure per primary school student to ETB 400 in 2035 from its level of ETB 250 in 2007, and to increase recurrent expenditure per primary school student to ETB 800 from its level of ETB 455 in 2007. (3) Reducing student per primary school teacher ratio to 50 in 2035 from its level of 59 in 2007, and reducing student per secondary school teacher ratio to 40 in 2035 from its level of 54 in 2007.

Table 1: Projection of primary and secondary schools required (in thousands) under fast, medium and slow fertility assumptions, 2010-2050.

Primary Schools Required in Thousands				Secondary Schools Required in Thousands			
Year	Fast Fertility	Medium Fertility	Slow Fertility	*Year*	Fast Fertility	Medium Fertility	Slow Fertility
2010	25.0	25.0	25.0	*2010*	1.3	1.3	1.3
2015	31.9	32.6	32.4	*2015*	2.3	2.3	2.3
2020	35.2	39.3	39.3	*2020*	3.4	3.4	3.4
2025	36.7	43.8	44.9	*2025*	4.4	4.8	4.8
2030	39.4	48.0	50.6	*2030*	5.1	6.1	6.2
2035	43.2	53.2	58.3	*2035*	6.2	7.5	7.9
2040	42.7	55.6	63.4	*2040*	7.1	8.7	9.5
2045	39.1	58.3	68.5	*2045*	7.9	10.0	11.3
2050	36.7	58.8	71.2	*2050*	7.9	11.6	13.5

Source: Author's projection using the Spectrum Model

As can be seen from Table (1) above the country needs to build around 15,000 more primary schools and around 1,700 more secondary schools by 2035 to achieve Universal Primary Education and increase enrollment rate at secondary level to 60 percent if fertility is to decline at slow rate against the fast fertility decline scenario. A word for caveat here is that these numbers (15,000 &1,700) are differences in schools needed between the fast and slow fertility decline assumptions rather than actual schools needed (58,000 Vs 43,000 primary schools, for example, by the year 2035).

Table 2: Projection of primary and secondary teachers required under fast, medium and slow fertility assumptions, 2010-2050.

Primary School Teachers Required in Millions				Secondary School Teachers Required in Thousands			
Year	Fast Fertility	Medium Fertility	Slow Fertility	*Year*	Fast Fertility	Medium Fertility	Slow Fertility
2010	0.28	0.28	0.28	*2010*	35.1	35.1	35.1
2015	0.35	0.36	0.36	*2015*	60.1	60.1	60.1
2020	0.38	0.43	0.43	*2020*	86.8	86.8	86.8
2025	0.39	0.46	0.48	*2025*	111.5	122.4	121.9
2030	0.41	0.49	0.52	*2030*	130.1	154.8	157.6
2035	0.43	0.53	0.58	*2035*	154.9	188.1	197.2
2040	0.43	0.56	0.63	*2040*	178.4	218.6	237.2
2045	0.39	0.58	0.68	*2045*	198.3	250.0	283.6
2050	0.37	0.59	0.71	*2050*	196.8	288.7	337.2

Source: Author's projection using the Spectrum Model

The schools so built, in addition to other teaching materials, need around 110,000 more primary school teachers and around 27,500 additional secondary school teachers by the year 2035 alone. These additional investments in human resource are required to achieve other school quasi-quality indicators as well as possible changes in the teaching system. In view of that, average student per primary teacher is assumed to reduce from its level of 59 in 2007 to 50 by 2035, and reducing students per primary school to 500 by 2035 from its level of 678 in 2007. The quality indicators set for secondary education are reducing, on average, student per secondary teacher and students per secondary school to 40 and 1,000 respectively in 2035 from their levels of 48 and 1250 in 2007. Comparison for other years under different fertility assumption can be made from the above two tables.

5.1.4 Population change and health services demand

Health is one of the social services that governments, in developing and developed countries alike, have hard time meeting. Among other things health system is measured by the level of access to and quality of service provided (measured in terms of availability of human and physical resources). Concerning human resource requirement, the paper used population per doctor and population per nurse. It also normalized these indicators to meet the standards set by the World Health Organization[12]. Interestingly, Ethiopia is already qualified in meeting the WHO standard of population per nurse ratio though it is far from the population per doctor standard. For example, population per doctor and Population per nurse ratio in the year 2006 was 35,495 and 4,207 respectively. The increasing population size in the face of difficulties meeting the current health service demand makes things more difficult in the future unless measures are taken in advance to bring fertility down (see Table 3 below).

The same holds true for health related physical infrastructures such as Hospitals and Health Centers. In 2006 the number of people per health center was 118,216 and that of population per hospital was 543,964 (MoH, 2006). With the goal of reducing these ratios to 25,000 health centers and 250,000 district hospitals respectively by 2035, quite a sizable amount of physical resource is required if population growth follows the slower fertility decline assumption, time and again, requiring higher investments in

[12]The underlying assumptions concerning health service are: (1) Reducing the Population per Doctor Ratio to 20,000 by 2035 from its level of 35,493 in 2006, and reaching a Population per Nurse Ratio of 5,000 in the same year from its level of 4,207 in 2006. (2) Reducing the Population per Health Center Ratio to 25,000 from its level of 118,216 in 2006, and reducing the Population per Hospital Ratio to 250,000 from its level of 543,964 in 2006. (3) Increasing the annual health expenditure per person to ETB 100 from its level of ETB 13.3 in 2006.

physical capital. By 2035 alone, for instance, around 100 more Hospitals and 1,000 more Health Centers are required.

Table 3: Projection of doctors, nurses, health centers and hospital required (in thousands) under fast and slow declining fertility assumptions, 2010-2050

Year	Doctors Required ('000)		Nurses Required ('000)		Health Centers Required ('000)		Hospitals Required	
	Fast Fertility	Slow Fertility	Fast Fertility	Slow Fertility	Fast Fertility	Slow Fertility	Fast Fertility	Slow Fertility
2010	2.27	2.31	17.57	17.81	0.82	0.83	0.163	0.165
2015	2.81	2.92	19.52	20.29	1.08	1.12	0.204	0.212
2020	3.46	3.7	21.39	22.88	1.46	1.56	0.255	0.273
2025	4.27	4.71	23.26	25.61	2.04	2.25	0.322	0.354
2030	5.32	6.05	25.07	28.54	3.07	3.49	0.411	0.467
2035	6.64	7.92	26.55	31.67	5.31	6.33	0.531	0.633
2040	7	8.8	28.01	35.22	5.6	7.04	0.560	0.704
2045	7.32	9.68	29.29	38.73	5.86	7.75	0.586	0.775
2050	7.58	10.51	30.31	42.05	6.06	8.41	0.606	0.841

Source: Author's projection using the Spectrum Model; data from MoH

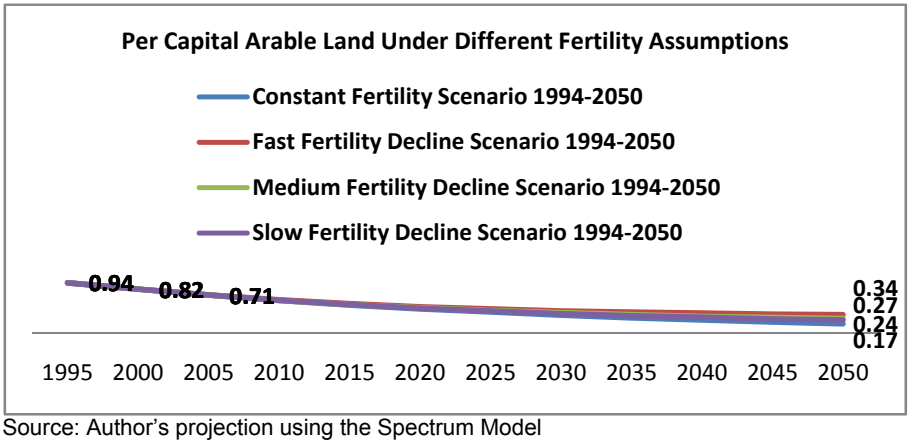
1.1.5. Population change, landlessness and agricultural production and consumption gaps

Coupled with poor farming practices (such as low use of modern farm inputs), the dwindling per capita land availability, which mainly is rooted in the population size and structure, is a cause for concern. This is evident in Figure (10) below where per capita arable land will keep diminishing from its level of 0.94 hectare per person in 1995 to 0.17, 0.24, and 0.27 hectare per person by the year 2050 under the fast, medium and slow fertility decline assumptions respectively. This too is taking total arable land of the country to be 51.3 million hectares while the current land under cultivation is not more than 13 million hectares.

In addition to the effect population change has on landlessness, there is also wide gap to be observed between production and consumption of major agricultural crops in the coming years. Available data on production and consumption of major crops (Teff, Maize, Wheat, Barely and Sorghum) show that from 1990 to 2004 the country has produced 93,888,438 Metric tons of cereals while it imported 9,946,572 Metric tons of cereals (mainly Maize and Wheat) in the same period to fill the gap between production and consumption needs. In other words, the average annual production of these major crops between 1990 and 2004 was 6.7 million Metric ton

(notwithstanding recent increase in productivity) while the average annual net import was 711 thousand Metric tons that is used to fill the gap between production and consumption (FAO, CSA, EEA/EEPRI Data Base, 2009) in the same period.

Figure 10: Projection[13] of per capital arable land (in hectare) under fast, medium and slow fertility decline assumptions, 1995-2050.



Source: Author's projection using the Spectrum Model

Even with increasing imports the annual per capita consumption of these major crops on average between 1994 and 2004 was 130 Kg. However, to meet the recommended minimum dietary standards of 2200 Kcal, the annual food requirement is estimated to be 225 Kg/adult/annum (FAO, 1992; MEDAC, 1999) where 70 percent is to be obtained from cereals. Hence the per capital consumptions of major agricultural crops is assumed to increase to 158 Kg (70% of the 225 Kg) by the year 2035 and onwards to meet the threshold.

The annual consumption needs with increasing population size therefore are projected in Table (4) below under the fast, medium and slow fertility decline scenarios. However, projecting Ethiopian agricultural production is a difficult task due to the low utilization of technology and the heavy dependence of agriculture on rainfall. Under these circumstances, either agricultural productivity has to increase (through the use of modern farm technologies including irrigation and agricultural intensification) or the government has to import the deficit amount. World Bank (2007)

[13]The underlying assumption concerning population growth and landlessness is that the urbanization level in Ethiopia will reach 30, 35, 40, and 45 percent in the years 2035, 2040, 2045 and 2050 respectively. This assumption partly is based on the level of urbanization projected by CSA (1999) and partly assuming that the country affords to reach the level of urbanization (that 45%) by the 2045 that West African countries achieved in late the 1990s.

states that in 2003 about 13 to 14 million people were threatened with starvation and it is estimated that 5 to 7 people annually are in need of food aid to survive. Nonetheless, in the medium to long run, reducing fertility (birth rate) would play its role in easing out the problem through reducing demand for consumption. But it is not a panacea for the complex problems that surround the agriculture sector in Ethiopia.

Table 4: Projection of demand for consumption of major crops under fast, medium and slow fertility decline assumptions, 2010-2050.

Year	Consumption Needs of Major Crop (in MT)		
	Fast Fertility Decline Scenario 2010-2050	Medium Fertility Decline Scenario 2010-2050	Slow Fertility Decline Scenario 2010-2050
2010	12,978,310	13,155,242	13,142,246
2015	14,618,964	15,170,707	15,195,405
2020	16,238,862	17,227,278	17,364,766
2025	17,896,594	19,356,016	19,705,008
2030	19,542,670	21,550,246	22,248,580
2035	20,970,866	23,844,096	25,016,140
2040	22,125,212	26,075,532	27,820,640
2045	23,140,204	28,155,600	30,593,068
2050	23,948,692	29,959,012	33,221,236

While there still are advantages to be derived from reducing population growth in the coming decades concerning agriculture/land and productivity, solutions are required to be sought in other areas as well. Ethiopian population is increasing by 2 million people each year, despite declining trends in fertility in urban areas over the past decade. It is very difficult to make progress in reducing poverty at this rate. Especially Ethiopia's rain-fed agriculture which is supporting the livelihood of over 80 percent of the population could not continue in absorbing the growing population without compromising its productivity and sustainability (EEA, 2009).

5.1.6 Population change and per capita GDP

Data from MoFED indicate that Gross Domestic Product at Constant Price by the year 1994 was 46,549 million ETB and increased to 85,184 million ETB in 2006. If the current annual economic growth rate of 10.1% is assumed to continue in the next four decades, the economy will grow significantly in the stated years reaching as high as half trillion ETB and 1.5 trillion ETB by the year 2025 and 2035 respectively. That will have its own repercussion on per capita GDP of citizens.

Even though, per capita income is not a genuine indicator of development, it is one component Human Development Index and partly explains the development level of

nations. In addition to the impact population has on provision of social services as discussed in the above sections, rapid population growth also retards per capita GDP of citizens. Table (5) below, for instance, indicate that per capita GDP will reach 10,793 ETB by the year 2035 under the fast fertility decline scenario while it is 9,048 ETB under the slow fertility assumption with a per capita GDP difference of 1,745 ETB.

Furthermore the Government of Ethiopia has the objective of reaching middle income countries in the "coming 20 to 30 years where the country has a goal to increase per capita income of citizens so that it reaches at the level of those in middle income countries" (MoFED, 2006). The table above also demonstrates that under the fast fertility decline assumption the country has the prospect of reaching the category of middle income countries earlier than the slow fertility assumptions imply.

The above projection also confirms that the government's plan of reaching middle income countries (that is increasing the current per capita income of less than USD 200, to more than USD 1000) in a short period of time, i.e., within 20 to 30 years starting from year 2005, indeed is very ambitious, and is more difficult to achieve it in the face of increasing population.

Table 5: Projection of per capita income (in ETB) under fast, medium and slow fertility decline assumptions, 2010-2050

	Per Capita GDP in ETB		
Year	**Fast Fertility Decline Scenario 2010-2050**	**Medium Fertility Decline Scenario 2010-2050**	**Slow Fertility Decline Scenario 2010-2050**
2010	1,550	1,531	1,529
2015	2,233	2,152	2,148
2020	3,262	3,075	3,051
2025	4,803	4,441	4,362
2030	7,137	6,473	6,269
2035	10,793	9,492	9,048
2037	12,793	11,087	10,498
2039	15,183	12,973	12,201
2041	18,046	15,209	14,205
2043	21,479	17,870	16,571
2045	25,601	21,041	19,364
2047	30,568	24,834	22,677
2049	36,566	29,384	26,612
2050	40,021	31,992	28,850

Source: Author's projection based on MoFED data and the 1994 Population using the Spectrum Model

This is based on the World Bank's division of economies in to income groups. As per the 2008 GNI per capita, countries are grouped under low income ($975 or less); lower middle income ($975-$3,855); upper middle income ($3,856-$11,905); and high income ($11,906 or more) (World Bank, 2009). These hold true if the following conditions are maintained; (1) the definition of middle income as of 2008 should hold true in 2035 and beyond, (2) the economy should grow by 10 percent or more for the same period and (2) the exchange rate will not show significant variation from its current level.

2. Conclusion and recommendations

Conclusions

- There is huge unemployment rate in urban Ethiopia, especially among the youth. Females are twice unemployed than that of males. While male unemployment rate showed decline overtime, female unemployment remains higher (above 30%).
- The country has made a striking improvement in primary enrollment rate and reducing gender gap in primary education. Its performance in secondary education is not pleasing. On the one hand enrollment rate is low and on the other, gender gap is wide and gets wider with time.
- Among other things, unemployment is an outgrowth of the rapid population growth, mainly in rural Ethiopia, and under business as usual scenario, the development efforts (such as provision of education and health services) by the government of Ethiopia and Development partners will be compromised by the rapidly increasing population.
- Rapid fertility decline will have significant effect on the population size, the age structure and the status of women in the country. And these will have direct effect on the demand for new jobs, demand for education, landlessness and the prospects of the country for joining the so-called Middle Income Countries.
- Ethiopia has issued a population policy, mentioned family planning in its Poverty Reduction Strategic Paper and belatedly included population as one pillar of development in the PASDEP document (although it is dropped in the new Growth and Transformation Plan (GTP)). (MoFED, 2010). Furthermore, there is low in-country funding for family planning services, no programmatic detail for family planning service provision, low commitment from above, weak implementation, no monitoring and evaluation and no strong institution to implement the strategies articulated in the population related policy documents.

- Under these conditions, the country is not poised to capture the emerging demographic potential, unless aggressive measures are taken in advance on the population and development sides.

Recommendations

- The Government of Ethiopia should reconsider aggressive fertility reduction measure in its development plan through creating favorable policy environment for the supply of quality, affordable, sustainable and accessible family planning services. This requires reliable means of financing and political commitment.
- Evaluate the 17 years old population policy, identify progresses and gaps, and establish quality institutions that can effectively implement population policies and programs.
- Encourage private sector, use labor intensive technology, encourage incentivized migration to less crowded towns & cities to reduce the huge rate of youth unemployment in few urban areas of the country in the short to medium term.
- Put more effort and commitment on the implementation of policies and programs designed related to female education, female empowerment and gender equitable growth at grass root level to narrow gender gaps.

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LINK BETWEEN ECONOMIC GROWTH AND POPULATION GROWTH IN ETHIOPIA: MALTHUSIAN OR BOSERUPIAN?

Yesuf Mohammednur[1] and Zenebe Gebreegziabher[2]

Abstract

Using time series data from 1973/74 to 2004/05, we examined the link between population growth and economic growth in Ethiopia. Methodologically, we used the ADF test to check for unit root and employed both Engle-Granger (E-G) and Johansen cointegration approaches to find out the long run relationship between population growth and economic growth. Firstly, we tested for unit root and found population growth and economic growth are I(1) in levels and I(0) in their first difference. Secondly, we checked for cointegration relationship and found no cointegration relationship between the two variables in both the E-G and Johansen procedure. Then, we estimated a VAR (2) model to investigate the short run relationship between the two variables and our results indicate statistically significant negative effect of population growth on economic growth. Lastly, we diagnosed the estimated VAR model and found it immune from misspecifications. Precisely, our results reveal that in the long run population growth in Ethiopia has no relation to economic growth. However, in the short run, the econometric evidence supports the Malthusian view that population growth is bad for economic growth. We draw policy implications of our results.

Key words: population growth, economic growth, cointegration

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1. Introduction

The relationship between population growth and economic growth is still a debatable issue. One, there are divergent economic theories in regard to the effect of population growth on the economy; namely, the Malthusians and Boserupians. Two, the net effect of population growth on the economy is conditioned up on several factors like responses at the individual, community and policy making level. For instance, the predictions by Malthus regarding inability of agricultural production to keep pace with population growth have not come to pass in developed nations. Though, there seem to be some likelihood of being correct prediction in some developing countries that faced famine and deterioration in welfare. The argument is not likely to be easily resolved. The amount of solid empirical work on the subject is limited, especially for developing countries. This is partly because the problem is not tractable for quantitative analysis given the cross-sectional nature of data that are mostly available. Cross sectional data are poor substitutes for the analysis whether population growth cause for economic growth since in the real world population change is not only a cause but a consequence of economic change. Hence, the cross sectional estimates are not consistent. Thus, the impact of population growth on the economy is captured better in a single country time series empirical approach.

With a population size of 73.9 million (2007), Ethiopia is the second most populous nation in Africa. But it is one of the poorest countries in Africa, with an estimated GDP per capita at PPP of $1055 in 2007, life expectancy at birth 51.8 years and adult literacy rate of 35.9% in 2007 (UNDP, 2007). *The purpose of our study is to look at the population growth over the last three decades and explore its implication on economic growth. We do so by investigating the causality between population growth and economic growth in a time series framework using both multivariate and single equation models. Finally, we draw policy implications of the study. The key question involved is does the Malthusians, Boserupians or neither hypothesis explain the Ethiopians condition?*

This study contributes to the literature providing an empirical evidence of the link between population and economic growth from SSA based on appropriate time series econometric procedure. To the best of our knowledge there is no similar study that investigated the causality between population growth and economic growth in a time series frame for Ethiopia.

Our econometric results show that population growth and economic growth are not cointegrated indicating no long run relationship. However, in the short run we have found statistically significant negative effect running from population growth to

economic growth. Precisely, in the long run population growth in Ethiopia has no relation to economic growth. In the short run, the econometric evidence supports the Malthusian view that population growth is bad for economic growth.

The roadmap of the study is as follows: section 2 reviews the literature, section 3 describes population and economic growth over the last three decades, section 4 presents the econometric methodology, section 5 provides the estimation results and section 6 concludes the paper.

2. Literature review

Though globally much of the empirical and theoretical literature agree on the positive impact of population growth to economic growth in the long term, there is no consensus on the effects of rapid population growth on economic growth in much of developing countries. During 1950s and 1960s, much of the view was that rapid population growth is detrimental to the economic growth of the nations. This is mainly due to the then emphasis on the lack of capital (and savings) coupled with the surplus labor in the agricultural sector as main constraining factor of economic growth. In late 1970s, there was a shift to the efficiency of capital and other factors use and the role of policy in impacting efficient use of resources as main factors explaining economic growth. This challenged the earlier view that lower level of capital coupled with abundant labor is the constraining factor for economic growth in developing countries. Recent view is of the so called “revisionist” Malthusians. They consider population growth as only one of the several factors that slow development. The mainstream debate now is on whether the negative effects of population growth is minimal or greater so as to direct attention to the issue of rapid population growth.

Below we briefly review the successive theoretical and empirical literature linking population growth and economic growth.

2.1 Theoretical literature

2.1.1 Malthusians

Thomas R. Malthus in 1798 published his views about the effect of population on food supply. His theory has two basic principles that population grows at a geometric rate while food production increases at an arithmetic rate. Eventually the consequence is population will exceed the capacity of agriculture to support the new population. Hence, further growth would be limited via preventive checks and positive checks.

In the one-sector neoclassical growth models by Solow (1956) the faster the rate of population growth, and thus the more rapid the increase in labor supply compared with capital formation, the lower the level of per capita consumption. Given a constant rate of saving, a faster growth rate of the labor force decreases the capital-labor ratio and the productivity of labor under constant returns to scale. Thus, rapid population growth is harmful even in the absence of diminishing returns.

Similar negative effect is predicted by the early two sector growth models of Lewis (1954), Fei and Ranis (1964). In these models surplus labor in the agricultural sector is absorbed into manufacturing only if savings and thus capital grow faster than population; or if technological change in the dynamic manufacturing sector offsets the combined effects of diminishing returns in agriculture and population growth. Thus, faster population growth delays the elimination of dualism in an economy.

In general, in the neoclassical growth model high population growth leads to lower capital-labor, hence lower steady state output though no effect on the growth rate in steady state output. Similarly, in the long run, Becker, Murphy and Tamura (1990) found negative effect in a rural economy where there is low human capital.

Neo-Malthusians argue that population growth will eat up all of the fruits of economic development or keep it from happening in the first place. This possibly is due to less capital for investment in industry since it is invested in people-more on the dependants (children), which force a nation to undercapitalize its existing labor force. Moreover, rapid population growth can be a factor for tight job markets and growing underemployment.

Neo Malthusian further argues that though economies of scale due to population growth are good but exceeding carrying capacity is not. Since high levels of fertility create a very youthful age structure with a high ratio of children to working age adults that consume than produce. So if fertility were to be reduced, the change in the dependency ratio would allow for a substantial diversion of economic investment. Accordingly, declining fertility would lead to more rapid economic growth.

2.1.2 Boserupian

Early classicals, for instance Adam Smith and Marshall, argue in favour of positive effect of population growth. Both argue that a growing population widen market opportunities, foster creativity and innovation that eventually lead to higher productivity. Similar emphasis was made by Hirschman (1958) and Kuznets (1966).

In contrary to the early growth models, Samuelson (1958) in an Overlapping Generation (OLG) model predicted that higher population growth is beneficiary for each generation. His theory assumes that the population can be categorized in to two age groups: the young-working and the old-retiring groups. Where the young-working group transfer consumption to the old-retiring group and receive repayment by the subsequent generation. Sustained higher population growth means higher proportion of young-working group that increases consumption transfer to the old group.

An often cited interesting argument that population growth induces innovation for the agricultural sector has been made by Boserup (1965, 1981). She argued that an increasing population puts pressure on the existing agricultural system. This stimulates change in to more labor-intensive farming system; change from long fallow to frequent cropping system, change in the farming tools and techniques. Precisely, it induces invention and innovations that permit increase in productivity. For the urban sector, Boserup (1981) argue that a more urbanised economy with high population density experiences more technical change due to greater division of labour, organizational development and more extensive transport technology.

In the endogenous growth model, population growth is assumed to positively influence economic growth. For instance, Conolly *et al* (2003), Peretto (1998) and Howitt (1999) argue in their R&D type model that a growing population means an increasing size of market and hence a potential for profit. This higher profit potential induce researchers and R&D firms to innovate that result in technical change, hence productivity (output) grows. Lucas (1988) found positive effect of population growth. He argue that sustained population growth means more labor force and this labor force can be educated costless due to the costless transfer of existing human capital to the new generation.

Simon (1981) in his influential book, *The Ultimate Resource*, ties innovation to population size. He argued that each person is a potential source of ingenuity and creativity, hence larger population means more people available to use their minds and create that enhance productivity, other things being equal.

2.1.3 Revisionists

Revisionists emphasizing at the micro level decision that result population change at the aggregate level argue that, one, rapid population growth is not a primary impediment to economic development rather it may interact and exacerbates the effects of failures in economic and social policy under certain conditions. Two, in the long run there will be micro and aggregate level adjustments that reverse the

negative effects of population growth. Thus, the effects of population growth may vary by time, place, circumstances, and must be studied empirically.

There is no firm ground to support that savings and investments are affected by rapid population growth. The concern that rapid population growth reduce saving is not supported by the data (Birdsall, 1988). For the case of investment, revisionists argue that diversion of resources from the productive sector to the alleged “less productive” sectors like education and health sectors is wrong. Since resources allocated in to both education and health sectors may well yield higher return than the physical investments.

Revisionist view the case of non-renewable resources (like minerals, oil, etc) that have well established property rights, the market works and population growth is of little concern. For renewable resources the issue is complicated and especially when there is no properly defined property right. However, in this case revisionists view population growth as a factor that interact and exacerbate the already existing problem of market failure.

Owing to their focus at family level, revisionists have found negative association between fertility and educational attainment and health. However, this may not necessarily mean a causal relation from family size to education and health.

2.2 Empirical literature/evidence

Several empirical investigations have been undertaken varying both in terms of regional focus, time period and modelling approach. Below we briefly review some of the empirics where the theoretical views are crossed against data.

Coal and Hoover (1958) developed a simulation model in which children are assumed to be costly and high fertility increases the proportion of children in the population. Based on this, they made projections of per capita income for India under three scenarios and concluded that over a 30-year period, per capita income could be as much as 40 percent lower under the high compared with the low fertility scenario.
Simon (1981) using his simulation model in which technological innovation is a function of population size, found positive effect of "moderate" population growth of less than 2 percent on welfare in the intermediate run (that is after a period of thirty to eighty years).

Using time-series and cross-country data from poor countries, the National Research Council (1986) found mixed results on the effect of population size and its growth on economic growth.

Using data from early 1960s to 1980s, Brander and Dowrick (1993) analyzed the relationship between economic growth and population growth. They found slight negative relationship between economic growth and population growth in simple correlation analysis, and the effect is significantly negative once Crude Birth rate (CBR) is considered as explanatory variable and pronounced more during 1980s. However, using other specification, they found no significant relationship between population and per capita output for developing countries and only a slightly negative relationship for developed countries (DCs). They concluded that lower fertility is good in the short term (less capital dilution) and even in the medium term (higher share of working age population).

Using data from 1 million BC to 1990, Kremer (1993) found that regions with a large initial population and no technical contact had greater technical change and population growth. Higher induced technical change leads to rapid growth in income per capita, hence he concluded that over the course of human history, large initial population and high population density had positive impact on economic growth.

In simple regression of cross-countries, Barlow (1994) similarly founds no significant relationship between population growth and economic growth for all countries. However, adding lagged fertility in to the regression he found significant negative effect of population growth and positive effect of lagged fertility on economic growth. He also found high correlation between population growth and lagged fertility. Thus, when only population growth is used in the regression, it include both the immediate negative effects (i.e., capital diluting) and the long term positive effect (larger share of working age population) that yield an overall insignificant effect of population growth on economic growth. He noted that countries with high lagged fertility and lower current fertility have “demographic window of opportunity/demographic bonus” of higher economic growth that disappears when the offspring of the highly fertile cohorts retire.

Kelly and Schmidt (1995) using data for 1960s and 1970s found no significant relationship between population growth and economic growth but a significant negative relationship in 1980s especially for less developed countries (LDCs). Based on additional regressors like CBR, lagged CBR, Crude Death Rate (CDR) and population density, they found that CBR has short term negative effect that increased in LDCs overtime and decreased in developed countries, lagged CBR is only

significantly positive in LDCs. Lower CDR found beneficial for economic growth with the effect declining overtime both in DCs and LDCs and in net have no significant effect. However population density found to have significant positive effect overtime.

Disaggregating the population growth in to labor force growth and dependants growth (other population growth or growth of non-working age population), Sheehey (1996) ran regression for the period 1960-88. He found that the labor force growth has no significant effect where as the dependants growth has significant negative effect. This confirms to the synthesis in the theoretical literature that the difference in results is mainly from the assumptions made on different specific growth rates than mere population growth.

In a multiple regression model to explain economic growth, Barlow (1998) found negative short term effect of current fertility and long term positive fertility effect both for DCs and LDCs. Population size; however, has a striking negative effect.

In a time series framework, Darrat and Al-Yousif (1999) ran simple regression of economic growth on population growth and performed cointegration test to investigate the causality between the two variables. They found a cointegration between the two variables for all countries. They also found short run insignificant effect for most countries and positive long run effects with causality running from population growth to economic growth with some exceptions of reverse causality and bi-directional causality. They also found negative relationship between the two variables for some countries, for instance with weak property rights.

In a panel data regression of 114 countries for 1960-89, Ahituv (2001) found a statistically significant negative effect of fertility on economic growth. Besides, he also found that population growth has insignificant effect after controlling for fertility.

Malmberg and Lindh (2002) emphasized on the importance of age structure of the population on economic growth. Based on different age groups for 14 Western countries from1860-1990, they revealed that growth in the middle-aged groups has significant positive effect on economic growth and expectedly growth in the young and old aged population has negative effect. This confirms the importance of the type of population growth.

Though most of the above reviewed works are based on developed countries, Ukpolo (2003) using data 1960-2000 applied a cointegration analysis to find out causality between population growth and economic growth for six African countries (Nigeria, Cote d'Ivoire, Ghana, Kenya, South Africa and Sudan). He found that the two variables are cointegrated for Nigeria but not for Cote d'Ivoire. Besides, the causality

runs from population growth to economic growth for Nigeria. While for Cote D'Ivoire, population growth granger causes economic growth in the short run. However, no meaningful judgment could be made about the long run causal relationship for the remaining 4 countries, implying no long run relationship between the two variables. Anoruo and Braha (2003) also did the same analysis for Botswana using data from 1961-1999 and found a positive long run relationship between population growth and economic growth, population growth granger causing economic growth.

2.3 Synthesis of the literature

The difference in the results or predictions of theoretical literature is basically derived based on the assumption built in to the models. Thus, the theoretical literature leaves us at the crossroad; however, it has been helpful in guiding the empirical investigations.

The empirical literature largely focused on developed countries and developing countries elsewhere than Africa. Methodologically, the literature is dominated by regression based on cross-country data subjected by too much averaging and possibly influenced by the point of time. In spite of this, the empirical evidence is mixed. Yet, the few time series studies based on single country that address issues of cross-country analysis also show mixed evidence of the relationship between population growth and economic growth.

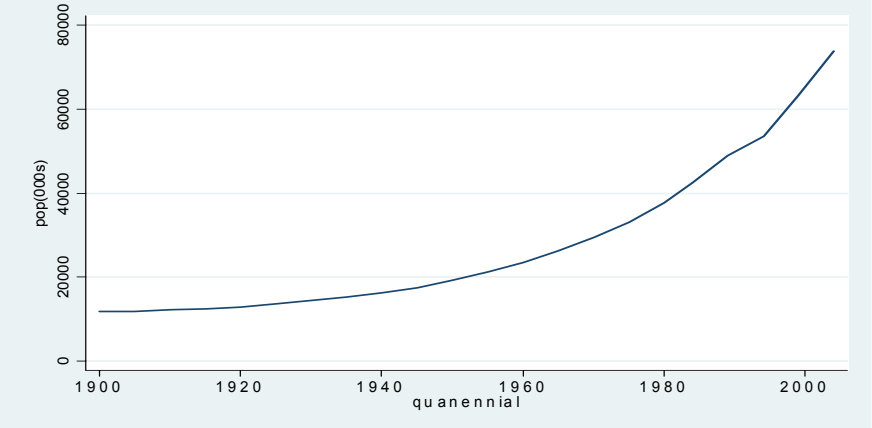
Given a comprehensive review of the literature, it is inconclusive empirically to generalize and claim either positive, negative or no effect of population growth on economic growth without undertaking a time series based analysis for a specific country. This paper investigates the implication of population growth on economic growth in Ethiopia in a robust methodological framework using time series data that can be relatively a good substitute for human history.

3. Population and economic growth in Ethiopia

Though fertility has been declining, the high level of fertility and the decline in mortality rate has resulted in the natural increase of the Ethiopian population. In 1900 Ethiopian population size was 11.8 million, it doubled in 60 years, i.e., in *1960* the population size reached 23.6 million. But it took only 28 years to double from 23.6 million in *1960* to 46.2 million in 1988. That is initially it took about six decades to double but in the next it only took nearly 3 decades. Given the population size 73.9 million in 2007 and the inter-census [1994-2007] growth rate of 2.5%, the next doubling period of the population is 28 years [by 2035 Ethiopian population reaches

147.8 million]. This trend makes Ethiopian population growth one of the fastest growing populations both in Africa and the globe.

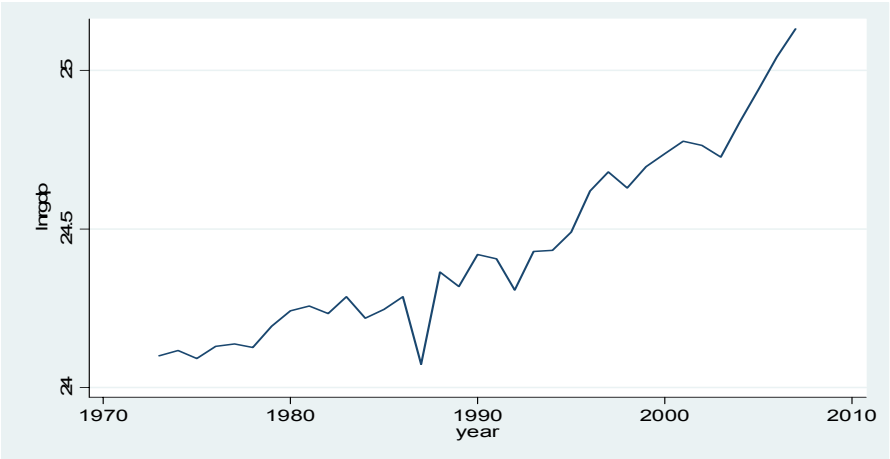
Figure 1: Developments of Ethiopian population (in 000's) from 1900 to 2007



Source: Abdulahi Hasen (1989) and CSA various issues

In regard to economic performance, there was high variability in GDP growth since 1973/74 as shown in Figure 2 below. For the period 1973/4-2007/08, GDP grew by about 3%. Disaggregating in to the two regimes, for the period 1974-1991, GDP grew by an average of 1.4% and for the period 1992-2007, average annual GDP growth was about 5.5%.

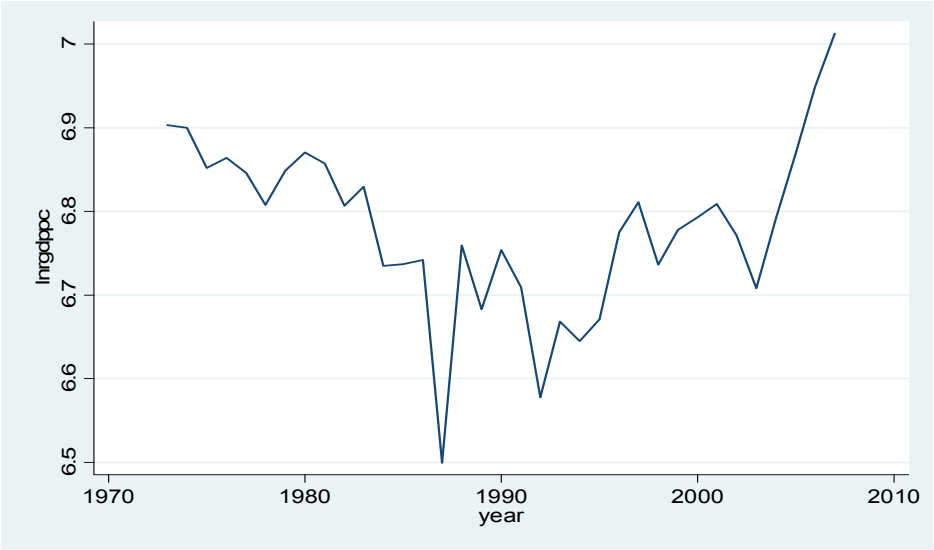
Figure 2: GDP in Ethiopia 1973/74-2007/08



Source: Penn World Table version 6.3, 2009
lnrgdp is the natural log of real GDP

Looking in to the real per capita GDP growth, the period between 1973/74 and 2007/08 registered an average annual growth of 0.3 percent with high volatility as shown in Figure 3 below. Disaggregating the analysis in to two regimes, for the period 1974-1991, average annual real per capita GDP growth was nearly -1% , while for the period 1992-2005, the average real GDP per capita growth per annum was about 2.8%. The high volatility in the growth performance can be attributed to periods of instability in the Derg regime, rainfall variability, terms of trade movement, changes in the real exchange rate, unpredictability of the external resource flow and regional security (MOFED, 2006).

Figure 3: GDP per capita 1973/74-2007/08 for Ethiopia



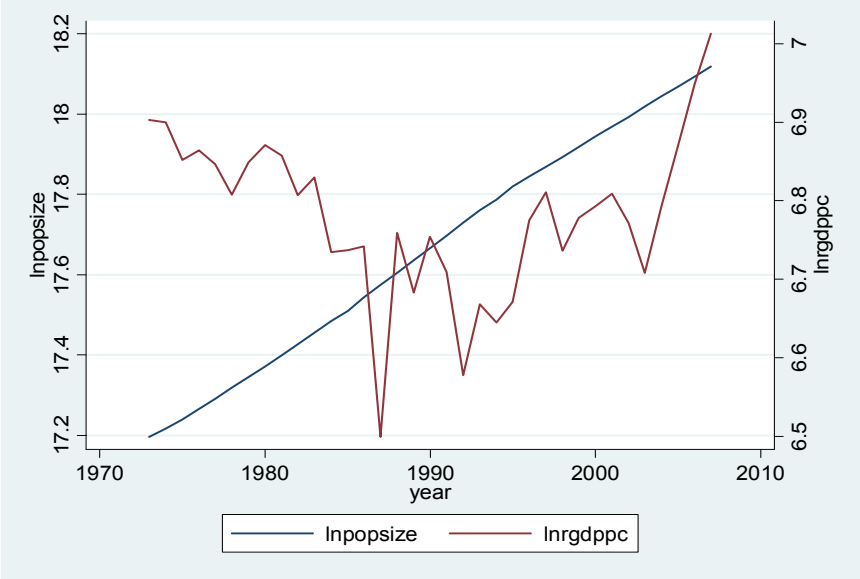
Source: Penn World Table version 6.3, 2009

Figure 4 below presents both population growth and economic growth for the period 1973/74-2007/08 and one can see the divergence in the rate of growth of the two variables. The average annual population growth rate for the period is estimated to 2.7%, while the annual average economic growth for the same period is estimated to 0.3% confirming the graphical presentation. Visual observation of Figure 4 and the descriptive results (mean growth rate) can hardly give us conclusive evidence about the relationship between population growth and economic growth.

In general, the above analysis reveals that on average Ethiopia has registered positive growth in GDP over the last three decades, this seem as not translated in to a desirable economic growth being diluted by high growth in the population. That is

real per capita GDP grew at a smaller rate of 0.3% on average per annum for the period under consideration. Thus high population growth can be a concern in translating positive performance of an economy in to desirable economic growth and development.

Figure 4: Population and GDP per capita 1973/74-2007/08 for Ethiopia



Source: EEPRI Database and Penn World Table version 6.3, 2009
lnpopsize is the natural log of population size and *lnrgdppc* is the natural log of real GDP per capita

To substantiate our analysis and find out the causational relationship between population growth and economic growth, we estimated a time series model and tested whether the two variables are cointegrated using Engle Granger (E-G) and Johansen Cointegration approach. We used data drawn from National Bank of Ethiopia (NBE) various publications. The methodology followed, estimation results and conclusions are briefly discussed in following sub sections.

4. Econometric methodology

Following (Thornton, 2001 and Ukpolo, 2003) the bivariate model below is estimated in our study to find the long run relationship between economic growth and population growth:

$$\ln rgdppc_t = \alpha + \beta \ln pop_t + \varepsilon_t \quad \textbf{(1)}$$

Where, $\ln rgdppc_t$ is log real GDP per capita at year *t*, $\ln pop_t$ is log population size at year *t*, α and β are parameters to be estimated and ε_t is the white noise error term.

In equation (1), we expect that β to be negative if Malthusians view explains the Ethiopian case, positive β if Boserupians view explains the Ethiopian case and statistically insignificant β or no long run relationship if neither hypothesis explains the Ethiopian case.

4.1 Unit root test

An issue in the estimation of time series data is to determine whether the variables are stationary or not, hence required us to test whether the two variables are non-stationary or not, i.e., a unit root test. This is due to the fact that simple regression of two independent non-stationary series often result in a significant *t* statistics that indicates a statistically acceptable relationship while there is no sense in which the two variables to be related, spurious regression case (Granger and Newbold, 1974). We used the Augmented Dickey Fuller (ADF) test to check whether the two variables are non-stationary or not as below:

$$\Delta \ln rgdppc_t = \gamma_0 + \gamma \ln rgdppc_{t-1} + \sum_{i=1}^{3} \gamma_i \Delta \ln rgdppc_{t-i} + \nu_t \quad (2)$$

$$\Delta \ln pop_t = \lambda_0 + \lambda \ln pop_{t-1} + \sum_{i=1}^{3} \lambda_i \Delta \ln pop_{t-i} + \lambda_4 t + \upsilon_t \quad (3)$$

Where $\ln rgdppc_t$ and $\ln pop_t$ are the variables to be tested for non-stationary. The null hypothesis is the variables $\ln rgdppc_t$ and $\ln pop_t$ contain Unit root and the alternative is each are stationary [i.e., integrated of order 0, I(0)]. If γ is statistically significant $\ln rgdppc_t$ is I(0) and if λ is statistically significant $\ln pop_t$ is I(0). Here the ADF test requires use of the Dickey Fuller critical value.

If the series of the variables contain Unit root, one may suspect spurious regression problem of equation (1) above. However, the time series literature have shown that

regressing an I(1) dependent variable on an I(1) independent variable can be informative if these variables are related in some particular sense, that is, if they are cointegrated.

Asking whether two economic time series variables are cointegrated is like asking whether any long run relationship exists between the trends in the two variables. Given an I(1) $\ln rgdppc_t$ and I(1) is $\ln pop_t$, we test for cointegration using both the Engle-Granger and Johansen procedure.

4.2 The Engle-Granger Cointegration Test

This method is due to Engle and Granger (1987). In this method, first we test the variables to see if they are non-stationary using ADF. Second, given the two variables are non-stationary, I(1), we test whether the two variables are cointegrated. The first step is to regress the dependent variable, $\ln rgdppc_t$, on the regressor, $\ln pop_t$, in order to obtain estimates of the cointegrating equation or the long run equation. The second step is to test for cointegration as follows:

Obtain the cointegrating residual ($\hat{\varepsilon}_t = \ln rgdppc_t - \hat{\alpha} + \hat{\beta} \ln pop_t$), estimated in step one and estimate the following error correction models:
Basic ECM:

$$\Delta \ln rgdppc_t = \alpha_0 + \delta_1 \Delta \ln rgdppc_{t-1} + \gamma_1 \Delta \ln popsize_t + \theta\, ect_{t-1} + \varsigma_t \qquad (4)$$

$$H_0 : \theta = 0$$
$$H_1 : \theta < 0$$

Alternatively, one can also directly estimate the ECM reducing errors-in-regressors bias by estimating the following equation:
Alternative ECM:

$$\Delta \ln rgdppc_t = \alpha_0 + \delta_1 \Delta \ln rgdppc_{t-1} + \gamma_1 \Delta \ln popsize_t + \theta \ln rgdppc_{t-1} + \gamma_2 \ln popsize_{t-1} + \xi_t \qquad (5)$$

$$H_0 : \theta = 0$$
$$H_1 : \theta < 0$$

Failing to reject the H_0 in both the two-step ECM and alternative one-step ECM is evidence against cointegration relationship between population growth and economic growth. If we reject the H_0 in favour of the alternative hypothesis is evidence about

the cointegration relationship between population growth and economic growth. Nevertheless, in this approach, we cannot test the statistical significance of the regressor in the long run or cointegrating equation, since the standard errors of the coefficients are unreliable. i.e., though we find cointegration between the two variables, we could not know whether the direction of relationship is statistically acceptable. Besides, the stepwise procedure of testing implies the compounding of errors (though can be solved using the alternative ECM equation (5)).

4.3 Johansen Cointegration Test

Owing to the weaknesses of the Engle-Granger method, we also used the Johansen cointegration procedure. Unlike the residual based cointegration technique, the Johansen procedure of conducting cointegration regression analysis provides a unified method for estimating and testing cointegrating relations in the framework of vector error correction (VEC) models (for details, see Johansen 1988; Johansen and Juselius 1990; Enders 1995, Harris and Sollis, 2003).

To extend the single equation ECM in to multivariate framework, following Harris and Sollis (2003), let us define a vector $Z_t = (z_{1t}, z_{2t}, ..., z_{mt})'$ and allow each variable to be potentially endogenous in the system. Then we can write a VAR model with *k* lag length as in (6) below. In our case $Z_t = (\ln rgdppc_t, \ln pop_t)'$

$$Z_t = \nu + A_1 Z_{t-1} + ... + A_k Z_{t-k} + U_t \qquad U_t \sim IN(0, \Sigma) \qquad \textbf{(6)}$$

Equation (6) can be reformulated in to a vector error correction form as in (7) below:

$$\Delta Z_t = \nu + \sum_{i=1}^{k-1} \Gamma_i \Delta Z_{t-i} + \Pi Z_{t-1} + U_t \qquad (7)$$

Where $\Pi = \sum_{j=1}^{j=k} A_j - I$, $\Gamma_i = -\sum_{j=i+1}^{j=k} A_j$, ν and U_t are vector of parameters and vector of *i.i.d* normal disturbance terms. Engle and Granger (1987) show that if the variables Z_t are I(1) the matrix Π in (7) has rank $0 \leq r < m$, where *r* is the number of linearly independent cointegrating vectors and *m* is the number of endogenous variables in the system. Hence, one can express Π as $\Pi = \alpha\beta'$, where α and β are both *m X r* matrices of rank *r*.

Specifying the system as in (7) contains information on both the short run and long run adjustment to changes in Z_t via the estimates of Γ_i and Π ($\hat{\Gamma}_i$ and $\hat{\Pi}$). Allowing for linear trend, a constant and assuming that there are r cointegrating relationships, we can rewrite (7) as follows:

$$\Delta Z_t = \alpha(\beta Z_{t-1} + \mu + \rho t) + \sum_{i=1}^{k-1} \Gamma_i \Delta Z_{t-i} + \gamma + \delta t + U_t \qquad (8)$$

By putting restrictions on the trend terms in (8), we can have 5 different vector error correction models. Identifying the proper specification among these 5 different specifications is an important issue in the Johansen procedure; since improper specification of the deterministic component (trend and constant terms) results in inference problem (Hendry and Juselius, 2000). The 5 different specifications or models are briefly discussed below:

Model 1: No restriction on trend parameters (Unrestricted Trend) implies linear trends in the differenced series and quadratic trends in the levels. According to Hendry and Juselius (2000) quadratic trends may sometimes improve the fit within the sample but likely to produce implausible forecast out of the sample. Thus, this specification requires very strong justification.

Model 2: Setting $\delta = 0$ (Restricted Trend) implies that the trend is restricted to lie in the cointegration space but the constant is unrestricted in the model. When the data in levels does not have a quadratic trend but there is long run linear growth not accounted by the model, given the dataset chosen, we allow for linear trend in the cointegration vector but no trend in the short run model.

Model 3: Setting $\delta = 0$ and $\rho = 0$ (Unrestricted Constant) implies no quadratic trend in the level of data and no long run linear growth in the cointegrating vector. In this specification, however, there is linear time trend in the levels of data.

Model 4: Setting $\delta = 0$, $\rho = 0$ and $\gamma = 0$ (Restricted Constant), we assume there are no linear time trend in the levels of the data. The only deterministic component is the cointegration vector (equilibrium relation) is with non zero mean.

Model 5: No trend-Setting all the deterministic components to zero, i.e., $\delta = 0$, $\rho = 0$, $\gamma = 0$ and $\mu = 0$, implies no growth in cointegration relation with zero mean. Besides, it implies zero mean on both the differences and levels of the data. This is unlikely to

occur in practice, at least the intercept/constant term is required to account for the initial level of measurement of the variables in Z_t (Harris and Sollis, 2003; Hendry and Juselius, 2000).

Realistically, often we consider the 3 specifications (Model 2-4), since model 1 and 5 require very strong justifications. In empirical work, it is not easy to determine which model to use *apriori*. One approach is to use a combination of theory and graphical analysis to select one of the 5 specifications. Another approach is following Johansen (1992) undertake joint hypothesis test of the rank order and deterministic component. Johansen (1992) suggests the need to test the joint hypothesis of both the rank order and the deterministic components, based on the so-called *Pantula principle*. That is to move through from the most restrictive alternative (model 4) to the least restrictive model (model 2) and at each stage to compare the trace test statistic to its critical value and only stop the first time the null hypothesis is not rejected. We follow the latter approach to identify the proper specification and test for existence of cointegration.

The existence of cointegration implies that there is a long run, causal relationship between the variables of interest, at least in one direction. The Granger causality tests can, then, be performed within the VEC framework to determine the direction of the causality. Causality running from population growth to economic growth is tested checking the joint statistical significance of the coefficients of lagged variables of population growth obtained from the Johansen procedure. Similarly, causality running from economic growth to population growth is tested by checking the joint statistical significance of the coefficients of lagged variables of economic growth.

If $\ln rgdppc_t$ and $\ln pop_t$ are not cointegrated, a regression of $\ln rgdppc_t$ on $\ln pop_t$ is spurious and tells us nothing meaningful: there is no long-run relationship between economic growth and population growth. However, we might estimate a vector autoregressive regression (VAR) model in first differences, including lags as in (9). But these regressions explain the difference in $\ln rgdppc_t$ in terms of the difference in $\ln pop_t$ and have nothing necessarily to do with a relationship in levels. Additionally, we can test causality from short run perspective utilizing the Granger causality test with in VAR framework. The basic idea behind the Granger causality test is the future cannot cause the past (Granger, 1969). A time series variable, population growth ($\ln pop_t$) is said to “Granger cause” economic growth ($\ln rgdppc_t$) if the lagged values of $\ln pop_t$ are valuable in explaining $\ln rgdppc_t$ given the past values of $\ln rgdppc_t$ and vice versa.

$$\Delta Z_t = \nu + \sum_{i=1}^{k-1} \Gamma_i \Delta Z_{t-i} + U_t \quad (9)$$

5. Estimation results

5.1 Unit root test results

Using data ranging from 1973/74 to 2007/08 for Ethiopia, we checked whether the series of the two variables contain unit root. The test results in Table 1 could not reject the presence of unit root for both variables $\ln rgdppc_t$ and $\ln pop_t$. That is, both $\ln rgdppc_t$ and $\ln pop_t$ are I(1) in their levels or non-stationary. This led us to proceed on testing whether the two variables that are I (1) are cointegrated.

Table 1: ADF unit root test results for population and economic growth

Variables	Variables in Level			Variables in Difference			Remark
	Test Statistics	Lags[a]	Inference	Test Statistics	Lags[b]	Inference	
$\ln pop_t$ [c]	-1.042	2	I(1) Non-stationary	-2.182***	1	I(0) Stationary	With time trend
$\ln rgdppc_t$ [d]	-1.108	2	I(1) Non-stationary	-4.573***	1	I(0) Stationary	Without time trend

*** indicate statistically significant at 1% level of significance

[a] the optimum lag length 2 is chosen using Akaike Information Criteria (AIC)

[b] the lag length is set at one to increase the power of the test given small sample size as indicated by Wooldridge (2000). Even at 2 lags both variables in their differenced series are stationary at 1%.

[c] The 1%, 5% and 10% critical values for tests in levels are -4.316, -3.572 and -3.223 respectively. The 1%, 5% and 10% critical values for tests in difference are -2.462, -1.699 and -1.311 respectively.

[d]The 1%, 5% and 10% critical values for tests in levels are -2.467, -1.701 and -1.313 respectively. The 1%, 5% and 10% critical values for tests in difference are -2.462, -1.699 and -1.311 respectively.

We estimated equation (2) without time trend, since the graph of the data do not show any trend and visually has a non-zero mean. Unlike to equation (2), we included time trend in estimating equation (3) to account for the upward trend over time observed in the data (see Figure 4).

5.2 Cointegration test results

Once we found that both variables ($\ln rgdppc_t$ and $\ln pop_t$) are I(1) in their levels, we proceeded to check whether the two I(1) variables are cointegrated or not using both the Engle-Granger method and Johansen procedure.

5.2.1 Engle-Granger ECM based Cointegration test results

In the Engle-Granger ECM based cointegration test, we first regressed $\ln rgdppc_t$ on $\ln pop_t$ and predicted the residual (***uhat***). Then we estimated the ECM and found statistically insignificant EC term-one period lag of the residual (***L1.uhat***), which is evidence not to reject the Ho of no cointegration between $\ln rgdppc_t$ and $\ln pop_t$.

Table 2: The Engle-Granger ECM based Cointegration Test Result: 2 step procedure

	Step 2: ECM		Step 1: OLS		
Dependent variable: D1.lnrgdppc	***Coefficient***	***p-value***	***Dependent variable:*** $\ln rgdppc_t$	***Coefficient***	***p-value***
D2.lnrgdppc	*.5016628*	*0.000*	$\ln pop_t$	*-.0385468*	*0.534*
D1.lnpopsize	*-4.263547*	*0.247*	*Constant*	*7.462769*	*0.000*
L1.uhat	***.000167***	***0.999***			
Constant	*.1188751*	*0.236*			
F(3,29) = 24.65	*Prob > F = 0.0000*		*F(1,30)=0.40*	*Prob>F=0.5338*	
R-squared = 0.7183	*Adj R-squared= 0.6892*		*R-squared=0.0118*	*Adj R-squared=-0.0003*	
Root MSE = 0.04756	*Number of obs= 33*		*Root MSE=0.1027*	*Number of obs =35*	

Similarly, we estimated the alternative ECM to test for cointegaration in one step. Our result is no different than the ECM based two step procedures as can be seen in Table 3 below. That is, the coefficient for one period lag of the natural log of real GDP per capita (***L1.lnrgdppc***) is statistically insignificant, which is an equivalent for the coefficient of the error correction term. This is an evidence not to reject the null hypothesis of no cointegration.

Table 3: The Engle-Granger Alternative ECM based Cointegration Test Result: one-step procedure

Dependent Variable: D1.lnrgdppc	**Coefficient**	**p-value**
D2.lnrgdppc	.5273466	0.000
D1.lnpopsize	-1.537542	0.680
L1.lnrgdppc	***.081449***	***0.551***
L1.lnpopsize	.067072	0.055
Constant	-1.691689	0.222
F(4, 28) = 21.49	*Prob > F = 0.0000*	*Number of obs = 33*
R-squared= 0.7543	*Adj R-squared = 0.7192*	*Root MSE = 0.04521*

As discussed in section 4 an equivalent coefficient for error correction term (the coefficient of ***L1.lnrgdppc***) is statistically insignificant even at 10%, which is evidence not to reject the Ho of no cointegration. Thus population and economic growths are not cointegrated.

5.2.2 Johansen Cointegration Test Result

Owing to limitations of the E-G approach discussed in section 4, we employed the Johansen procedure to test the existence of cointegration between population growth and economic growth. The Johansen procedure for cointegration test is based on trace statistics (λ_{trace}) or maximum eigenvalue ($\lambda_{\max}$). Due to consistency in the test procedure, the current practice is to rely on trace statistics (Harris and Sollis, 2003) and we follow the same. Moreover, as stated in section 4, we follow Johansen (1992) and test the joint hypothesis of both the rank order and the deterministic components, based on the so-called *Pantula principle*.

Table 4 below presents the joint test for determining the cointegration rank and the model with appropriate deterministic component. Starting with the restrictive model (*model 4*) the trace statistics (26.4477) is greater than the 5% critical value hence reject the null hypothesis of no cointegration (*r=0*). Proceeding to the next model (*model 3*) the trace statistics is less than the 5% critical value, hence we do not reject the null hypothesis of no cointegration for the first time. Consequently, we do not reject the claim that there is no cointegration and there are deterministic trends in the level of the data (*model 3*).

Cointegration test results based on E-G approach and Johansen procedure revealed that there is no long run relationship between the population growth and economic growth. If two variables are not cointegrated the logical step is to take first difference of the data and estimate a VAR model for the stationary variables (*dlnrgdppc, dlnpopsize*). The next section discusses VAR model results.

Table 4: Trace Test for Determining Cointegration Rank and the Model for the Deterministic Component for $\ln rgdppc_t$ and $\ln pop_t$

Null Hypothesis	*Model 4 Restricted Constant*		*Model 3 Constant*		*Model 2 Restricted Trend*		Lag Length
	Trace Statistics	*Critical Value 5%*	Trace Statistics	*Critical Value 5%*	Trace Statistics	*Critical Value 5%*	
r =0	26.4477	19.96	14.5618♠	15.41	24.1007	25.32	2
r = 1	6.4634	9.42	4.8718	3.76	5.3352	12.25	2

♠ indicate the first time the null hypothesis is not rejected

The optimum lag length 2 is based on AIC

5.3 Vector Auto Regression (VAR) model result

Once we determined the existence of no long run relationship between the two variables, we estimated the VAR model to examine the short run relationship between population growth and economic growth and determine the direction of causality. Table 5 below reveal the results of the VAR model with two lags. The optimum lag length, which is 2, selected based on AIC, HQIC and SBIC.

Table 5: Results of the VAR Model

Dependent Variable: D1.lnrgdppc	**Equation 1:**		***Dependent Variable:*** D1.lnpopsize	**Equation 2:**	
	Coefficient	***p-value***		***Coefficient***	***p-value***
L1.dlnrgdppc	-.4551686***	0.005	L1.dlnrgdppc	-.003944	0.441
L2.dlnrgdppc	-.0718911***	0.000	L2.dlnrgdppc	-.0039203	0.449
L1.dlnpopsize	***-14.32364******	***0.007***	L1.dlnpopsize	.3177338*	0.057
L2.dlnpopsize	12.10639	0.013	L2.dlnpopsize	.3205523**	0.035
Constant	.0683203	0.594	Constant	.0100143**	0.013
RMSE=.07538	*R-sq=0.3335*		*RMSE=.002369*	*R-sq=0.4193*	
chi2=16.01183	*P>chi2= 0.0030*		*chi2=23.10303*	*P>chi2= 0.0001*	
Jarque-Bera Normality test:			Jarque-Bera Normality test:		
chi2(2)= 0.663 p-value= *0.71785*			***chi2(2)=*** *2.816* ***p-value=*** *0.24465*		
Portmanteau test for white noise:			Portmanteau test for white noise:		
Portmanteau(Q)statistic=9.7143			*Portmanteau(Q)statistic= 12.9237*		
Prob > chi2(14) = 0.7828			*Prob > chi2(14)= 0.5325*		
Multivariate Vector Diagnostics:					
LM test for Autocorrelation: Lag (1) chi2(4)= 4.5748 p-value = 0.33377					
Lag (2) chi2(4)= 2.1282 p-value = 0.71220					
Jarque-Bera Normality test: chi2(4) =3.479 p-value = 0.48111					

***, ** and * indicate statistically significance at 1%, 5% and 10% respectively

Overall the estimation results indicate that the model fits quite well. The coefficient for one period lag of population growth in equation 1 is negatively and statistically significant, which is an evidence for negative effect of population growth on economic growth. But the coefficient for lagged variables of economic growth in equation 2 is statistically insignificant that indicates no effect of economic growth on population growth in the short run.

Both short run equations are statistically significant and have good model fit. That is, equation 1 has a chi2= *16.01183* (p-value=0.0030) and R^2=0.3335. Similarly, Equation 2 has a chi2=*23.10303* (p-value=0.0001) and R^2=0.4193.

In terms of Granger causality, we have used the Wald test (Table 6) to check for direction of causation. We have found joint statistical significance of the coefficient of lagged population growth that imply causality running from population growth to economic growth in the short run.

Table 6: Granger Causality Test in the VAR Model

Explanatory Variables	Endogenous Variables			
	Dlnrgdppc		***Dlnpopsize***	
	chi2	*P-value*	*chi2*	*P-value*
∑*Dlnrgdppc*	-	-	.80939	0.667
∑*Dlnpopsize*	8.5675**	0.014	-	-

**indicates statistical significance at 5%

Current population growth in the short run is only affected by past growth rates in population. Both recent and farthest past population growth increases current population growth. In terms of Granger causality, there is no evidence that previous economic growth affects short run population growth.

5.4 Robustness check

An issue that may affect the unit root and cointegration test results is not accounting for structural break that existed between the two regimes. We did not explicitly address the issue; however, we argue that not accounting for the structural break will not affect our results.

The issue of structural break in unitroot test was initially pointed by Perron (1989). He argued that failing to account for at least one structural break in the trend function may lead researchers, who use the conventional unit root tests, not to reject the null hypothesis of unit root process when in fact the series is stationary around a onetime structural break. Empirically, he showed that treating the first oil shock in 1973 as a structural breakpoint in the trend function then one can reject the unit root hypothesis in favor of a trend stationary hypothesis. In our case we did not reject the hypothesis of non-stationary for $lnpop_t$ and $lnrgdppc_t$. If the structural break affects our unit root test in line with Perron (1989), we erroneously reject the stationarity of $lnpop_t$ and $lnrgdppc_t$. If two variables are stationary, regressing $lnpop_t$ and $lnrgdppc_t$ could tell us the long run relationship between the two variables. The regression result of $lnpop_t$ on $lnrgdppc_t$ given in the Table 2, step 1, indicate insignificant relationship. This means the two variables are not cointegrated. Thus, not accounting for the structural break would only cost us lack of brevity in the empirical procedure we implemented. Yet we admit that our further work will address the issue of structural break by explicitly accounting for the issue in our modelling.

We diagnosed our estimated VAR model for specification problems. First, we checked for parameter stability in the VAR equation as shown in table 5.8 below. The results indicate no misspecification in our model, since all the eigenvalues are strictly less than one.

Table 7: Stability Condition of VAR estimates

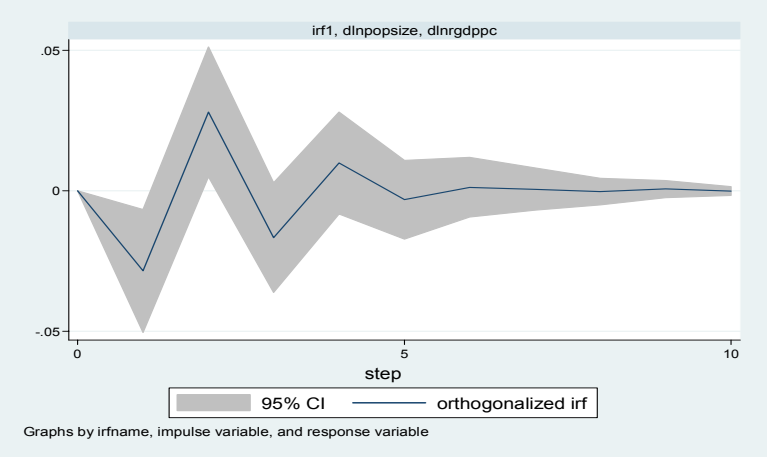
Eigenvalue			Modulus
.7374059			.737406
-.4920743	+	.2465245i	.550374
-.4920743	-	.2465245i	.550374
.1093079			.109308

Then, we checked for any serial correlation in the residuals using Lagrange Multiplier (LM) test and found no problem of autocorrelation at 1% level of significance as shown in Table 7 above. Moreover, we checked for both normality and white noise of the residuals using Jarqu-Bera normality test and Portmanteau test for white noise respectively. We found white noise normal residuals in both equations as shown in Table 7 above.

5.5 Impulse Response Function (IRF) analysis

Lastly, we estimated an IRF to undertake an IRF analysis. The IRF graph below indicates that an orthogonalized shock to population growth rate causes, on average, a small negative effect on economic growth rate that dies out after 7 or 8 years.

Figure 5.1: Impulse-Response Function to a shock in Population



dlnpopsize is first difference in natural log of population growth and
dlnrgdppc is the first difference in natural log of real GDP per capita

A negative shock on population growth increases economic growth in the short run, changes in to insignificant effect in the medium run and finally converges to zero or no relationship in the long run.

6. Conclusion

After checking for stationarity of the time series variables and testing for cointegration between economic growth and population growth, the econometric results show population growth and economic growth are not cointegrated indicating no long run relationship.

However, in the short run we have found statistically significant negative effect running from population growth to economic growth. Precisely, in the long run population growth in Ethiopia has no relation to economic growth. In the short run, the econometric evidence supports the Malthusian view that population growth is bad for economic growth.

Efforts in reducing the population growth could accelerate economic growth in the short run but may not have any effect on the long run economic growth. So, policy makers should properly consider issue of population in order to accelerate economic growth in the short run.

Since our study focused on the link between population growth and economic growth at aggregate level, our results revealed only the macro level effects, hence we suggest further studies to examine the micro and meso level effects. Further investigation at sectoral level could also increase our understanding of the effect of population growth on the economy. Besides, we recommend further studies that account for structural break.

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URBANIZATION IN ETHIOPIA: CHALLENGES AND THE WAY FORWARD

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1. Introduction

There are two views which shape the debate on urbanization. The first is an anti-urbanization stance which was highly influenced by the urban bias thesis of Micale Lipton (Lipton, 1989). The anti-urbanization stance neglected cities and focused investment on rural development. As a result, not only the poor in the cities were neglected but the potentials of urban centres in inducing growth were also undermined. The second is the pro-urban perspective which views urban areas as centers of technological innovation, economic development and socio-political change (Fantu, 2005**)**. The current stand is to see cites as engines of growth and social transformations and as contributors to poverty reduction.

The role of urban centres and cities in promoting economic growth and social transformation has long been noted (Henderson, 2010). The argument focuses on the agglomeration advantages of urban centres which represent the productivity advantages that firms and industries gain by locating in close proximity to each other and to large markets (Henderson, 2010). Cities also provide dense interactive locations where knowledge is exchanged, innovations spurred and sophisticated skills developed (Lucas 1988, Black and Henderson 1999 cited in Henderson, 2010). Cities are known to be the bases to economic modernization, diversification and to higher value production. Successful competition in global markets requires skills, information, technology and capabilities for rapid response in production, marketing, service, transport and logistics which are all facilitated in urban centers. Urbanization promotes development by diversifying incomes, expanding options for more affordable service delivery and opening horizons for innovation and skill acquisition (Kessides, 2005).

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On the other hand, urbanization plays a significant role in poverty reduction. The contribution comes through its facilitation of demographic transition and ease of service delivery. In this regard, urban areas witness earlier and steeper decline of mortality and fertility than the rest of the country and lower per capita costs of infrastructure and services than rural areas (ibid). Urban economy also provides alternative sources of income to the poor through migration and remittances (Ibid).
Urbanization, however, poses its own challenges. Urbanization is a major socio-economic transformation that entails a shift of population from rural to urban center and a far reaching economic and social change with accompanying infrastructure and service development. These shifts and changes are not smooth and necessitate financial, technical, planning etc capabilities to meet the pressures arising from urban development. For example, the demand for housing, employment, services, etc need to be met if the potential from urbanization is to be realized. Similarly, the processes of urbanization, its pace, pattern and direction need to be understood if urbanization is to yield positive results.

Urbanization processes are country specific and the sets of challenges are also unique to different countries. There is, therefore, a need to assess the unique challenges of and ways forward for urbanization as prerequisites for realizing the potential of urbanization for fostering economic growth, bringing social transformation and contributing to poverty reduction.

Ethiopia, with only 16% of urbanization in 2007, is an under urbanized country even by the standard of Sub Saharan African countries (35% in the year 2005). With an average growth rate of 4 %, it has, however, one of the fastest rates of urbanization. In fact, the UN figure shows that the average urban growth rates in Ethiopia for the years 1950-2050 is 4.34%, which is higher than the average for Sub-Saharan Africa (3.95%), the less developed countries (2.84%) and the world (2.15%) (UN, 2009)
Urbanization in Ethiopia faces several challenges that hamper the rural-urban transition. These challenges have to be surmounted if urbanization is to be promoted and the country is to reap its benefits.

The paper, against this background, examines the challenges of urbanization in Ethiopia and suggests the ways forward. The second part of the paper provides the state of urbanization in Ethiopia. It includes a brief historical overview of urbanization and some stylized facts. Section three discusses the challenges of urbanization. Section four is a way forward while section five concludes.

2. The state of urbanization in Ethiopia

2.1 Brief history of urbanization in Ethiopia

Though Ethiopia is one of the cradles of early civilization and urbanism, urban development is less advanced. The urban history of the country can be characterized by five principal periods.

The first phase is the early urbanization of the north and its southward expansion. In the northern part or in the Amhara-Tigre heartland of traditional Abssinya, urban development has a long but interrupted history dating back to the rise of Axum in the fourth century AD (Baker, 1990). Though not much is known about the predecessors of Aksum, it is known that Aksum flourished from the first to the seventh century AD (Bahru, 2002). The towns of the Aksumite kingdom included the capital Aksum and Adulis, a red sea port (Bahru, 2002). The kingdom is known to have flourished on trade and had possessed large parts of Northern Ethiopia and the Arabian coastline across the Red Sea (Bahru, 2002). The decline of Aksum was marked after the middle of the seventh century accompanied by disruption of the red sea trade and the rise of Islam.

The period between 1150 to 1270 was dominated by the Zagwe dynasty. The Zagwe dynasty is known for constructing eleven churches in Lalibela town. Many kings, Atse Yekune Amlak, Amda Tsion (1314-1344), Zara Yaco (1434-1468) Emperor Lebna Dengil (1508-1540), Emperor Susneyous (1607-1632) etc ruled after the Zagwe dynasty but had no significant impact on urban history as they were ruling from roving camps. Urbanization at this period is at best described as cyclical and the capitals as wandering capitals (Akalu, 1967, Horvath, 1969).

Gonder was established as the Imperial capital in 1636 by King Fasildes who led the way in the construction of a number of impressive castles and churches in and around the town (Bahru, 2002). One of the significance of Gonder was its ability to break the impermanency of the Ethiopian towns and to remain the seat of the government for nearly two century (Baker, 1990). The new urban culture, however, did not preclude the monarch from breaking up. The monarchical power was declining and regional chiefs grew at the expense of the monarchs. This period is termed as the “zemene mesafint’ (era of the Princesses). The significance of this period for urban development was that the rise of these chiefs means the proliferation of regional capitals which helped to expand the urban base (Akalu, 1967).

The Monarch was reinstituted in the second half of the 19th century. This helped the development of the existing urban life since the sovereigns at this period used the

existing capitals as their initial base of operation rather than creating new capitals. Akalu (1967) argues that urbanization in this period became cumulative.

The territorial expansion of the Solomonic Kingdom into non-Amhara and non-Tigrean part introduced a new dynamic of urbanization in Ethiopia. Menilik undertook a series of military campaigns to expand southward and unite the diverse religious, ethnic and linguistic groups into the modern nation-state (Baker, 1974). He incorporated southern and eastern places with different ethnic, religious and language groups. In order to facilitate the control of these places, he established various garrison towns known as 'ketemas'. It is estimated that between 1887 and 1910 at least 37 such garrison towns were established (Akalu, 1973). These garrison towns created the impetus for urban growth in the south. Towns such as Gore, Jimma, Lekemte, Bako, Gabo and Ginir have evolved from such towns (Baker, 1974) At the beginning, the garrison towns had military functions. Military governors and soldiers were assigned. The governors were awarded with land (rist-gult, gult) from the expropriated land and a number of tenants (gabars) who will till the land and provide other services for them. The garrison towns, however, later acquired other functions such as civil administration, judicial functions, markets, schools, catering services etc (Baker, 1990).

Menilik established a new and permanent capital Addis Ababa, in 1892 Addis Ababa was preceded by other capitals such as Ankober, Liche, Angolellla, Entoto. The introduction of eucalyptus tree from Australia to solve cooking problem contributed to the permanency of Addis Ababa (Assefa and Tegegne, 2010). The geographical location of Addis Ababa at the center of the country and the pleasant climate it enjoys due to its high altitude are also factors that contributed to its attraction.

Menilik's centralization drive of the empire both economically and administratively spurred the urbanization process. In the process of centralization, the nobility was changed or modernized transforming the traditional pattern of authority. The co-opted nobility became articulators of the imperial policy and aligned them with the newly established civil administration which was urban based (Baker, 1990). The consequence was that increasingly the nobility took up urban residence and acquired a taste for imported luxury goods and adopted urban norms and cultures (Pausewang, 1983**)**. Similarly, permanent residents come to towns from various parts of the country in different capacities and forms. These permanent residents contributed their share to urban growth in the country. Akalu (1973) mentioned that the residents came 1) to carry out government activities such as clerks, runners and other functions; 2) to provide domestic services to the households of government officials and do works considered as menial by the aristocrats; 3) to work in the construction sector such as public buildings, walls, roads and bridges.

The Djibouti-AA railway constructed during the period between 1897 and 1917, gave further impetus for urban development in Ethiopia. In fact the railway gave rise to the formation of new towns known as railway towns (Akalu, 1973) and changed the commerce and trade routes of Ethiopia. A string of stations were also built along the railway line that later became full-fledged towns. For instance 12 stations were built between Dire Dawa and Djibouti and seven of these were within the Ethiopian territory (Akalu, 1973). The origin of Dire Dawa, Adama, Debrezeit, Modjo has relation with the growth of the railroad.

Though limited in their impact, improvements in communication was also considered as having an influence on urban development in Ethiopia (Akalu, 1973). Menilik is known to have introduced a number of innovations such as postal services, telephones and telegraphs, schools etc. Improvements on land transportation were also initiated in 1902 with the first road construction being between Addis Ababa and Addis Alem (Akalu, 1973).

After the death of Menilik in 1913, Hailesellassie continued with the process of consolidation, centralization and unification of the state. Due to the extension of the political control throughout the country, long-established towns were able to continue growing and new towns were also established (Baker, 1990).

The second phase of urban development was during the period of Italian occupation (1935-1941). The period witnessed a rapid growth of urban development. The main reason was the expansive road construction undertaken in the country. By 1941, the Italians had built a total of 7,000 kms of road of which 3450 kms were tarred (Baker, 1990). The road construction was matched with the effort of the Italians to change and alter cities and towns. Addis Ababa was chosen as the seat for all Italian East Africa and a programme of public works such as the installation of water supplies, electricity, street lighting, paved roads, hospitals and schools was implemented. The city was segregated in 1937 (Baker, 1990). The Italians also established new towns- Alem Gena, Sebeta, Tafkie, Sululta, Sendafa, all around Addis Ababa.

The third phase is the period from Liberation to revolution (1941-1974). Urban development is known to have suffered a period of decline immediately after the departure of the Italians. This is due to a halt of the road construction and the departure of the Italians who were participating in urban functions such as shopkeepers, artisans etc. The lack of local capital and indigenous skill also compounded the problem (Baker, 1974).

Urban development, however, soon took off in the 1950's during which time the first highway program (1951-57) was started and there was also inflow of capital and aid. The inclusion of Eritrea as a province also helped to incorporate important towns such as Asmara, Massawa, Keren etc (Baker, 1974.). The emperor's gesture of magnanimity to Italian captive *soldatos* was also a boost to urban development. The emperor invited the Italians to stay and engage in whatever business they wish and keep their Italian citizenship. Some stayed and engaged in different business including working as drivers (*autistas*) over long distance routes which connected Addis Ababa to the hinterland (Assefa and Tegegne**,** 2010). Urban development was also supported by the emperor drive to provide critical infrastructure: a commercial school, a technical school, a university college, modern civil service system, commercial banks, highway authorities, electric power authorities, a telecommunication ministry, water resource authorities, an international airline, and a tourist authority (Assefa and Tegegne, 2010). Educational and health-care establishments were also expanded in major urban centers, and Addis Ababa received the bulk of such establishments including high-quality colleges of arts and letters, education, engineering, science, building and architecture, and comprehensive universities that began to supply the required highly trained manpower (Assefa and Tegegne, 2010).

The fourth period is the period of revolution (1974-1991). A military junta called the Derg took over in 1974 and ruled the country until 1991. During this period, urban development faced the nationalization of all land, rental property and industry. This destroyed the functions of markets and transaction in urban and rental housing (Assefa and Tegegne, 2010**)**. As a result, cities faced shortages of housing and other socio-economic problems. Though the Derg attempted low cost housing in Addis Ababa, it was neither sufficient, nor was it duplicated elsewhere. The establishment of urban locality (kebele) association was also other development of the period.

The fifth period is the current period (1991-present) or the EPRDF period. The EPRDF period is known for its rural centered policy rather than urban oriented strategy. Agricultural development led industrialization (ADLI) is the main strategy of the country which aims at improving small farmers productivity, boost agricultural production and improve the living condition of the rural people. Such overzealous obsession with rural development has led to the neglect of urban development (Tegegne, 2007)

The regime continued with the state ownership of urban and rural land. It, however, instituted a lease system of urban land holding. The lease system transfers land to users for a certain period of time. The government has issued a long awaited urban development policy in 2005. Since then, urban development is getting some attention

as different municipal reforms and master plans continue to be issued. Of particular importance is the recognition of the urbanization agenda in the second PRSP document known as a plan for accelerated and sustainable development to end poverty (PASDEP).

2.2 Some stylized facts of urbanization in Ethiopia

2.2.1 Levels and rates of urbanization

In the year 2007, Ethiopia was able to attain an urbanization level of 16% (Tabe 1)[2]. In the year 2009 the urbanization level reached 17% (Table 2). This clearly puts the country as one of the least urbanized countries even by the standard of African countries. Most African countries have higher levels of urbanization. The average level of urbanization in Africa in 2009 was 40%. Ethiopia has one of the fastest rates of urbanization. With 4.5%, its rates of urban growth is higher than the average for Africa (3.4%) and the world (2.0%) though it is similar with some countries such as Tanzania, Uganda, Sudan (Table 2). A higher urbanization rate overstretches the capacity of infrastructure and services.

Table 1: Total population and urban population (000) (1967-2007)

	1967	1984	1994	2000	2005	2007
Total population	22,591.0	42,616.9	53,477.3	63,495.0	73,043.5	73,918.5
GR	3.73	2.27	2.86	2.80		
Urban population	1917.0	4869.3	7323.2	9473.0	11674.5	11956.2
GR	5.48	4.08	4.29	4.18		
Urban population as percentage of total population	8.5	11.4	13.6	14.9	15.98	16.2

Source: For 1967, CSA, 1967; For 1984, CSA, 1991; For 1994, CSA, 1999a; For 2000, CSA, 2000; For 2005, CSA 2004, for 2007, census result

[2] Ethiopia had conducted population census in the years 1984, 1994 and 2007. Data are used from these census periods to document trends in different urban features.

Table 2: Total population and urbanization in Ethiopia, selected African countries and the world

	Total population (2009) Million	Average population growth rate (2005-2010)	% urban (2009)	Urban growth rate (2005-2010)	GNI per capita Ppp$2007	Access to improved drinking water service
Ethiopia	82.8	2.6	17	4.5	780	42
Tanzania	43.7	2.9	26	4.7	1200	55
Uganda	32.7	3.3	13	4.5	1040	64
Kenya	39.8	2.6	22	4.1	1550	57
Sudan	42.3	2.2	44	4.4	1880	70
Ghana	23.8	2.1	51	3.7	1320	80
Egypt	83.0	1.8	43	1.9	5370	98
South Africa	50.1	1.0	61	1.8	9450	93
Africa	1009.9	2.3	40	3.4	-	-
Least developed region	835.5	2.3	29	4.1	1171	-
Less developed region	5596.1	1.4	45	2.6	-	-
More developed region	1233.3	0.3	75	0.6	-	-
World total	**6829.4**	**1.2**	**50**	**2.0**	**9947**	**-**

Source: State of the world population 2009, United Nations population fund

The Central Statistical Authority (CSA, 1999) projected total and urban population on assumption of low, medium and high variants[3]. According to the mid variant projection, the urban population in the year 2030 will be 29.7 million and the level of urbanization will be 22 percent (Table 3). The urban population will grow at a higher rate than total and rural population. Ethiopia thus has to anticipate such high growth of urban population and devise appropriate policy. The higher rate of urban population is due to both natural increase and rural-urban migration. The difference between urban growth rate and the natural increase is mainly due to rural-urban migration. The urban population, however, will grow at a decreasing rate. The rural-urban migration component of the urban growth increases slightly from 1.3 between 2005-2010 to 1.5 between 2025 - 2030.

[3] The low, medium and high variants are prepared by using different assumptions on fertility levels. The medium variant is more plausible in population projection

Table 3: Projections of total and urban population under medium variant (million)

	2005	2010	2015	2020	2025	2030
Total Population	73,044	83,483	94,526	106,003	117,586	129,059
Urban Population	11,675	14,351	17,479	21,077	25,147	29,746
Rate of natural increase	2.62	2.44	2.26	2.05	1.85	
GR percent	2.62	2.44	2.26	2.05	1.85	
Urban GR percent	4.06	3.88	3.69	3.51	3.35	
Rural GR percent	2.35	2.15	1.98	1.68	1.41	
Percent urban	16.0	17.20	18.49	19.89	21.39	22.22

CSA, 1999a

2.2.2 Urbanization pattern across size class category

Knowledge on urbanization patterns including size distribution, growth rates etc has implication regarding the health of an urbanization process. For example, in situations where the urbanization pattern is dominated by primate city, the integration and hierarchical ordering of cities will be very much constrained. Since the process of economic growth tends to occur in matrix of the urban regions (Friedman, 1966), the lack of properly developed hierarchy of cities constrains the evolution of the space economy. Similarly, knowledge of the growth rates by size class provides information on the levels of cities which are witnessing rapid or slow growth rates. This has quite a significant implication for the emerging patterns of urbanization in the sense of creating a concentrated or diffused form of urbanization.

Ethiopia had 312 urban centers with population of over 2000 in 1984 (Table 4). These towns grew to 534 and 793 in 1994 and 2007 respectively. It is quite possible to discern certain patterns across size category.

Multitude of small urban centers

A particular feature of the Ethiopian size distribution is that there are a multitude of small urban centers. In 1984, 58 % of the urban centers were in the size category of 2000-5000 while they formed about 55 and 45 per cent in 1994 and 2007 respectively (Table 4). If we accept the delineation of small towns by urban PASDEP as those towns which have less than 20,000 people, they represent 93 %, 91%, and 89.2 % of the total towns in the years 1984, 1994 and 2007 respectively. Between the years 1994-2007 those in the size category of 10,000-19,999 have grown rapidly compared to other towns within the size category of less than 20,000. A particular feature of small towns is that despite their huge number, they host a small proportion of the total

urban population. They host only 38-39% of the urban population in all census periods (Table 5 and Figure 1).

Small number of intermediate and large towns

There are only 86 towns with over 20,000 populations in the year 2007. The majority or 60 towns have population in the size category of 20,000-50,000, 15 towns are found in the size category of 50,000-100,000 and 10 towns are found in the size category of 100,000-500,000. There are no towns in the size category of 500,000 - 1,000,000 in all the years examined. This entails that there is a distributional gap in intermediate and large towns in Ethiopia. Addis Ababa, the capital city is the only city with over a million inhabitants. The population of Addis Ababa increased from 1.4 million in 1984 to about 2.5 million in the year 1994 and 2.7 million in 2007.

The 86 towns together account for 11% of the total number of towns. These towns though small in number are the ones which host most of the urban population. Nearly 60 per cent of the urban population live in intermediate and large towns (Table 5 and Figure 1). Within intermediate and large towns, the highest growth rate was recorded for towns between 20,000 - 50,000 in the period 1984-1994. In the period, 1994-2007, towns in the size category of 100,000-500,000 have shown a dramatic increase both in their numbers and share of the urban population (Tables 4 and 5). Towns in the latter category emerged only in 1994 in Ethiopia. Their number increased to 10 in 2007 while their share of the urban population reached 14%. These towns are mostly regional capitals.

Differential growth rates

The pattern of growth in the period 1994-2007 shows some interesting points. The growth of urban population in small towns particularly those in the range between 5000-20,000 is relatively higher (over 7%) (Table 5) than towns which may be classified as intermediate towns with the size category of 20,000-100,000. Urban population is growing at a very fast rate in the towns of 100,000-500,000 (Table 5). In the latter groups, are towns such as Awassa, Adama, Shashemene, and Mekelle. These are regional and commercial centres and are rapidly catching up with Addis Ababa though their size is minuscule compared to it. The fact that these towns are growing at a higher rate could be used as opportunity to create a more diffused form of urbanization.

Table 4: Size Distributions and growth rates of urban centers

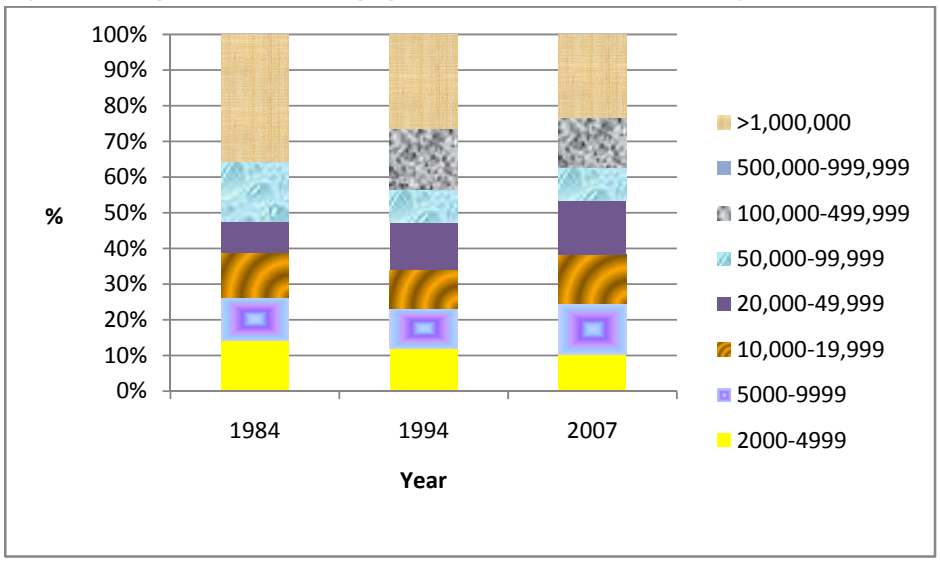
Size group	1984		1994		2007		Annual GR 1984-1994	Annual GR 1994-2007
	No	%	No	%	No	%		
<2000			389		165			
2000-4999	182	58.3	295	55.2	357	45.0	4.95	1.21
5000 -9999	71	22.7	127	23.8	234	29.5	5.99	3.26
10,000 -19,999	36	11.5	61	11.4	117	14.7	5.42	5.47
20,000 -49,999	12	3.9	39	7.3	60	7.5	12.51	5.89
50,000-99,999	10	3.2	8	1.5	15	1.9	-2.21	6.99
100,000- 499,999	-	-	3	.005	10	1.3	-	15.16
500,000-999,999	-	-	-	-	-	-	-	
>1000000	1	0.3	1	0.2	1	0.12	-	-
Total*	312		534		793		5.52	3.30

* The total excludes towns below population size of 2000

Table 5: Size Distribution and growth rates of urban population

Size group	1984		1994		2007		Annual GR 1984-1994	Annual GR 1994-2007
	Pop.	%	Pop	%	Pop	%		
<2000			452,885		221505			
2000-4999	559,149	14.1	948,127	13.7	1,216,307	10.30	6.95	2.17
5000-9999	489,663	12.2	884,684	12.8	1,671,810	14.16	8.06	8.89
10,000-19,999	491,017	12.4	834,431	12.0	1,623,282	13.75	6.99	7.27
20,000-49,999	351,929	8.9	1,059,183	15.3	1,803,875	15.28	20.09	5.40
50,000-99,999	657,018	16.6	716,053	10.3	1,076,126	9.11	0.89	5.02
100,000-499,999	-	-	404,942	19.4	1,672,852	14.17	-	31.31
500,000-999,999	-	-	-	-	-	-	-	
>1,000,000	1,412,575	35.7	2,084,588	30.1	2,739,551	23.20	4.75	3.14
Total	**3,961,351**		**6,932,008**		**11,803,803**		**7.49**	**5.40**

Figure 1: Proportion of urban population in different size categories



Urban primacy

Though Ethiopia, by the standard of some African countries, has lower primacy, it still has one of the highest primacy levels. With the overall primacy of 23% in 2007 (Table 6), it is lower than some African countries such as Mozambique (83.2%), Burundi (82.0%), but much higher than other African countries such as Algeria (11.5%), Malawi (18.8%), Nigeria (16.9%). Addis Ababa is a typical primate city and dominates the urban scene in Ethiopia. It is entirely different from other towns in various ways.

It is, however, important to note that primacy in Ethiopia has a declining trend. It has decreased from 36% in 1984 to 23% in 2007. The growth rate of Addis Ababa, the primate city, is also lower than the national average. Addis Ababa had a growth rate of 4.75 in the period 1984-1994 and 3.14 in the period 1994-2007. The average growth rates of urban population in the country however was 7.49 in the period 1984-1994 and 5.4 in the period 1994-2007.

Table 6: Overall primacy index, 1984-2007

Year	Overall primacy index
1984	35.7
1994	30.1
2007	23.4

2.2.3. Regional variation in urbanization

There is a significant regional variation in the levels of urbanization in the country. The three most urbanized regions are Dire Dawa, Harar and Addis Ababa (Table 7). Outside these urban regions, only Tigray and Gambella were able to attain urbanization levels above the national average while Somale has an urbanization level that is a little lower than the national average. Those regions with large size of population such as Amhara, Oromiya and SNNP have low levels of urbanization. SNNP is the least urbanized region followed by Amhara and Oromiya.

Table 7: Regional Distribution of Urban Population in 2007

Regions	Total population	Urban population	Levels of urbanization
Tigray	4,316,988	844,040	19.55
Afar	1,390,273	185,135	13.31
Amhara	17,221,976	2,112,595	12.26
Oromiya	26,993,933	3,317,460	12.28
Somale	4,445,219	623,004	14.01
Benishangul	784,345	105,926	13.50
SNNP	14,929,548	1,495,557	10.01
Gambella	307,096	77,925	25.37
Harar	183,415	99,368	54.17
Addis Ababa	2,739,551	2,739,551	100.00
Dire Dawa	341,834	233,224	68.22
Total	73,750,932	11,862,821	16.08

The regional dimension of population and size distribution is very striking (see Annexes 1 and 2). First of all, the peripheral regions, which are mainly lowland and backward areas, have very few urban centers. Most of the towns in Ethiopia are found in Oromiya (39.5%), Amhara (22.8%) and SNNP (17.5%). These three regions account for nearly 80% of the towns. Similarly 76% of the urban population outside Addis Ababa live in these three regions. The fact that urban centers and urban population are lower in other regions implies a dearth of urban services and facilities in these regions. The dearth of urban centers is particularly sever in Afar, Benishangul, and Gambella[4]. Most or the majority of towns in these regions have a population size of less than 10,000.

Regarding the size distribution, it is possible to discern some shift. For example there were only three regions (Amhara, Oromiya, and D.D.) with towns in the size category of

[4] There are only 23 towns, 18 towns and 9 towns in with population size of more than 2000 Afar, Benishangul and Gambella respectively in 2007

100,000-500,000 in 1994. In the year 2007, the number of regions with towns in the same size category grew to six (Tigray, Amhara, Oromiya, Somali, SNNP and D.D.). The number of towns in the same size category also grew in some regions. Amhara and Oromiya each had three towns in 2007 while each had only one town in 1994.

The unbalanced spatial and size distribution of towns at national and regional levels means that there are places which are not served by urban centers and those which are served also suffer from lack of big centers. Size of towns has a positive correlation with the type, nature and diversity of functions that can be supported. The smaller the size, the lower the number of functions. In this regard, all the small towns do not seem to have the necessary functions for the smooth functioning of the centers and the surroundings. Small towns in Ethiopia have only service activities and at most occupy a single person business (Baker and Tsion, 1994, Tegegne and Tilahun, 1996).

2.2.4 Contribution of the urban population to the GDP

It is difficult to get official estimates of the contribution of the urban population to GDP. The combined share of industrial and service sectors can however be taken as a proxy measure. Accordingly, Table 8 shows that industry and service sectors accounted for between 46 and 55 per cent of total GDP between 1995/96-2005/06 with an average of 51 percent. The corresponding proportion of urban population in total population however is much lower. In all cases the share of industry and services sector is more than four times the proportion of urban population in total population. The reason is due to the concentration of industry and services in cities and towns. These have higher productivity and growth rates than agriculture.

Table 8: Sectoral contribution to GDP (GDP at 1993 EFY values)

	Agriculture	Industry	Distributive service	Other service	Industry and services (Urban economy)
1995/96	53.6	11.7	18.3	15.7	45.6
1996/97	53.4	11.8	18.4	15.6	45.8
1997/98	49.8	12.9	19.3	17.0	49.2
1998/99	48.6	12.8	19.3	18.3	50.5
1999/00	47.4	12.8	19.4	19.6	51.7
2000/01	48.8	12.5	19.1	18.5	50.2
2001/02	47.3	13.4	19.6	18.8	51.8
2002/03	43.3	14.3	20.8	20.2	55.4
2003/04	45.4	14.1	20.1	19.0	53.2
2004/05	46.6	13.8	19.6	18.7	52.1
2005/06	47.3	13.5	19.2	18.6	51.3
Average	48.3	13.1	19.4	18.2	50.6

Source: World Bank (2007), pp. 17

3. The challenges of urbanization in Ethiopia

The challenges of urban development are multitude. These challenges could be subsumed under issues of underdevelopment, settlement and functional. Settlement issues refer to those arising from systems of cities and have a regional dimension. Functional issues refer to problems that occur within cities. The underdevelopment issues refer to the lack of prerequisites for urban development and the attendant underdevelopment of urbanization. The recognition and measurement of such issues forms the first step in attaining rational ways forward.

4. Underdevelopment challenges of urbanization

Urban development remains low in Ethiopia. The major problem of such low level of urbanization is the lack of urban services and access to infrastructure. With low level of urbanization, people cannot benefit from the dynamics of urbanization such as the agglomeration and spillover effects that increase productivity. The country cannot also benefit from market demand that stimulates both rural and urban activities. Urban centers as factors of development concentrate physical, human and financial resources and their absence also means poor accumulation of these capitals.

The main reason for such underdevelopment could be found in the overall structure of the economy which is not supportive of urban development. Of particular importance are the subsistence nature of the dominant agricultural economy, limited industrialization and lack of communication and transportation. In addition, lack of proper policy support could also go towards constraining urbanization.

Agricultural production in Ethiopia has low productivity, uses backward technology and generates low surplus. Under this circumstance, agriculture is not capable of providing the surplus labour, food and raw materials required for industrialization. The absence of agricultural surplus constrains investment in industrialization and thereby constrains urbanization. The type of agriculture and the degree of intensification are critical factors affecting the extent of backward linkages (Livingston, 1997). Agricultural with high degree of intensification will have high levels of demand for non-agricultural sector. Agriculture in Ethiopia is rain-fed, subsistence and employs traditional tools and implements. The tools used by farmers are mostly homemade, except the tip of the plough which might be done by a blacksmith. There is no use of wheel driven transportation system that might require some transportation facilities. Agriculture depends on rainfall and there is negligible irrigation that might demand pumps and pump related equipments. The use of modern inputs such as fertilizers and tractors is very negligible.

In terms of industrialization, Ethiopia is one of the least industrialized countries worldwide (EEA, 2005). The manufacturing sector is least developed in many respects including volume of production, quality of products, technology status, labor skill, export capacity etc (EEA, 2005). The sector's contribution to the GDP stands at 12.4% for the period 2000/01-2007/08. The role of the manufacturing sector in transforming other sectors of the economy is also negligible. In the absence of industrialization and structural transformation of the manufacturing sector, urbanization will be constrained severely.

Another important factor of urbanization is communication and transportation. Transportation and communication has always been associated with urban development in Ethiopia throughout its history. The Djibouti-Addis Ababa railway constructed during the period between 1897 and 1917 by Menilik II is one of the impetuses for urban development in Ethiopia. In fact the railway gave rise to the formation of new towns known as railway towns. Similarly, urban development picked during the Italian period mainly due to road construction. In the same manner, urban development is known to have suffered a period of decline immediately after the departure of the Italians mainly due to a halt of the road construction. Despite such close link, transport and communication development has not been sufficient to spur and sustain urban development in Ethiopia.

As of June 2008, the total road network of the country was 44,359 km (excluding community roads). With a rad density of 0.56km per 1000 population and 40.3 km per 1000km^2, Ethiopia has the lowest road network in Africa. As a result, large proportion of the country is inaccessible. The proportion of area further than 5 kms of all weather road in 2008 was 67% of the country area (see Table 12). Such remote areas remain out of the mainstream of economic systems and have less chance for urban development.

The policy environment in Ethiopia was not also supportive of urban development. Notable exception is the Hailesellassie period during which time there was rapid rural-urban migration and fast growth of cities. Urbanization was rapid in the 1960s and the period 1967-75 saw rapid growth of new urban centers. For example, the population of six towns namely Akaki, Arba Minch, Awassa, Bahir Dar, Jijiga and Shashemene tripled while that of other eight towns doubled. Awassa, Arba Minch, Metu, Goba were newly designed capital of administrative regions and important agricultural centers.

Table 9: Indicators of road development in Ethiopia

Indicators	1997	2002	2007	2008
Proportion of Asphalt roads in Good Condition	17%	35%	64%	68%
Proportion of Gravel roads in Good Condition	25%	30%	49%	53%
Proportion of Rural roads in Good Condition	21%	28%	46%	49%
Proportion of Total Road network in Good Condition	22%	30%	49%	53%
Road Density/ 1000 sq. km	24.1km	30.3km	38.6km	40.3km
Road Density/ 1000 Population	0.46km	0.49km	0.55km	0.56km
Road Density/ 1000 sq. km (including community roads)	24km	30.3km	91.4km	104.0
Road Density/ 1000 Population (including community roads)	0.49km	0.49km	1.3km	1.45km
Proportion of area more than 5km from all weather road	79%	75%	68%	67%
Average distance to all weather road	21.4km	17km	13km	12.4km

Source: ERA, RSDP performance eleven years later

The Derg period through its rural land policy has discouraged rural-urban migration as farmers were given incentives to stay in rural areas. With declining rural urban migration, there was also a decline in urban population. Beside, the period is also known for housing shortages due to the nationalization policy of urban land and extra houses which led not only to the deteriorating living condition in the city but also served as a deterrent for would be migrants.

The EPRDF period has focused on rural development as a center stage of its overall development. As a result urban centres did not receive their due attention. Furthermore, the land tenure focuses on use right of peasants which serves as disincentive for urban ward migration. The recent attention given to urban development coupled with overall changes in the structure of the economy could however change the situation and serve as an impetus for urbanization.

5. Settlement challenges of urbanization

The settlement dimension of urbanization refers to the balanced nature of urbanization and the linkages cities have with rural areas or other cities**.** The major notion of balanced urbanization is the achievement of a reasonable city-size distribution across city hierarchies and across the regions. The fact that urbanization pattern in Ethiopia is top heavy or is characterized by primate city structure creates disparity within the urban hierarchy and further peripheralizes the smallest centers. On the other hand, the existence of numerous small towns, though they house a smaller proportion of urban population, is a cause for concern. The concern comes

mainly from the fact that the small towns show less dynamism and have many weak features. For instance, most of the small town in Ethiopia have informal businesses which have meagre profits and lack innovation. These businesses also face series deficiencies in infrastructure and services (Tegegne and Mulat, 2005**)**.

The rural urban linkage development approach recognizes the mutual and symbiotic development of towns and rural areas. Towns depend on the surrounding hinterland for their different needs: market, raw material, food etc. In fact, studies indicate that the development of the hinterland is key to the growth of urban centers. In the context of small urban centers, for example Hinderink and Titus (2002) indicted that the quality and diversity of small urban centers function depends on the development of their hinterland instead of the other way round. Such rural growth linkage or transmission however could be realized if there is a strong linkage between towns and their hinterland. Linkage studies in Ethiopia show that, it has underdeveloped rural-urban linkages as manifested by different indicators (Tegegne, 2005**).** Spatial flows between rural and urban areas are constrained due to the subsistence nature of agriculture, lack of participation of the private sector in input distribution, limited interest of the formal banks in financing rural people. Inter-sectoral linkage, particularly production linkage between agriculture and industry, is also constrained since agriculture cannot supply the required raw materials and inputs to industry (ibid). Agriculture shows more of a consumptive linkage rather than production linkage. The current physical linkages between the two spatial units is far from desirable since large portion of rural areas lack any connection to the urban centers. As a result, socioeconomic development in Ethiopia is not benefiting from symbiotic relation.

6. Functional challenges of urbanization

The functional challenges of urbanization in Ethiopia in the main could be depicted in terms of the economic nature of cities, the infrastructure and service deficiencies. Economically, most cities in Ethiopia lack internal dynamism because of their weak economic base (Shewaye, 2002). In many cases this is a result of the historical origin of towns. Many towns in Ethiopia originated as political capitals and garrison towns to serve political and military purposes (Akalu,1967). Other towns have mainly employment in civil service, the military or small catering services and do not provide sound bases for industrialization (Tegegne, 2005). Such lack of dynamism means lack of enough production and service support to meet the growing needs of rural-urban migrants, the urban residents and the informal economy. Unemployment is therefore very high in urban Ethiopia. According to a recent labor force survey, the unemployment rate in urban Ethiopia is 20.6% with the highest incidence being

among females (27.2%) compared to males (13.7%) (CSA,2006). A feature that is worth taking note of unemployment rate in urban Ethiopia besides its high level is the presence of unemployed skilled labor. The unemployed in Ethiopia include a large section of the educated persons (EEA, 2004/05). The recent national labor force survey puts the unemployment rate of literate (7.8%) to be higher than illiterate (3.5%) (CSA, 2006). The rate of unemployment is also higher for those who completed general education (28.8%) as opposed to those who have no general education (23.2 %) (CSA, 2006). On top of unemployment, under-employment caused by increased casualization of labor is also widespread in urban areas and this leads to unstable household income and increased vulnerability to poverty (Abbi, 2005). The informal economy is a significant source of livelihood in urban Ethiopia. In 1999, the sector provided employment for a little over half (51%) of the urban work force. Though according to the recent official statistics, this has decreased to about one-quarter (26%), it still provides livelihood for a significant proportion of the urban labor force in some cities such as Dire Dawa (41%), Desse (39%), Jijiga (39%), Gonder (39%) (CSA, 2006). Though entry to the sector is quite easy, entrepreneurs in the sector are highly vulnerable for a variety of reasons (Dessalegn and Aklilu, 2002). Urban poverty is another manifestation of the weak economic base of cities. Urban poverty is on the rise in Ethiopian cities. According to a poverty profile study, the level of urban poverty has jumped from 33 % in 1995/96 to 37 % in 1999/2000 and attained a modest decline and reached 35% in 2004/05. This shows a percentage increase of 6% between 1995/96 and 2004/05. This is in contrast to a persistent decline of poverty at national level and in rural areas. At national level, poverty stood at 45% in 1995/96, 44% in 1999/00 and 39% in 2004/05. In rural areas, the level of poverty was 47% in 1995/96, 45% in 1999/00 and 39% in 2004/05 **(**MoFED, 2008)**.**

The disconnect between Ethiopian cities and the global economy could also be taken as a significant economic challenge. Increasingly, there is a recognition that international trade and investment play important roles in urban economic revitalisation, job and wealth creation. Thus cities in order to become viable have to rapidly integrate to the world economy, provide globally linked infrastructure, better educated and highly skilled workers and flexible public and private organizations (Rondenilli et al, 1998). In Ethiopia, export processing industries are mainly found in Addis Ababa and the surrounding. These cities could benefit from such global engagement. Other cities which are not linked to international trade are losers from this perspective.

In terms of infrastructure, the infrastructure and service needs of most cities in Ethiopia remain far from desirable. The 1994 census result showed the inadequacy of

housing quality and lack of facilities. For example, out of the 1.5 million houses in urban Ethiopia, only 1.65 % were storied, 83.7% had walls made of wood, 72.6% had mud floor, 76.9% had no ceiling. In 2007, out of the total 2.9 million houses, 80% had wood and mud wall, 66% had mud floor and 52% had no ceiling. Housing is also overcrowded. The proportion of houses with one room is 41.8 % and 46.3% in 1994 and 2007 respectively.

7. Ways forward for urbanization in Ethiopia

Two observations can be made regarding ways forward for urbanization in Ethiopia. The first two challenges referring to functional and settlement can be addressed by properly managing the existing urbanization. The underdevelopment issue, however, needs a pro active effort to induce urbanization. In both cases consistency with non-urban policy is a prime concern for urbanization. In Ethiopia major non-urban policies that have bearings on urbanization include private sector development, industrial policy, agricultural led Industrialization (ADLI), structural adjustment programs and decentralization.

7.1 Managing and planning existing urbanization

Spontaneous growth of urbanization results in numerous structural problems. Urban management and planning is needed to address these structural problems. Urban planning and management entails mobilising and utilizing a range of resources (finance, land, personnel and so on) to achieve the objective of improved urban living condition for all concerned. Key areas of urban management and planning in the Ethiopian context include:

7.1.1 Urban local economic development

Since most of the cities and towns lack internal dynamism, they house large scale unemployment. Local economic development forges partnership among actors and hopes to stimulate employment and income. Enterprise development, community development, locality development and other LED strategies need to be promoted. This would entail a broader economic stimulation.

7.1.2 Maintaining infrastructure and housing standards

The large number of cities and towns in Ethiopia which are filled with slum areas, informal settlements, and those which lack infrastructure do not provide conducive environment for non-agricultural activities. It might be important to define the basic urbanization requirement and standards so as to target and plan

urbanization activities. If there are detailed standards cities should attain in terms of infrastructure and housing, it would help define more specific national urbanization goals and target.

7.1.3 Urban safety nets and asset building

A large scale poverty and slum dwellers are evident in the country. The poor in urban areas are asset less. Studies have shown that assets are the bases on which the livelihood of the poor depends(Tegegne, 2010). This implies that governments should strive to improve the asset endowment of the poor including financial, human, physical and social (ibid). In addition, the urban poor are also vulnerable to changes in life cycle, endowment and external situation which necessitate a need to install urban safety net programs in order to reduce their vulnerability (ibid).

7.1.4 Urban local government capacity

Urban government is the key actor responsible for the provision of a conducive environment for the community and the private sector. The local government is also expected to overcome urban problems. Urban local governments, however, are weak in terms of technical, financial and institutional capacity. Capacity development of local authorities should therefore be one of the focus areas of urban management.

7.1.5 Diffused urbanization

The urban hierarchy imbalance in Ethiopia is a cause for concern. Efforts to instill diffused urbanization should be followed. This is characterized by large number of different sizes performing different functions widely distributed throughout the country and linked together. This results in articulated spatial hierarchy. Elements of diffused urbanization includes small town program, stimulating secondary cities and intermediate sized towns, big centers and rural development. Each of the towns could develop in response to specific development context. For example, Industrial towns could develop as towns which could host small, medium and large enterprises, towns across cross-ways and with good infrastructural access could develop into commercial towns while small towns could develop with a view of serving rural regions. Similarly, big towns could develop into metropolitan areas.

7.1.6 Migration policy

Spatial mobility is a desirable phenomenon from the point of view of attaining efficiency in factor allocation particularly, labor allocation. There is thus no need to

stop migration in the country. As is evident there is a high rate of migration in Ethiopia which is dominated by rural-urban migration. In order to curb the undesirable effects of migration, however, it is essential to consider strategies such as those which reduce the pressure to migrate and those which encourage new and more satisfactory patterns of migration. The latter could be attained by providing information for would be migrants about alternative destinations and assisting migrants in settling in destinations.

7.1.7 Strengthening rural-urban linkage

The current rural urban linkages in Ethiopia are less than satisfactory. In order to bring a symbiotic and beneficial linkage, there is a need to forge economic and institutional links between urban centers and the surrounding rural areas. Some of the strategies that could improve rural –urban link include:

- Improving infrastructure (those that link towns and cities to rural areas);
- Small town program to promote infrastructure, access to credit market, access to job training and local marketing skills;
- Expanding education and health services;
- Providing technical assistance for the marketing and commercialization of rural products;
- Improving agriculture to translate into higher income for farmers and increase demand for non-farm goods and services; and
- integration of lagging and remote regions with urbanized and prosperous areas.

7.2 Inducing urbanization

There is a need to induce or speed up urbanization in a manner that is compatible with the economic growth. Ethiopia has to go for more urbanization in order to gain the benefits from urbanization. The alternative is to stay rural which is not capable of solving the socio-economic problems (Bekure, 2002).

There are two ways of inducing urbanization in Ethiopia. The first is to exploit existing urbanizing opportunities in the country's urbanization drive and the second is to pursue an active urban formation strategy.

7.2.1 Exploiting urbanizing opportunities

Some of the policies which provide opportunities for urbanization include the federal structure, the massive infrastructure push, the private sector development and education policy.

The federal structure

The federal structure of the country has resulted in the creation of regional governments and local governments with own mandates and functions. One of the urbanization benefits of a federal structure is, it encourages or creates network of cities as different autonomous units establish their own capitals. The nine regional capitals which have developed in the nine regional governments are growing fast and they provide alternative agglomeration to the city of Addis Ababa. Further, devolution of power has also enabled the designation of woreda capitals as seats of local government. This will also provide opportunities for more urbanized Ethiopia.

Massive infrastructure push

The massive infrastructural development the country is recently witnessing provides good opportunity for more urbanization in Ethiopia. The upgrading and rehabilitation of federal and regional roads, the rural electrification programs, the penetration of telecommunication lines in different parts of the country present an opportunity for more urbanization.

The private sector

The investment policy gives way and legitimacy to the private sector to provide urban infrastructure and services. Theoretically, urban infrastructure is better provided by the private sector as most services and the infrastructure sector are excludable. Thus infrastructure services such as water, solid waste collection and dispersal, road maintenance, fire prevention, tree priming and electricity are likely to be handled by the private sector. In Ethiopia, though the private sector investment in infrastructure is yet to come, private investment in real estate comes next to manufacturing and agriculture. In terms of infrastructure, municipalities should look at themselves no more as service providers but as facilitators of contract for the private sector. The private sector will also participate in urban production sector. This is underscored in the industrial policy which opens up for the private sector to manage most industrial activities.

The education policy

The Ethiopian Government has implemented education sector development programs with a view of expanding elementary, secondary, TVET and higher education. As a result massification of education has been achieved. This is clearly seen in the growth of the total number of schools, teachers, student enrolment (Table 10) and in the number of new universities established in different regions. Educational development improves the skill levels of people, encourages migration and improves the competitiveness of cities. With improved competitiveness, cities can attract more investment that could encourage their growth.

Table 10: Indicators of educational development in primary and secondary schools

	1998	2007	% change
Number of primary schools	10,752	20,660	92.15
Number of secondary schools	352	952	170.45
Number of primary teachers	109237	225319	106.26
Number of secondary teachers	12329	28183	128.59
Gross primary enrolment in elementary school	41.8	91.7	119.37
Gross enrolment in secondary school	11.3	37.3	230.08

Source: Ministry of Education (Education statistics)

7.2.2 Active town formation

While it is necessary to exploit the above opportunities to further push the urban sector, it might as well be important to indulge in active town formation particularly in underdeveloped areas. One lesson will be to push urbanization from the bottom up. This could be achieved by promoting non-agricultural activities such as village enterprises by providing the necessary services and infrastructure. The lesson from China 'leave the land but not the village' could be a good starting point for urbanization from below (Zhang, 2009). At the same time, there is a need to improve local investment climate and foster urban entrepreneurialism in order to make cities and towns compete for international foot loose capital that has the potential of inducing urbanization in the country.

8. Conclusion

Urbanization is an inevitable socio-economic process. Countries change from an agrarian society to an urban and industrialized society. Not only does urbanization represent socio-economic shift but is also helpful to bring about agricultural and rural development even in agrarian society. Equally true is the differential level of urbanization and the attendant differential benefits countries enjoy from urbanization.
While the benefits from urbanization are evident, equally evident are the challenges urbanization pose. These challenges emanate partly from disconnect between levels of urbanization and levels of economic growth. Urbanization brings high density settlement which requires adequate services, infrastructure, employment and housing. Quite often countries at low levels of development do not have the necessary capacity to meet these demands. In addition, the pattern of urbanization and its evolution could result in distorted urban system that poses challenges in the form of inadequacy and unavailability of urban centers and urban services.

With 73 million people, Ethiopia should exploit its existing and future levels of urbanization as force of growth and development. This requires understanding the challenges and the ways forward. This paper has shown that the country has to surmount a number of challenges related to the level and evolution of its urbanization and the functioning of its urban centers. The paper has also argued that there is a need to induce urbanization. In this regard, the country has to seize the urbanizing opportunities that are created and also engage in active city formation in a bottom up manner. The policy implication is that urbanization should be seen as a positive socio-economic change and should receive top priority in the policy sphere. Policy makers should understand the urbanizing phenomena and should support the same in a manner that fosters more urbanization. A policy commitment is needed to stimulate urbanization in the country.

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Annex 1: Number of Urban Centres by Size Category in Different Regions in 1994 and 2007

Regional	Size category in 000								
	<2	2-5	5-10	10-20	20-50	50-100	100-500	500-1000	>1000
Tigray									
1994	37	17	10	4	5	1	-	-	-
2007	2	17	19	9	7	2	1	-	-
Afar									
1994	16	6	4	2	-	-	-	-	-
2007	24	9	9	5	-	-	-	-	-
Amhara									
1994	81	68	36	14	6	2	1	-	-
2007	25	77	50	35	12	4	3	-	-
Oromiya									
1994	155	130	45	25	15	3	1	-	-
2007	49	147	91	46	24	3	3	-	-
Somali									
1994	20	16	21	3	7	-	-	-	-
2007	21	30	18	8	4	1	1	-	-
Gambella									
1994	3	2	-	1	-	-	-	-	-
2007	3	4	4	1	-	-	-	-	-
SNNP									
1994	70	51	10	11	6	1	-	-	-
2007	36	62	47	12	13	4	1	-	-
Benishangul									
1994	7	5	-	1	1	-	-	-	-
2007	5	11	6	-	1	-	-	-	-
Harari									
1994	-	-	-	-	-	1	-	-	-
2007	-	-		-	-	1	-	-	-
Dire Dawa									
1994	-	-	1	-	-	-	1	-	-
2007	-	-	-	-	-	-	1	-	-
Addis Ababa									
1994	-	-	-	-	-	-	-	-	1
2007	-	-	-	-	-	-	-	-	1

Annex 2: Urban Population by Size Category in Different Regions in 1994 and 2007 (000)

Regions	Size category in 000								
	<2	2-5	5-10	10-20	20-50	50-100	100-500	500-1000	>1000
Tigray									
1994	37.3	58.5	67.7	67.5	140.5	97.0	-	-	-
2007	4.0	60.2	139.3	119.3	240.9	149.7	123.8	-	-
Afar									
1994	14.3	18.3	27.2	26.0	-	-	-	-	-
2007	28.7	27.0	59.4	70.0	-	-	-	-	-
Amhara									
1994	96.5	202.1	268.6	197.2	195.2	193.4	112.2	-	-
2007	35.1	264.8	342.6	476.3	303.0	242.0	482.6	-	-
Oromiya									
1994	182.6	438.2	307.3	330.4	369.5	214.3	127.8		
2007	71.8	502.7	618.3	636.4	797.7	242.4	441.6	--	--
Somali									
1994	25.4	52.1	138.0	44.0	167.5	65.8	-	-	-
2007	27.5	113.1	130.6	97.0	128.9	62.5	125.9	-	-
Gambella									
1994	3.9	5.3	-	18.3	-	-	-	-	-
2007	2.3	11.3	25.2	39.0	-	-	-	-	-
SNNP									
1994	84.7	157.6	67.6	139.3	186.4	69.2	-	-	-
2007	47.3	203.1	313.5	161.0	333.4	280.1	157.1	-	-
Benishangul									
1994	8.3	16.0	-	11.7	-	-	-	-	-
2007	5.0	34.0	42.8	24.2	-	-	-	-	-
Harari									
1994	-	-	-	-	-	76.4	-	-	-
2000	-	-	-	-		99.4	-	-	-
Dire Dawa									
1994	-	-	8.3	-	-	-	164.8	-	-
2007	-	-	-	-	-	-	341.8	-	-
Addis Ababa									
1994	-	-	-	-	-	-	-	-	2084.6
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RURAL AND URBAN POLICIES AFFECTING SPATIAL AND SECTORAL LINKAGES

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1. Introduction

The Ethiopian economy is dominated by a rain-fed agriculture which is overwhelmingly characterised by smallholder subsistence agriculture and structural constraints consisting of small and fragmented land holding, primitive farm implements, poor farm management, fragile soil, environmental degradation, fragile market and high population pressure. Actually, the overall economy is also plagued by structural problems such as low import capacity, poor infrastructure, and weak human development, limited manufacturing base and limited backward and forward linkage of the non-agricultural sector with agriculture.

The rural-urban demographic structure also witnessed the disparity in the economic structure of the country. For example, the urbanisation rate is one of the lowest even by Sub-Sahara Africa standard (only 16.2%). Rural population accounts for 87.9% of the labour force in the country where agriculture contributes 51.1% value added at current basic prices and 46.3% at constant prices in 2006/07. The economy has very limited manufacturing base which is consistently below 6% of GDP in the last 12 years.[2] These stylised facts of the economy indicate that limited rural-urban linkage (RUL), weak rural transformation, poor rural-urban migration, rural-urban disparities in economic investments, low provisions for social services and development of basic infrastructures such as roads, electricity, telecommunication and water supply are the defining characteristics of the country.

The above figures and fact statements are compelling in making RUL, rural-urban migration and rural transformation priority development agenda and taking these as the basis for macro policy development. Development theory, particularly Post Keynesian, has recognized the central role of inter-sectoral linkage between agriculture and non agriculture to bring about agricultural growth and agrarian

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[2] EEA/EEPRI, Statistical Database, 2009.

transformation. Thus, there exists an economic, social and environmental interdependence between urban and rural areas. The solutions to the problems of subsistence agriculture, rural poverty and rural transformation do not lie only in policies that promote self sufficiency of rural communities. There should be changes in the structure of output, labour force, employment and demographic characteristics. This can only be possible by effectively linking rural and urban areas and by allowing mobility of people (with changing jobs and occupation). Particularly in the Ethiopia context there is a need to consider the movement of people from rural areas to urban areas so as to link the rural and the urban areas. This calls for a balanced and mutually supportive policy intervention in both areas.

The recognition of the role and importance of RUL, rural transformation and rural-urban migration in Ethiopia is not still embedded in a sound macroeconomic framework and a supportive policy environment. While rural-urban migration is natural and part of the socioeconomic dynamics and attribute of development process, the fact that various policies are hampering instead of facilitating this dynamic process is not commendable. In addition, while the absence of strong RUL and limited rural transformation have been very apparent, there are disturbingly no strong effort in understanding and documenting what is going on in the country. Of course studies of this nature are, of necessity, limited due to several factors of which availability and suitability of data and literatures are the most constraining. Research works and data did not lend themselves to the level required for a thorough analysis. Our study is also constrained by limited literature.

The main objective of this paper is to examine the impact of policies on RUL, rural transformation and rural-urban migration in Ethiopia. The paper in particular review sectoral policies that have impact on RUL, rural transformation and rural-urban migration, review how rural and urban land policies, legislations and regulations (land rights in rural areas, loss of land rights in the case of out-migration, and access to land in urban areas for migrants) promote or hinder RUL, rural transformation and rural-urban migration, and explore the way forward for the RULs, rural transformation and rural-urban migration.

The main approach employed for this study is document analysis. We used a content analysis method to see as to what extent the two successive poverty reduction strategy programs gave a policy space for the issue under study. We also reviewed theoretical works to understand RUL and the conceptual link between land policy and rural-urban migration and rural transformation. Similarly empirical works of other countries and Ethiopia were reviewed to see where Ethiopia stands. We also critically reviewed sectoral policy documents, proclamations and regulations in relation to land

in order to analyze and understand their implications on rural-urban migration and rural transformation.

The rest of the paper has four sections. Section 2 discusses concepts of different forms of RUL and their role in rural transformation. Section 3 reviews RUL and migration in Ethiopia concentrating on the two major aspects of RUL that are economic linkages particularly flow of goods (along road infrastructure) and rural-urban migration. Section 4 reviews macroeconomic and sectoral policies that have impact on the same subject. Section 5 summarises key aspects of policies and indicates the way forward for the RULs, rural transformation and rural-urban migration in Ethiopia.

2. Rural-urban Linkages: Conceptual Issues

2.1 Rural-urban linkage and its role in rural transformation

2.1.1 Forms of rural-urban linkage[3]

As mentioned in the preceding section, defining rural and urban areas are becoming very difficult as the two are increasingly sharing borders and functions. This problem has called for a systematic approach that enables a proper conceptualisation of the rural-urban relationships. As a result, the United Nation Centre for Human Settlements and the EU Committee of Spatial Development adopted the concept of RULs to emphasise the visible and invisible interdependence between the two.[4]

RULs refer to economic, social and political links that are manifested in different forms. There are various forms that RUL or the interdependence between urban and rural areas manifests itself. These include the following:[5]

[3] RUL has multiple dimensions in addition to what is mentioned here. For instance Rondinelli and Ruddle (1976) classified RULs as physical linkages, social delivery linkages and political and administrative linkages. In terms of physical linkage, transport networks including farm-to-market roads reduce the cost of communication and make flows of people, capital, goods, services and ideas possible between urban and rural centres. Service delivery linkage is one of the key forms of linkages. Rural people derive various public services such as health, education, postal services from nearby urban centres. Political and administrative linkages reflected in formal government structural relationships, flows of public budget resources, administrative authority, supervision and approval of expenditure integrate spatial systems at different levels.

[4] See Davoudi (2001).

[5] See Sheng (N.D.:4) and Tacoli (2004:2).

i) Flow of goods: Rural areas are the major source of food for urban population, labour for non agricultural activities and raw materials for manufacturing and processing industries which are located largely in urban centres. In situations of rapid urbanisation and industrialisation the food and raw material supply from rural areas to urban areas are very critical to the extent of characterising the industrialisation effort as agriculture constrained. Urban areas are also the source of manufactured and imported goods to rural areas. These goods include industrial goods or which we call incentive goods. The flows of goods linkage between urban centres and rural areas occur as urban centres offer markets for rural products and rural areas serve as markets for goods and services produced in urban areas. Commercialization and diversification occur as linkages are established between resource areas and market centres. This linkage can also be referred as sectoral linkage particularly between agriculture and manufacturing and can also occur in the production function relationship as the two spatial units interact in forward and backward production relationship.[6]

The flow of goods from both directions implies the need for the rural and urban policy (agriculture and industry policy) that focuses on the inter-sectoral demand linkage. What is more, this form of linkage also creates many social linkages in rural areas by providing important meeting places for rural communities in the market centres.

ii) Flow of capital: The flow of capital includes remittances from migrants to relatives and communities, urban based investments in rural areas and credit from urban-based institutions to rural areas. The main problem in this linkage is that much of the capital generated from urban based investment in rural areas 'concentrates in a few prosperous metropolitan areas nationally and internationally'.[7] The policy approach should take this into account in the sense that urban based investments should 'link rural areas to local and regional urban centres, small towns and their immediate hinterlands instead of directly to national and international metropolitan centres'.

iii) Flow of people: Flow of people refers movement of people between rural and urban either commuting on a regular basis for different purposes or migrating temporarily or permanently. The demographic flow or migration is largely one side dominated by people migrating from rural to urban area. This form of migration is a central characteristic of urbanisation in developing countries. In developing countries,

[6] Backward linkages occur when urban centres distribute inputs to agriculture, while forward linkages occur when the agricultural sector provides input to the manufacturing sector in general and to processing of agricultural outputs industries in particular.
[7] For details of this kinds of argument see UNDP, 1998.

migration is one of the adaptive strategies that allow poor rural households to increase their incomes in order to cope with conditions of poverty.

iv) Flow of information: The information flows between rural and urban areas are of various types. The information flows can be about resources from rural to urban areas, about markets and prices for agricultural and rural commodities from urban to rural areas, about employment opportunities for potential migrants, and the like.

In general one can categorise the forms of RULs in to two: migration of people along with the resultant flow of information, ideas, employment, and money/remittance and economic interaction which is flow of goods and investment.

In this context the key interest is to identify the key driving forces behind people migration and economic interactions and facilitating factors for this such as nonfarm economic activity (see Hazell, P, S. Haggblade and T. Reardon (2007). These are critical inputs for urban and rural land and development policy formulations in order to promote mutually supportive rural and urban development in general and rural transformation in particular.

As Tacoli (2004:2 and 4) mentioned some of the driving forces can be categorized as follows:

i) Decreasing incomes from farming because of lack of land and other related inputs pushed people to engage in nonfarm activities that are often located in urban centres;
ii) Successful and commercial farmers need direct access to markets and these markets are usually located in urban centres;
iii) Better access to markets can increase farming incomes and encourage shifts to nonfarm engagement and may also create market in the rural areas for incentive goods;
iv) Population growth and distribution patterns affect the availability of good agricultural land and can contribute to rural residents moving out of farming; and
v) Urbanization leads to land uses change. For instance, the change of agricultural land into residential quarters and industrial zones leads to transformations in the livelihoods of the rural settlers. Their livelihood converts from agriculture to non agriculture.

These driving forces are common in most situations and obvious in rural transformation. Understanding the various forms of linkage are, however, crucial for ensuring economic interdependency between rural areas and urban areas and the facilitating factors for rural transformation.

2.1.2 The role of rural-urban linkage in rural transformation

As discussed in the preceding section, RUL is about economic linkage (flow of goods and investment between the two areas) and population movement linkage (migration of people along with the resultant flow of information, ideas, employment and remittance).

Rural transformation is a process by which small-holder farms and other rural activities shift from subsistence-oriented production system towards rapid growth with enhanced productivity that changes the rural communities' source of income from farm to nonfarm.[8] This process involves a substantial number of rural household who have incomes exceeding the poverty level, marketable surplus, and intensive production system. This process will lead to releasing labour to the urban based economic activities and shift from rural based to urban based economic activities as a main source of income. The process involves rural-urban migration and a greater reliance on input and output delivery systems and increased integration of rural economy with the urban economy.[9]

Successful agrarian transformation from agriculture to non agriculture or from rural based economy to urban based economy will require change in the structure of output, labour force and employment pattern.[10] This is what constitutes the basic stylised facts of theories of sectoral balance or structural transformation.[11] In line with this Getnet (2009:762) [12] argued,

> "Development, both from theoretical and empirical evidence, is conceived as a social transformation (rural migration to towns and cities) and economic structural transformation (from agriculture to non-agriculture). At the early

[8] At the early stage rural/agrarian transformation also includes changes in source of income within rural areas such as expansion of non-farm sector. At the initial stage this is particularly important for two reasons: one is the agricultural sector might be reached at a stage where it can not absorb additional workers and second the urban sector might have limited absorptive capacity.

[9] For the detail account of the discussion on agrarian transformation and related issues See Getnet 2009, UNESCO 2001, Liedholm, C. and Michael T. Weber 1999, Timmer 1998, Staatz 1998.

[10] The rapid agricultural growth and the resultant decline in its share are not contradictory. Agricultural growth is rather the apparent prerequisite for agriculture to decline and for the simultaneous rise in the share of non-agricultural sector. 'The faster agriculture grows, the faster its relative size declines'. See Getnet 2009.

[11] For a detailed account of this see Taylor (1989).

[12] The original source is Clark (1940), Kuznets (1966) and Chenery and Syrquin (1975).

> stages of development, most economies are agrarian dominant. Thus, in the process of structural transformation of these kinds of economy, typically, as income per capita rises, the share of agriculture from output and labour force declines over time while that of non-agriculture increases. Put differently, as income rises, the non-agriculture sector grows as a share of employment, income and expenditure and non-agricultural employment grows faster than the rate at which total labour force grows".

At the early stages of development, the structural transformation inherent in the development process is, therefore, rural transformation which in turn is driven by RUL.[13] RUL is, therefore, central to rural transformation.

Strong RUL in terms of economic (flow of goods and investment) and rural-urban migration are critical for rural transformation. The flow of goods and people between rural and urban is more or less synonymous with inter linkages between agriculture and manufacturing. Urban based economic activities need food, industrial crops, labour, capital and effective demand (market) from rural areas. Agriculture also needs industrial goods (incentive goods) and effective demand (market) from urban areas. One either the urban or the rural could not move forward if the other is slowing down.

RUL that promotes rural transformation depends on various factors such as social and economic infrastructure, policies and institutions. In order to make the rural economy sustainable in providing market for products and services of urban base economy, removing structural and institutional constraints in rural economy is critical. This requires massive investments such as investment in human capital such as health, education, family planning, nutrition; investment in rapid technical change appropriate to smallholder farm households and investment in irrigation and dynamic land reform that bestowed ownership or full security. The same effort should also be put into urban economy. The urban economy should be able to sustainably provide various inputs to the rural economy and market for agricultural and rural based products. Physical infrastructure such as affordable transport service connecting farmers and other rural producers with markets in urban centres contributes in increasing incomes of rural farm households.

[13] As Getnet (2009:2) argued in developing countries like Ethiopia where the nonagricultural sector is small, the number of farmers may grow even fast with the emergence of huge labour surplus in agriculture. The turning point for structural transformation is, thus, when the absolute number of farmers starts to fall. This is a real challenge for smallholder farm dominant economies like Ethiopia.

Food and industrial crop production, manufacturing and other service production will be encouraged with enhanced productivity, if both urban and rural sectors provide effective demand for each other and provide the required inputs and outputs to each other at the required scale. For this to happen, a right policy that promotes the linkage is fundamental. If this is the case, rural households will earn higher incomes and increase their demand for the manufacturing outputs. With this they will be able to accumulate some capital which will lead/encourage the creation of non-farm jobs and employment diversification, especially in small towns close to agricultural production areas. This in turn leads for most rural communities to shift their main economic activity from rural to urban based, eases pressure on land, encourages land consolidation and increase size of farm land and at the same time absorbs surplus rural labour and raises demand for agricultural produce. This will again boosts agricultural productivity and rural incomes which will constitute an effective demand for non agricultural products and be significant incentive for industrial expansion and urbanization.

Investment in urban centres (industrial investment) will certainly push the demand for food. This will result in higher food price if agriculture is plagued by structural and institutional constraints that resulted in low productivity of land and labour. This is the main challenge faced by the agricultural sector which has to move along with urbanisation and industrial expansion and to supply food for the growing number of industrial employees and urban population. As a result, the expected RUL, rural transformation and the overall development process will be constrained by agriculture.[14]

The other thread of RUL that promotes and facilitates rural transformation is the mobility of people. Developed and emerging economies that have eradicated and substantially reduced poverty have given opportunity for people mobility through an effective RUL in the context of rural transformation. At the heart of such transformation towards what Lucas (2004) called 'a society of sustained growth in

[14] Kalecki (1976) treated food supply as a central constraint on aggregate output. Kalecki (1976:48) argued that, with this kind of agrarian economy, the investment drive will create higher demand for food and this pressure on food demand would lead to higher food prices and hence 'cause a fall in real wages and will generate an inflationary price-wage spiral'. He further interpreted 'the problem of financing development' as the adjustment of planned aggregate output to the available supply of food and application of progressive tax to reduce total consumption. He further argued that an increase in industrial investment has to be accompanied by agricultural growth through measures ranging from removing institutional barriers (land reform) to getting rid of technical constraints (ranging from cheap bank credit for peasants to improvements in the method of cultivation, small-scale irrigation and cheap fertiliser).

opportunities', lies rural-urban migration. The importance of mobility of people from rural to urban areas in increasing rural production, effective RUL and rural transformation is also explained by Hayami and Ruttan (1985). Hayami and Ruttan (as quoted by Elleni and Johnston 1999:17-19) argued that in a predominantly agrarian economy where the overwhelming production is accounted by subsistent smallholder farm households, increasing agricultural labour force always compromises the growth in agricultural output. In addition rural-urban migration, as a facilitator of rural transformation, is believed to help reallocate labour from less productive sectors, usually agriculture, to vibrant sectors such as manufacturing industry.

Migration as one of the avenues open to rural households to change jobs and livelihoods is a dynamic adaptive strategy that allows rural households (people either commuting on a regular basis or migrating temporarily or permanently) to tap into opportunities available and to cope with conditions of poverty.

For an economy like Ethiopia, rural-urban migration (absorbing rural people into urban based economy) is one of the major avenues to sustainable development. Getnet (2009:762) in this regard argued that the process of structural transformation in agrarian dominated economy implies that the rate at which non-agricultural employment grows must exceed the rate of growth of agricultural/total labour force. The rapid growth of agricultural labour is mainly the characteristics of agrarian dominant economy and it resulted from high growth of population and limited employment opportunity in urban based economy. The growth of total labour force which in this case is mostly agricultural labour force should be taken as policy instrument in the sense that structural transformation should be accompanied by concerted efforts in focused education, effective family planning and job creation in urban centres. Thus, the key entry point is promoting employment opportunities that encourage rural-urban migration in urban centres as this has a significant impact in reducing the rate at which agricultural/total labour force and population grows. [15]

Migration is basically driven by differences in expected income/opportunities over space. In line with this Harris and Todaro (1970 as quoted by Seid 2009), argued that migration decision is 'determined by rural-urban income differentials net of cost of migration and probability of finding jobs at destinations'. Rural-urban migration is thus

[15] There is also a situation where rural-urban migrants return to their relatives in times of high inflation which made it difficult to live in urban areas or other problems that make life in urban areas very difficult. For instance, millions of low-wage workers in cities who were suddenly without employment tried to return to the countryside to live with relatives and friends during the Asian economic crisis beginning in 1997 (see Douglass, 2000).

largely driven by structural related issues and policies which create opportunities in urban centres. Understanding factors that drive difference in income/opportunities in rural and urban are critical for formulating/revising rural and urban related policies.

Despite the above arguments, policy makers in developing countries are always sceptical in promoting rural-urban migration. This is mainly because the tendency to view rural-urban migration as a failure of rural development or an escape for rural poverty still constitutes popular views of RULs (UNCHS, 1995). Indeed, desperate people who lack economic opportunities in rural areas and facing poverty migrate to urban areas. This is, however, largely due to policy failures.

What logically follows from these is that rural transformation cannot be achieved by good rural development policy alone. It also needs a comprehensive urban development policy and industrial policy including land policy. These policies should support rural development in providing critical inputs for the sector and in creating effective demand for outputs of the sector and employment for rural migrants. These consequently shape RUL in the context of promoting mutually supportive rural and urban development in general and rural transformation in particular.

1. Rural-urban migration in Ethiopia: An overview

Migration is one form of RUL usually dominated by people moving from rural to urban areas. Thus, migration is a central characteristic of urbanisation in developing countries and one of the adaptive strategies that allows poor rural households to increase their incomes in order to cope with conditions of poverty. As discussed in Section 4, migration in the Ethiopian policy document is, however, treated marginally if not neglected. In the same fashion research works in Ethiopia on the subject are very limited. Migration has, however, long history in Ethiopia. Gete et al (2008:16) in this regard stated,

> In Ethiopia, from earlier periods seasonal out- migration of labour to the south-west for the coffee picking peak period (Wood, 1983), to the Metehara state farms of sugar cane plantation and cotton picking (Beyene, 1985), to rural areas for different off-farm activities and urban areas for temporary jobs (Worku, 2006; Bjeren, 1983), ... have been experienced by many people.

Seasonal out-migration from rural to rural is common in the country as the agricultural activity is seasonal in character. This is because peak and slack periods of harvesting and cultivation vary across time and locations. According to the recent CSA 2005 National Labour Force Survey (CSA, 2006), 18% of the population are migrants.

Although the scale of migration differs, people migrate from rural to rural, rural to urban, urban to urban and urban to rural. Rural to rural migration is a single most important category of migration followed by migration from rural to urban (see Table 1).

Table 1: Different forms of migration

Forms of migration	1984 Census	1994 Census	1999 Labour force survey
Rural-rural	55.8	48.9	37.6
Rural-urban	28.7	24.8	23.5
Urban-rural	2.0	7.3	15.7
Urban-urban	13.5	18.9	23.2
Total	100	100	100

Source: CSA, 1999:31

The change in the proportion of rural out migrants and a considerable shift in the forms of migration are two important features that can be observed from the above table. The proportion of rural out migrants from total migrants is declining. In addition, the level of rural-urban migration in the country is also very low. The fact that only 16.2% of the 73.92 million people of the country are living in urban centres in the year 2007 indicates that there is limited and low level rural-urban migration. For instance, the level of urbanisation in the three most populous regional states (Amhara, Oromiya and SNNP) which account for 80.4% of the total population of the country is only 11.8% which further reveals low rural-urban migration.[16]

The proportion of urban out migrants, on the other hand, has increased considerably. This is largely due the impact of various policies, notably the land policy, that directly or indirectly discourage rural out migrants (see Section 4.2.2). The limited growth of the urban based economic activities to offer employment opportunities for rural-urban migrants is also another possible explanation for the shift in forms of migration. The limited growth of industry might narrow earning differential between the urban and rural areas which is one of the major driving forces of rural-urban migration. As rural-urban migration is a characteristic of structural transformation and sustainable development, the current declining share of rural-urban migration in all forms of migrations should be a source of concern. The shift in the forms of migration, i.e., from rural out migrants to urban out migrants needs further deliberations. Whether this trend is normal, healthy and common in an economy and composition of people like Ethiopia which strive for development demands further research by drawing experiences of other developed and emerging countries

[16] All figures are based on the 2007 population census.

Many studies have ascertained that the main reason for rural-urban migration is economic. Landlessness, shortage of land, lack of off-farm activity and lower agricultural productivity are the main reasons that pushed people to migrate from the area they used to live (Gete et al, 2008, Girma et al, 2008, Haan et al, 2000). Recent studies revealed that rural people migrate to urban areas in search of income generating activities such as jobs, trading and the like (Seid, 2009, Girma et al, 2008, Gete et al, 2008, Abdurehman et al, 2009). Abdurehman et al (2009) in his study on rural migrants to Jijiga town found out that among their sample migrants 60.7% was economic migrants[17] seeking for employment in the urban centres. In the same fashion, Girma et al (2008:31) based on survey of 500 households in Addis Ababa[18] and 96 households from Gurage zone,[19] found out that income generating activities in urban areas are the main target of rural-urban migrants. In the context where 83.8% of the population live in the rural areas, small size of land holding and landlessness are the main causes of rural out migration (Girma et al, 2008 and Gete et al, 2008).

In addition, information about the potential destination decreases the cost of migration and hence positively related with rural-urban migration. Information about the success of previous migrants was one of the major pull factors in Addis Ababa. In line with this Girma et al (2008:31) states, "Migrants from northern part of Ethiopia emphasized that the success of earlier migrants in saving money and establishing well back in the rural areas are the main reason behind their own migration to Addis Ababa. In the same fashion Abdurehman et al, (2009) found out that access to information is one of the determinant factors for rural-urban migration.

The other interesting point about the rural-urban migration experience of Ethiopia is that the economic status of migrants and its role in influencing migration. Abdurehman et al (2009) found out that the size of livestock a farmer has is positively related with rural-urban migration. They argued that the higher income associated with large number of livestock ownership gave the opportunities to engage in other activities such as trading in urban areas. Thus, rural people who happen to have more income tend to migrate to urban areas for better income generating activities. On the other hand, de Haan et al (2000) found out the opposite that is poor rural people tend to migrate more often than relatively rich rural people. The experience of other countries showed that relatively rich rural people tend to migrate more often

[17] Economic migrants are those who expected a wage differential between their rural area and the urban destination and intended to improve their earning.

[18] Households are randomly selected from Akaki Kality, Bole, Gulele, Kolfe-Keranyo, and Nifas Silk-Lafto sub cities. These sub-cities are purposively selected for being residences of migrants to the city and for being sections where urban agriculture is practiced.

[19] Gurage zone was included in the study for being the most famous source area of migrants.

than poor ones (de Haan et al, 2000). de Haan et al finding is not surprising as we have observed the extent the rural land policy discourage rural-urban migration in Section 4.2.2. Given this context, rural migrants can be those who have inadequate farm land, have no land at all and have no opportunities to be engaged in off-farm activity.[20]

The role of education in facilitating rural-urban migration in Ethiopia was also acknowledged by different researchers. Fan and Stark (2008) and Lucas (2004) (as quoted by Seid, 2009) argued that education, besides its effect on migration through its impact on earnings differential, also has the power to break the cultural inertia that keeps individuals in their original rural place of residence by changing their preference. Based on the 1994 population census, Seid (2009) estimated that among individuals with primary, junior secondary, senior secondary and tertiary levels of education, the migration rates were 2.1%, 3.5 %, 6.0 %, and 16.2 %, respectively. The higher the education level is the greater incentive to migrate to urban areas. In his 250 sample households and 1000 respondents,[21] Seid found out that education is the major force that influences rural-urban migration. He found that 95.4% of the total migrants are literate. He further noted that 'the strong association between education and migration becomes even clearer when the migration rate among the groups by education level is considered. The migration rate for illiterate is only 0.6%. On the other hand, this rate for educated individuals progressively increases from 4.1% for those with primary level of education to 94.4% for those who have tertiary level of education. This figure excludes individuals who moved to urban areas exclusively for education purpose and are currently enrolled'.

Thus factors related to economic, education level and availability of information for migrants are decisive in defining the pattern of rural urban migration.

The lack of transformation from agriculture to industry is also mirrored by the low urbanization rate. The overwhelming majority of the people are still in the rural areas with little migration to urban centres. The urbanization rate in 1961 was about 11%. This rate has increased by a mere 6% over five decades, while the total population has well over tripled and the share of agriculture from GDP has declined from 75.8% in 1961 to 42.6% in 2008/09, a decline by 33.2% in the last five decades. This figure

[20] Landlessness, shortage of land, lack of off-farm activity and lower agricultural productivity are also mentioned as the main driving forces of rural-urban migration (Gete et al, 2008, Girma et al, 2008, Haan et al, 2000).

[21] These six villages are Alasha, Buhoro, Menentela, Kulie, Girana, and Habru-Ligo in Amhara regional state, Ethiopia systematically selected based on their distances from major towns.

clearly witnessed that the decline in the share of agriculture was not accompanied by rural urban migration.

The decline in the share of output was not accompanied by the decline in its share in employment/labor force. In fact pattern of migration in Ethiopia is dominated by rural-rural and not rural-urban migration (see Getnet, 2010).

2. Policy challenges to rural-urban migration and rural transformation in Ethiopia

This section reviews macroeconomic and sectoral policies that have impact on RUL, rural-urban migration and rural transformation. In relation to this, the recently adopted poverty reduction strategies, rural and agricultural development policy and urban development policy will be examined.

The main focus of this section is, however, reviewing how rural and urban land tenure regimes promote or hinder RUL, rural-urban migration and rural transformation. Specifically, the section focuses on land rights in rural areas, loss of land rights in rural areas (in the case of livelihood diversification and out-migration), effect of rural land policies on migration from rural to urban areas, and access to land in urban areas for rural-urban migrants.

4.1 Macro-economic and sectoral development policy framework of rural-urban linkage, migration and rural transformation

4.1.1 Overview of macro-economic policy frameworks

The development strategy of the two regimes - the Imperial and Military - was a kind of Import Substitution Industrialisation (ISI) that accords primacy to industry to the neglect of agriculture and particularly peasant agriculture.[22] Ironically, primacy to industry was given in a context where the economy had to depend on agriculture for its capital accumulation, food supply, raw material, foreign exchange generation, and market. Pursuing poor non-agricultural sources of financing and subsistence agriculture, both regimes entered into an ISI development strategy assuming that agriculture would play its own role. The consequence of this was agrarian failure to supply industrial crops, wagegoods, foreign exchange, and savings constitute agricultural constraints on the industrialisation-led growth model. The overall growth process of the economy was thus constrained by the poor attention given to agriculture.

[22] For the detail account of conceptual discussion and Ethiopia's experience, see Getnet (2002 and 2006).

The current regime has taken a radical shift from a policy of "industry first" to a policy of "agriculture first" with particular focus on peasant agriculture known as Agricultural Development Led Industrialisation (ADLI). ADLI is the guiding framework for the two successive Ethiopia's macro policy framework for growth and development: Sustainable Development and Poverty Reduction Program (SDPRP) which covered the past three years - 2002/03-2004/05 and Plan for Accelerated and Sustained Development to End Poverty (PASDEP) for 2005/06-2009/10.

As mentioned above, ADLI considers the agricultural sector as the leading economic sector and the development of the other economic sectors hinges upon the achievements in the agricultural sector. Put differently, ADLI assumes agriculture's leading role in the social and structural transformation of the economy towards urbanisation and industrialization. In a way, it is a farewell to the old style of consistent neglect and discrimination of agriculture in general and peasant agriculture in particular from the mainstream development process. Despite appreciating its focus on agriculture, critics have rightly indicated that the strategy has not given adequate attention to the non agricultural sector and urban areas (urban development policy was issued in 2005), that it lacks to be definite in terms of time (the need to shift to non agriculture) and that it has not given enough attention to markets and to the demand side of production.[23] In short, the strategy's potential to fully form a basis for RULs, rural-urban migration and rural transformation has been found to be rather limited.

PASDEP has also continued to pursue on the ADLI strategy.[24] The PASDEP document reiterates the need to strengthen RULs with the purpose of reducing the negative impact of rural-urban migration, maximizing growth and its impact on poverty reduction and taking full advantage of the synergies through market integration, facilitating mobility of labour, and access to income earning opportunities between towns and surrounding rural areas. The document further recognizes the role of improved rural access roads, improving telecommunication access, expansion of general education and technical-vocational training, development of small-scale credit markets, and rural electrification as key instrument to facilitate RUL.[25] RUL is also considered as one of the pillars of the urban development strategy where development of small towns was taken as a major entry point.[26]

[23] EEA, 2005.
[24] See MoFED, 2006:46.
[25] See MoFED, 2006:41, 49, 50 and 162.
[26] See MoFED, 2006:162-3.

With regard to rural transformation, the SDPRP document recognised the role of non agricultural sector in the rural transformation in the sense that agricultural and rural development will not be rapid and sustainable unless complementing and simultaneous development initiatives are taken in non-agriculture sectors such as education, health, water supply, road and transport services and small and medium industries development. The PASDEP document is, however, weak when it comes to factoring rural transformation as a development agenda. It was just stated once in relation to the power that electricity is an essential ingredient of the rural transformation agenda to provide the basis for businesses and production in small to medium sized towns, and as an input into agriculture, for irrigation pumping, commercial agricultural production and processing.[27]

Addressing RUL, rural-urban migration and rural transformation directly or indirectly in the macro policy framework, however, has been very limited. This is mainly reflected in the issue-focused SDPRP and PASDEP analysis. Our brief content analysis[28] revealed that the phrase **rural urban linkage** or **interaction** has never been mentioned even in one instance in a 222 pages of the SDPRP document. Even though the word **rural urban** is mentioned in 6 instances (4 of them just in paragraph) it is not done in the context of rural urban linkage. Of the word **urban rural** that is mentioned in 2 instances is only one of them is linked with rural urban linkage.

PASDEP document, the second generation PRSP in Ethiopia, provides a commendable hope. It did not, however, factor RUL as one entity in its own right. Again, our brief content analysis revealed that the word rural urban linkage was mentioned only in 3 instances in a-277-page document. The word rural-urban was also mentioned in 5 instances in the same document of which 4 of them were in the context of migration. The word urban rural was mentioned 3 times where 2 of them are linked with rural urban linkages.

As observed, the policy space for RUL is very limited. Possible explanations could be: i) In almost in all the cases, the development debate and policies focus are on agriculture and industry. Traditionally there is a kind of notion that agriculture represents rural and industry denotes urban. Thus, the term rural and urban are simply subsumed in agriculture and industry respectively. Rural issues, however, are not solely confined to agriculture; they embrace a number of activities outside agriculture proper. The same is true for urban. ii) Secondly, the usual development debate is about the role of agriculture versus industry (industry first or agriculture first)

[27] See Mofed, 2006:137.

[28] In our content analysis we did not consider phrases in table of contents, chapter titles, tables and figures.

as the basis for a macro policy framework and development strategy. The importance of inter-sectoral demand linkage is usually left aside or treated with less attention. This is one of the critics against ADLI.

As discussed in Section 2, there are several arguments about the critical role of RUL in the fight against poverty in developing countries. In a macro policy framework and development strategy, RUL must therefore be seen as a virtuous circle in the context of inter demand linkage where access to urban markets and services for non-farm production stimulates agricultural productivity and rural incomes, which in turn generate demand and labour supply for more goods and services.

The macro policy was also thin in terms of addressing the issue of rural-urban migration. Our brief content analysis of the SDPRP document revealed that the word **migration** is mentioned only in 5 instances (4 of them just in one paragraph) and in the rural-urban context the term is discussed only in one instance. In the PASDEP document, migration is mentioned in five instances where four of them are in the rural-urban context. In the policy document, migration is simply mentioned as a periphery. Given the agrarian dominant nature of the economy and growing population pressure on land, migration is one of the most durable avenues for livelihood diversification and rural transformation.[29]

As mentioned in SDPRP and PASDEP, the policy interest towards rural-urban migration is dictated by natural resource degradation, ethnic conflicts and economic instability (MoFED, 2002:56), urban population growth and associated problems (MoFED, 2002:125 and MoFED 2006:40,161,167) and spread of HIV/AIDS (MoFED 2006:120). There is an urgent need for policy makers to understand that at the initial stage of development in an economy like Ethiopia, the agricultural transformation (and for that matter the structural transformation) inherent in the development process is rural-urban migration. In this context there is a need for policy makers to shift from perceiving rural-urban migration as a threat to the country and economy to take migration as a means of livelihood diversification and opportunity for economic growth.

The macro policy space for considering rural transformation as a development agenda was also very limited. In a 222 page SDPRP document, the phrase **rural transformation** is mentioned only in 2 instances in the context of rural and non rural development. The policy consideration in the 277 pages of PASDEP document is

[29] For detail account of migration as a major component of livelihood strategy, see Tacoli (2004) and Gete et al 2009.

even worse. Rural transformation is mentioned only in 2 instances; while one is related to power, the other linked with regional consultation where participants raised the importance of expansion of power supply to meet the needs of the rural transformation. Even though, rural transformation is the processes by which people living in rural areas make a shift from subsistence production to surplus production integrated with market and other urban services and involve multiple occupations ranging from farming to services to processing and manufacturing, from the content analysis, it is obvious that the policy documents have failed to give it adequate space. Lack of proper space in the macro policy framework has also implication on sectoral policies which are discussed in the subsequent sections.

4.1.2 Overview of rural/agricultural development policies

In reviewing Ethiopia's development strategy and agricultural policies of the previous two regimes, Getnet has identified the following problem implicit in the strategy and policy.

> From the very beginning of the planning experience of Ethiopia, in the last two regimes two contradictory processes were set in motion, in parallel. Firstly, agriculture as a sector was neglected, and later, when agriculture became a priority area for policy concern, peasant agriculture was alienated. When this neglect manifested itself in an industry-agriculture imbalance, both governments went into short-run surplus generation schemes with an agricultural investment strategy pivoted on enclaves of large-scale commercial farms, during the Imperial regime, and state farms during Socialist rule which through time compromised total agricultural growth. The prevailing policy attitudes of the time may be summed up under the slogans ‘no solution to the peasant problem’ during the Imperial period and ‘peasant agriculture cannot be a viable undertaking’ during the Socialist time. (Getnet 2006:20).

The RUL in those periods can be explained in such a way that both the strategy and policy resulted in an agrarian malaise that constrained the growth of non agricultural sector.

The current government, soon after the downfall of the socialist regime, has embarked on ADLI as economy wide strategy and agriculture led rural development as a sector strategy. Several policies and programmes have been put in place to improve the productivity and hence income earning potentials of farmers in the rural areas. Such policies include the Rural Development Policies and Strategies (RDPS), Food Security Strategy, Food Security Programme, Productive Safety Net Program, Participatory Demonstration and Training Extension System (PADETES), Sasakawa Global 2000, National Extension Intervention Program (NEIP) and the like.

The main focus of the RDPS is smallholders. It envisages that productivity of smallholder agriculture will be improved through mutually reinforcing ways of achieving enhanced productivity levels which include combining resources of the farmer, i.e., land, labour and capital in a better way. That is achieved with a package program through: distribution of improved seeds, fertilizers, improved farm implements and pesticide to farmers; provision of improved extension services; construction of small scale irrigation scheme; minimization of post-harvest losses; development of livestock resources through improved feed base and veterinary services, better use of improved breed and livestock products. Furthermore, RDPS intends to cover proper use of land, expanding rural infrastructure (health, education, access to safe water, and rural roads), rural financial system accessible by smallholders and developing and strengthening rural institutions. The food security program and the extension program known as PADETES were introduced in order to increase food production via modern inputs, by investing in rural infrastructure and technology transfer. Critics have indicated that while RDPS tries to address the supply side problems, it has paid little attention to the demand side, institutional issues and the interaction of rural sector with urban sector (Gete et al 2009 and Seid 2009). In other words, RDPS and other policies are critiqued for treating rural and agricultural development independent of other sectors. In fact, so far, there has been no conscious attempt to foster linkage between the rural and urban areas through the instrumentality of policy.

The institutional arrangement for the distribution of agricultural inputs and credit, one of the critical factors to increase agricultural production and hence rural transformation, has some problems. While retail price of fertiliser is liberalised, the institutional arrangement for delivery is highly controlled by the regional governments and affiliated enterprises. Credit for fertiliser and delivery of fertiliser are usually dealt within one transaction (Dercon 1999). Regardless of the size of the harvest (even where there is crop failure) the credit has to be paid and there is no insurance mechanism and even provision for postponement.[30] Local government uses every force at its disposal to make sure that the loan is settled immediately after the harvest, including by sale of assets (see Mulat et al., 1998).

In a recent study on seasonal out-migration of rural labour from Amhara region, Gete et al (1998:30-33) has found out that one of the underlying reasons of seasonal rural to rural migration is indebtedness, particularly fertiliser debt. They noted, "During the FGD carried out at destinations, participants mentioned that unless they pay back

[30] A source interviewed in Keeley and Scoones (1998) reported that ‘at the moment SG-2000 farmers are put in prison for being unable to repay credit when the rains fail’ [in parts of southern region], (Dercon 1999:52, footnote 17).

their fertilizer debt within the specified time schedule, they will end up in jail or their property will be taken over. They even borrow money from the local moneylenders to meet the advance payment for fertilizer debt, for consumption and to cover their transport expense" (Gete et al, 2008:32).

The input and associated credit supply system seems more often peasant indebtedness than improved livelihoods. Coupled with the devaluation and removal of subsidy, this has in fact exposed smallholders to unfavourable relative price movement, high rise in price of fertiliser relative to crops' prices, and increased the risk involved in using fertiliser.

4.1.3 Overview of urban development policies

As mentioned in the beginning of this section, the current government adopted ADLI as a country's development strategy and accorded primacy to agriculture. Given the Ethiopian context, the focus on agriculture is welcomed. That should not, however, be taken at the expense of the industry or the urban sector. The critic directed against ADLI was it has neglected the urban sector which was also acknowledged by the government in its National Urban Development Policy. The urban development component of the SDPRP and what has been done in practice can reflect this. The main strategic actions to enhance urban development and management during the SDPRP period were urban governance, infrastructures, housing, land management, employment opportunities and urban environment. There was no major investment program in urban areas except in Addis Ababa. (see MoFED 2002:125-7). RUL and rural-urban migrants were completely neglected

Three years later after SDPRP was introduced, the Government issued National Urban Development Policy (NUDP), approved by the Council of Ministers in March 2005. The policy document stated that ADLI is the basis of the NUDP in the sense that rural development is not only the basis but also determines the direction and rate of urban development. This, as per the NUDP, is because rural labour, agricultural production and natural resources are the basis for urban based industrial development (See MoWUD, 2006:9-11).

The core principles of the NUDP are the following (MoWUD, 2006:11-12):

i) Strengthen urban-rural and urban-urban linkages for sustainable development;
ii) Expand the growth opportunities of all urban centres through balanced development of urban centres;
iii) Reduce urban poverty and unemployment;
iv) Participation of the community in different aspects of urban development;

v) Creating strong partnership with the private sector; and
vi) Decentralised urban governance.

The NUDP highlights the need for rapid development in urban centres through expansion of small and micro enterprises, construction of low cost houses, facilitating access to land and supply related infrastructure for private sector investments and urban residents including the poor and expansion of social services (MoWUD, 2006:16-35). The NUDP clearly states the role of urban centres as a market centre, service centre and industry centre is critical for rapid and sustainable rural development (MoWUD, 2006:13-14). The most important aspect of the policy in relation to this study is its provision about the irreplaceable role of urban centres for rural development, economic interdependence between rural and urban areas.

Unlike the SDPRP, the PASDEP explicitly embraced a comprehensive urban development agenda with the objective of achieving the goals of the NUDP. At the same time, it recognizes that the scale of the needs means that subsidies are not feasible, and that urban development needs to take place on a financially sustainable basis.

The urban development strategy under PASDEP has four pillars:[31]

i) Support for MSEs and job creation: reducing urban unemployment down to less than 20% through developing vocational and technical training programs, community-based and labour-intensive urban works program, expansion of micro-finance institutions, providing market support and ensuring the availability of serviced land for all sizes of enterprises.
ii) Integrated housing development: reducing slums in Ethiopia's main cities by 50% through developing a national Integrated Housing Development Program, creating a new instrument for revolving finance, facilitating access to land for the private sector and developing low-cost housing technologies.
iii) Improved access to land infrastructure and services: ensuring access to serviced land and urban infrastructure and services through designing urban infrastructure program and development of 5-Year Municipal Infrastructure Investment Plans (to be funded through a combination of the Capacity Building for Decentralized Service Delivery project, Local Investment Grants, and the Urban Development Fund).
iv) Promoting urban-rural and urban-urban linkages.

[31] See MoFED (2006:162-64).

The PASDEP recognises RUL as one of the pillars of the urban development strategy of the country. Development of small towns was considered as an instrument. The target includes developing 600 small towns (towns with less than 20,000 people) between 2005/06 and 2009/10.

Cutting across the four pillars is an on-going program of strengthening urban governance. The three parts of the urban governance agenda under PASDEP include strengthening the policy, legal, regulatory, and institutional framework; capacity building for urban, regional, and federal authorities and performance monitoring, evaluation, and reporting system.[32]

Immediately after the issuance of the NUDP, the federal government established the MoWUD in October 2005 in order to bring about a stronger focus to urban development.[33] Following its establishment, the MoWUD developed Urban Development Package (UDP)[34] and Urban Good Governance Package (UGGP)[35] to facilitate the implementation of NUDP. While the UDP outlines the investments that the government intends to make in urban areas for the PASDEP period, UGGP outlines the institutional development, systems reforms and capacity building measures to promote good urban governance and facilitate rapid and sustained urban development.[36]

Although the NUDP and UDP recognise the role of urban centre and RUL in the overall development, the premise that urban development is to be determined by

[32] For details see MoFED (2006:164-65).

[33] Previously the urban issue was the responsibility the Ministry of Federal Affairs.

[34] The UDP has five pillars: a micro and small enterprise development program; an integrated housing development program; a youth development program; provision of land, infrastructure, services and facilities and support for rural-urban and urban-urban linkages. The objectives of UDP are to reduce unemployment and poverty through the creation of employment for 1.5 million urban residents in 825 urban centres; improve the capacity of the construction industry through the creation of 10,000 small enterprises; alleviate the existing housing problems through the construction of 400,000 houses in 72 urban centres; promote urban areas as engines of economic growth; and improve urban social and economic infrastructure through the provision of close to 14,000 hectares of serviced land for housing, MSE development, youth development, and other development.

[35] The UGGP has seven subprograms: land development and administration systems improvement; public participation; urban planning improvement; urban infrastructure and service improvement; organization and human resource management reform; urban finance and financial management improvement; and justice reform.

[36] Technical assistance provided from 2003-2005/6, particularly under the Bank-financed CBDSD project, has formed the basis of the UGGP.

agricultural development is dictating the whole NUDP and UDP and its implementation. This premise also applies to industrial policy, as one of the core principles of the industrial policy and strategy is ADLI. It is perhaps due to this that the policy lacks any clear provision in linking the rural areas with urban areas. For instance, rural-urban migration, one of the core elements of RUL, is not totally addressed.

The thesis that considers urbanisation and industrial development as a by-product of agricultural development needs some reflection. As it is currently configured and implemented, agriculture will not be able to generate the desperately needed rural transformation let alone achieving rapid urbanisation and industrialisation. There are also serious concerns about the possibility of reducing poverty significantly through this strategy. The significance of expanding urbanisation and the industrial sector lies in its capacity to help transform agriculture. The transformation of agricultural output requires the expansion of the manufacturing sector (EEA, 2004:236-237).

The success of ADLI should thus not be measured in terms of smallholder agricultural output growth. Its success instead should be measured in terms of significant reduction in the share of agriculture in total output and employment, reducing labour cultivated land ratio, increasing volume of marketed surplus and significant volume of rural labour migration to be engaged in urban based economic activities. Hence, the rapid agricultural growth must go with the decline in its share and simultaneous increase in manufacturing share.

There are historical evidences where there is much to be learned from experiences of other countries. All the developed countries and emerging ones have witnessed rural transformation and structural transformation of the economy through urbanisation and manufacturing playing a leading role. A case in point is the experience of Japan.[37] The Japan post WWII land reform was initially targeted at abolishing landlordism and hence restricted and regulated agricultural land transfer. This has resulted in small, fragmented and unviable farm plots and created imbalance between rapidly growing manufacturing industries and the supply of smallholder agriculture. As a result, let alone bringing about urbanisation and industrial development, Japanese agriculture could not even go along with the fast growing manufacturing industries.

This situation led Japan to revisit the agricultural and land policy which prevented not only farmland expansion and land consolidation but also retarded agrarian transformation by restricting land transfer. Consequently, the Agricultural Basic Law

[37] For detail account of this discussion see Getnet, 2009.

was enacted in 1961. The main objective of this law was to address the deficit of the 1946 Agricultural Land Adjustment Law Revision Bill and the 1952 Agricultural Land Law which took land reform without macro context. In other words, this was a shift from land reform to agrarian reform. The basic tenet of this law was to transform agriculture by changing its structure through encouraging farm households engaged in non-farm work to leave agriculture. This led to relaxing restrictions on transfer of land and created economically viable farm units through consolidation of land and increase of land size. Unlike PASDEP's and NUDP's prescriptions, the Japanese shift from land reform to agrarian reform (agricultural development for that matter) was dictated by the rapid growth of manufacturing.

In light of this, the ADLI as a framework of NUDP and the industrial policy and strategy needs some thought. Agricultural growth must not be seen as end result it is rather an apparent prerequisite for agriculture to decline and paves the way for simultaneous rise in the share of manufacturing industry.[38] This requires reshaping the current strategy, according primacy to agriculture, in the context of transforming agriculture.

To recap, it can be argued that the macro policy environment is deficient in promoting RUL, rural-urban migration and rural transformation. Migration is one strand of RUL and rural transformation. Transformation from farming to off farming and non farming occupation involves rural-urban and rural-rural migration. Transformation from subsistence production to surplus production integrated with market and other urban services involves RUL. Thus, migration and RUL is a central component of rural transformation. Given the interconnected nature among RUL, rural-urban migration and rural transformation; rural transformation or positive effects of rural-urban migration cannot be achieved by good rural policies alone or by good urban policies alone. RUL (inter-sectoral linkage) and rural-urban migration must be taken as a framework for rural and agricultural development and urban and industrial development policy formulation.

4.2 Challenges of land tenure regime to migration and rural transformation

4.2.1 Rural land acquisition, transfer, redistribution and depriving the holding right

One of the institutional factors that has an important impact on agricultural growth and rural transformation is property rights structure. In Ethiopian context, the most

[38] For the same line of argument, see Getnet and Admit (2001 and Getnet 2009.

important one is the land policy/tenure system. The system of institutions that govern access and use of land and the security on this land ranging from temporary to exclusive through traditional means or registered and protected by a legal title have significant impact on sustainable use of land and, hence, growth and transformation. Land is one of the major resources that the economy relies on and the overwhelming majority of the people still depend on land for their livelihood. On the other hand, landholding size is declining. To make matters worse, the land holding is characterized by unabated land fragmentation and farm households are vulnerable to drought and famine. There is also growing population pressure on land and growing landlessness.

Both the Constitution and Proc. No. 456/2005 promise every citizen who wants to be engaged in agriculture for living whose age is greater than or equal to 18 to be given land free of charge. It is also stated that land cannot be sold or exchanged including the use right.

Farmers will be willing, motivated and more able to use the land sustainably by investing and properly managing the land so as to reduce the long-run land degradation costs and encouraged to diversify their livelihood from farming to non farming only when they have an exclusive security that ensures rights on a continuous basis. This can be secured when they are bestowed ownership title or at least full security for the use right. Several researchers argued that this kind of tenure arrangement enhances investment incentives and hence promote productivity, agricultural growth and rural-urban migration.[39] Ownership rights enable farmers to access formal credit by making land to have collateral values which will enhance their ability to invest on the land and/or engage in non farming activities.

In contrast, government ownership of land and periodic redistribution does not provide tenure security and hence adversely affects the productive capacity of land, livelihood diversification and RUL. Furthermore, it is an obstacle to consolidate fragmented farm plots and increase size of holdings. Output, particularly in the context of Ethiopia, increases with farm size. As farm land consolidates and increases in size, the number of working hours spent per unit area significantly decreases and overall cost tends to drop. As rightly argued by Solomon and Reinfried (2003:3) that failure of land in Ethiopia "to reduce poverty, bring about structural transformation to the hitherto unrewarding smallholder based agrarian economy" can

[39] See Platteau 1992, Bromley 1989, Feder et al, 1988, Falloux 1987 and Firmin-Sellers 1996.

be attributed to the 'relevance and appropriateness of the prevailing land policy regime.[40]

The legal framework for rural land acquisition, transfer, redistribution, depriving the holding right, administration and security in Ethiopia is provided by the 1995 Constitution and Proclamation No. 456/2005. The subsequent regional proclamations, regulations and directives are part of the legal framework that provides operation details. All the legal frameworks clearly state that the right to ownership of land is vested in the state and the public. Hence, it is impossible to transfer the land holding to other party on sale or in exchange by another property. Peasant farmers, pastoralists and semi pastoralists who are engaged in agriculture or wish to engage in agriculture will have only use right. It is also stated that land administration is the responsibility of regional governments. Thus, there is no an independent body to observe land matters at federal level.

It is worth noting that our purpose here is not to review rural land policies in the country. Instead, we focus on some of the major issues that have relevance to the rural-urban interaction, rural-urban migration and rural transformation.

i) Acquisition of rural land

Rural land will be given to peasants, pastoralists and semi pastoralists who are engaged or wish to engage in agriculture free of charge (FDRE, Proc. No. 456/2005, Art.5 sub Art. 1.a) with no time limit[41] and to investors through lease/rent for a specific period of time. Based on the proclamation, rural land can be acquired either by distribution (distribution of government land, communal land, any other unoccupied land and land with no inheritor), redistribution, settlement program, donation or inheritance.

As the implementation of the federal rural land proclamation is bestowed on regional states (Art. 17), regional states enact proclamations, regulations and directives and establish institutions in order to implement this federal proclamation. The framework for the regional governments' proclamations is therefore the federal proclamation. With the exception of some differences which are perhaps local context driven, regional states' proclamations are in agreement with the federal one in the acquisition of rural land.

[40] The basic principles set out in the 1995 constitution are regarded as land policy. Nonetheless, the country doesn't have a separate and full-fledged policy document that exclusively deals with the matter with the exception of some regions.

[41] See federal Proc. No. 456/2005 Art. 7, SNNP Proc. No. 110/2007 Art. 7.1 and Amhara Proc. No. 133/2006 Art. 5.3.

The federal government and regional states proclamations put in place a minimum size for land that is granted through different forms. The federal proclamations states that 'the farm plots to be given in the future shall not be less than the minimum size of holding' (Art. 11.1). Based on this guide, regional governments decide on the minimum size. For instance, the regulation of Amhara region states that when land is granted the size of that land should not be less than 0.2 hectare if the land is cultivable by rain and 0.06 hectare if the land is cultivable by irrigation (Regulation No. 51/2007 Art. 7). Similarly, the proclamation of Oromiya region (Proc. No. 130/2007) also fixes the minimum size: 0.5 hectare for annual crops and 0.25 for perennial crops (Art. 7). The SNNP region proclamation (Proc. No. 110/2007 Art. 11.1), on its part, provides 0.5 hectare if the land allotted is cultivable by rain and ≤ 0.5 hectare if the land granted is cultivable through irrigation constructed by government.

As opposed to the federal proclamation Art. 4 which states 'this proclamation shall apply to any rural land in Ethiopia', regional governments' proclamations restrict access to rural land by prescribing the need to be a resident in that particular region as a condition for acquiring rural land free of charge (Proc. No. 133/2006 Art. 6.1 for the Amhara region, Proc. No. 130/2007 Art. 5.1 for the Oromiya region and Proc. No. 110/2007 Art. 5.2 for the SNNP region). This is certainly in contradiction with the federal government rural land proclamation and restricts rural-rural migration across regions.

In addition to the requirement being a resident in the region, one has to be also a rural resident to get rural land free of charge. The only exception in this case is the Amhara region which relaxes this condition to some extent. It is stated that a person residing in urban centre for education, national service[42], or any other similar duty as a result of temporary mission can be considered as rural resident and be eligible to get rural land free of charge (Regulation No. 51/2007, Art. 4.1 and 4.2)

ii) Transfer of rural land holding and use right

Rural land use right can be transferred either through inheritance, donation or rent/lease. The federal government states that peasant farmers, pastoralists and semi pastoralists can transfer their rural land use right through donation (Art.5.2) or inheritance (Art. 8.5) to members of their family and can also rent/lease part of their

[42] National service" shall mean any military service rendered for a definite period of time by departing from one's locality or a service rendered to cope with an emergency operation having to do with a certain calamity or participation in a public administration as a regular employee, be it in the form of through an election or assignment for a specified duration. Amhara Regulation No. 51/2007, Reg 2.c.

holdings to other farmers or investors for a specific period of time (Art.8.1). The federal rural land proclamation on land transfer through donation and inheritance clearly stated that being a rural resident and engaged in agriculture or wish to engage in agriculture is a precondition to be eligible while transfer through rent/lease can be for rural resident and urban resident who are engaged in agriculture or wish to engage in agriculture.

The same is true for rural land proclamations by different regional states. Rural land proclamation in Amhara region states that any holder of rural land may transfer his holding or using right through inheritance to his family engaged or likes to engage in agriculture (Art. 16.1). Unlike the federal proclamation, the condition to be rural resident to inherit rural land is relaxed. Persons residing in urban centres and engaged in small income activities to support their rural lives can be considered as farmers for the sake of succession (Art. 16.2). But the transfer through inheritance can only be put into effect once the person died (EPLAUA, 2008:14). In the SNNP region, the law says transfer through inheritance only applies to right holder members of family (Art. 8.5). The same is true for Oromiya region (Art.9.1). The proclamations in Oromiya and SNNP regions explicitly put that being a rural resident and family member of the right holder as a condition to inherit rural land.

There are some restrictions on the size when rural land is transferred through inheritance. The federal rural land proclamation states that when rural land is transferred through inheritance the size of the land to be transferred must not be less than the minimum size of holding (Art.11.2). Regional governments follow the same suit. In Amhara region, when land is transferred through inheritance, the minimum size must be respected in such a way that the minimum size of holding to be transferred should not be less than 0.2 hectare if the land is cultivated by rain and not to be less than 0.06 hectares if the land is cultivated by irrigation (Regulation No. 51/2007, Art. 11.9).[43] Furthermore, transfer of rural land through inheritance cannot be put into effect if the total size of the land to be possessed by any person, at the time of inheritance, exceeds seven hectares in the high land and semi-high land, and ten hectares in the low land areas (Regulation No. 51/2007 Art. 11.12 and Art. 5.3).

The rural land directive, issued by the Environmental Protection, Land Administration and Use Authority of the Amhara region (EPLAUA, 2008:12) in order to implement Proclamation No. 133/2006 and Regulation No. 51/2007, states that during divorce, if

[43] If the size of land to be transferred among different inheritors is below the minimum size, alternative like collective utilization, offering for rent, exchange same with that of another person, or any other kinds of agreement which satisfies the minimum size can be explored (Reg. No. 51/2007, Art. 11.11).

one of the partner is engaged in non-agricultural activity and earns more than the minimum salary of government employee, the partner cannot transfer his land to his children as source of income for the kids.

The same is true in the SNNP region. The rural land proclamation (Art. 11.1 and 11.2) states that when a rural land is transferred through inheritance, it must meet the conditions of minimum and maximum size which is not less than 0.5 hectare if the land is cultivated by rain and not larger than 0.5 hectare if the land is cultivated by irrigation.

As mentioned in the aforementioned discussion, the other form of transferring rural land is through donation. In Amhara region, a rural land holder can transfer his holding or using right in donation to a person who resides in the region and the person must be a family member engaged or likes to be engaged in agricultural works (Art. 17.1). This has also restriction in the sense prohibits an individual attending higher education from having the right to transfer his holding/use right through donation (EPLAUA, 2008:13). In Oromiya, land can also be transferred though donation to family members whose livelihood depends on it with no other source of income (Art.9.5). The law explicitly put being a rural resident and family member of the right holder as a condition to be eligible to get rural land through donation.

The other form of land transfer is rent/lease. The federal rural land proclamation explicitly states that a rural land holder who is given holding certificate can rent/lease his land to any person (rural or urban resident) who is engaged in agriculture or wishes to engage in agriculture for a specific period of time in a manner that shall not displace him (Art.8.1). This implies that a farm household need to have a land certificate and cannot lease his entire holdings. In other words, land law policy requires farm households to permanently reside in rural areas with farming community.

Rural land proclamation in Amhara region allows any rural land holder to transfer his land through rent/lease to any person (Art. 18.1) for a maximum period of 25 years (Art. 18.6) with the possibility of renewal (Art. 18.7). There is also a possibility where the lessee can re-rent the land partially or fully to the third party (Art. 18.9). From the proclamation, regulation and directive, there is no single statement that restricts the size of land to be rent. The procedure in the Oromiya region is different. Although any peasant farmer, be it pastoralist or semi pastoralist, has the right to rent/lease their holding (Art.6.1), the amount of land they can rent/lease is limited to a maximum of half of the holding (Art.10.1). And this requires the farm household, the leaser, to

permanently reside in rural areas with farming community. The duration of the lease period is restricted to a maximum of 3 years for those who apply traditional farming and 15 years for mechanised farming (Art.10.2).

The provision of Oromiya proclamations stipulates additional restriction on asset developed on the land. The provision (Art. 6.2 and 6.3) stipulates that selling of fixed assets (perennial plants that give yield seasonally like coffee, mango, avocado, papaya, orange etc) is prohibited while selling of the products of fixed assets is possible provided that: a) the land occupied by the product to be sold shall not exceed half of the total land holding of the individual and b) the product shall be sold for three years only (Art. 6.3) This does not by any means imply the transfer of use right.

Rural land proclamation in SNNP region (Art.8.1) also allows any rural land holder who is given holding certificates to transfer his land through rent/lease to any person in a manner that it shall not displace him. The remaining holding should be enough to produce annual food consumption for his family. The duration of the contract is also stated in explicit terms. The duration of the contract from peasants to peasants is up to 5 years, from peasants to investor up to 10 years and from peasants to investor who cultivate perennial crops up to 25years. The condition which forces the land holder to rent only part of his land can, however, be relaxed under certain condition. If the land holder has any other source of livelihood such as 'working as labourer, being hired by the investor, or to make business or any other better job opportunity, he can rent all of his holding (Art.8.1.c). This provision does not go with the federal proclamation and encourages rural households to diversify their livelihood.

iii) Redistribution and consolidation of farm land

The federal proclamation on rural land clearly promises land redistribution only when the community agrees (Art. 9.3). Land to be cultivated by irrigation is, however, subjected to redistribution 'in order to use irrigable land properly and equitably' (Art. 9.2). Regional proclamations follow suit. Redistribution of rural land in Amhara, Oromiya and SNNP regional states is not going to be carried out except on irrigation land. All regions allow redistribution only when the community agrees and the size of land to be redistributed shall not be less than the minimum size; in the case of the Amhara region, redistribution is possible only when at least 80% of land holders residing in one kebele agree on the need for redistribution (Art.8.2).

Irrigation land is automatically subjected to redistribution with minimum and maximum size. For instance, in Oromiya the maximum size is 0.5 hectare while the minimum size is 0.25 hectare (Art. 14.4). In the case of SNNP region, irrigation land is redistributed only when the irrigation is undertaken by government (Art. 9). Farm

households using irrigation land by their own investment is not subjected to redistribution.

Land consolidation is also encouraged by the federal government and regional states allow it based on voluntarily exchange of farmlands.[44] Given the degree of the problem, land consolidation should not be left to the farmers alone. Government need to be involved in it.

iv) Conditions of deprivation of the rights of land holdings

Farm households and other right holders can lose their land use right for different reasons. As per the federal proclamation, the condition that leads to the dispossession of rural land holding is failure to use and protect the land (Proc. No. 456/2005, Art. 10.1). This condition applies to regional states.[45] The provision of regional proclamations, however, stipulates additional conditions some of which are in contradiction with the development policies and strategies of the country.

In Oromiya rural land user can get away from his land use right when he leaves the land unused for 2 consecutive years (Art. 6.16). In SNNP region, rural land user can be deprived of his rights if he left the land fallow for 3 consecutive years provided that he is not sick or put in prison.

Rural land holding rights given in accordance with the Proc. No. 133/2006 of the Amhara region can be deprived for any of the following reasons (Art. 12.1):[46]

a) If the land holder is engaged in non-farming activity and earns means of living;

b) If the land holder disappears from his residence for 5 consecutive years without notifying his whereabouts or without renting his land;[47]

c) If the land holder fallows his land for 3 consecutive years for land cultivable by rain and 1 year for land cultivable by irrigation;[48] and

[44] See Proc. No. 456/2005 - Art. 11.3 for the federal government, Proc. No. 130/2007 - Art.8 for Oromia region and Proc. No. 110/2007 - Art. 11.4 for SNNPR.

[45] See Art. 12.1d of the Proc. No. 133/2006 for Amhara, Art. 6.16 of the Proc. No. 130/2007 for Oromia and Art.10.1 of the Proc. No. 110/2007 and Art. 13.4a of the Reg 66/2007 for SNNP.

[46] This provision is not applicable to any person who lives on a retirement pension or is assigned to national service no matter how much his income is (Regulation No. 51/2007Art. 14.2).

[47] Where a disappeared landholder has spouse or a minor who lives with him and has no land, or where there is doubtful information that his disappearance is due to unexpected accidental situation, the provision stated under b and c is not going to be applicable (Art. 12.2).

d) If the land holder allows gross damage over the land due to his mismanagement.

The provision of Art.12.1.b of the Proclamation No. 133/2006 above is expounded in a clear manner by Art. 14.1a&b of Regulation No, 51/2007. The provision stipulates that rural land holding rights will be deprived if the right holder is employed in a permanent job and earns an income not less than average monthly salary determined by the government to be paid in minimum starting salary or he is engaged in work field other than agricultural activity and excisable one.

4.2.2. Effects of rural land tenure on migration and rural transformation

Successful rural transformation is manifested in the form of rural-urban migration, increased agricultural growth and productivity, peasants engagement in non agricultural and off farm activity. Institutions, however, influence migration and rural transformation by constraining or facilitating key drivers of migration and rural transformation. Among the institutional factors, rural land tenure regime plays a major role.

The system of institutions that govern acquisition and use, transfer of rights, loss of rights in case of various conditions, increasing size of holdings and consolidation of fragmented farm plots have significant impact on sustainable use of land, flows of products, flows of labour and, hence, agricultural growth and rural transformation. To this end, the system has to provide tenure security in the form of provision of rights to use the land with the right to exclude others and the ability to recoup benefits of investment, a rule of law environment and availability of institutions to settle disputes, easy transferability and marketability of the rights (inherit, donate, rent, sale, exchange, sharecropping,…) including mortgageability. The land tenure regime should facilitate migration of farm households to urban areas and other rural areas for livelihood diversification in order to bring about effective rural-urban interaction and rural transformation.

As discussed in Section 2.4.1, farmers will be willing and motivated to diversify source of income other than farming only when they have an exclusive security that ensures rights on a continuous basis. This can be secured when they are bestowed ownership title or at least full security for the use right. Access to land, land rights, conditions for loss of land rights and ownership influences rural transformation since they determine agricultural growth, labour mobility and investment between rural and

[48] The law may not applied if there is an adequate and right reason or a prior written permit from pertinent Kebele Land Administration and Use Committee or form the Authority's of woreda representative office (Regulation No. 51/2007 Art. 14.1d).

urban areas. Keeping that in mind, the discussion below looks into how rural land tenure regime promotes or hinders rural labour migration and rural transformation.

As mentioned in the preceding sub-section, the legal framework for rural land in Ethiopia clearly states that the right to ownership of land is vested in the state and the public. Hence, it is impossible to transfer the land use right to other on sale or in exchange by another property. This has been forcing farm households to be permanently a rural resident and hence curb rural-urban migration and limits the capacity of farm households to create capital and be engaged in other activity as a main source of income.

In addition to the absence of right to transfer land right on sale or in exchange with another property, there are additional restrictions that discourage effective RUL, rural-urban migration and rural transformation through impeding mortgageability of rural land, easy transferability of land rights, livelihood diversification, reduction of population pressure on land and land consolidation.

The use right of land of farm households has no time limit. The absence of time limit for the use right and the impossibility of transferring to others either on sale or in exchange seems to complicate the assessment of the collateral value of farm land. This might also inform rural land proclamations and regulations in the country such that farm households have no right to use their land rights as collateral. What is surprising is that an investor, who is not required to be a rural resident, acquires rural land through rent/lease from farm households is allowed to use his use right as collateral for the effective rent/lease period. While the land policy provides mortgage right for the lessee, it denies the leaser.[49] This has reduced the capacity of farm households to access formal credit so as to invest on his land and/or diversify his source of income other than farm with the resultant effect of poor agricultural performance and diversification of livelihood. This is believed to be one of the factors that discourage rural-urban migration and rural transformation.

Lack of and restriction on easy transferability and marketability of land use rights has also a serious implication on rural-urban migration, livelihood diversification, land consolidation and increasing size of holding.

Transfer of land use right in the form of inheritance and donation is allowed only to the right holder's family members who are residing in the rural kebele and are

[49] See Art. 8.4 of the proclamation No. 456/2005 for the federal government, Art.19.1 of the proclamation No. 133/2006 for the Amhara region, Art. 6.1 of the proclamation for Oromia region and Art. 8.4 of the proclamation No. 110/2007 for the SNNP region.

engaged or wish to engage in agriculture. This means those who are residing in other rural kebele and non rural resident and those who do not want to engage in agriculture do not have the right to get rural land through donation or inheritance.[50] The implication these provisions have on rural-urban migration and diversification of livelihood by moving even into other rural areas is obvious. The requirement of being a rural resident in the same area where parents live and the need be engaged in agriculture forces peasants to permanently stay in a specific rural area and not to be engaged in non-farm activities.

Transferring rural land use right through rent/lease is also subjected to some restrictions with significant impact on migration and rural transformation. Farmers having rural land use right can rent/lease only part of their holding (in Oromiya, only half; and in SNNP, the remaining holding should be enough to produce annual food consumption for his family). The law thus requires farm households to be a permanent resident in rural areas with farming activity.[51] There are other restrictions even on the part of the land that is going to be leased. The lease period both in Oromiya and SNNP regional states is very short for the leaser to make good money in order to engage himself in other income generating activity.[52]

High productivity and growth in agricultural output is a precondition for rural transformation and effective RUL. This can be achieved by a multiple factors of which land size is one of the major factors. Given small size of holding and traditional farming system that characterises Ethiopian agriculture, farm size is one of the critical determinant factors of agricultural output. The land policy provisions are very limited in this regard. Land size can be increased only through transfer of land. For this to happen, people should be encouraged to leave the land and move out of the rural areas. The land tenure regime, however, discourages farm households' mobility by law. What is even more disturbing is the fragmentation of this small size of holding. Fragmentation is unabated because of regular in-house redistribution. The practice is that parents redistribute their land to their children when they establish their own

[50] Exception to this is in Amhara region. Persons residing in urban centres and engaged in small income activities to support their rural lives can be considered as farmers for the sake of succession.

[51] Exception to this is in SNNP. If the land holder has any other source of livelihood such as 'working as labourer, being hired by the investor, or to make business or any other better job opportunity, he can rent all of his holding. But again it discourages peasants who want to rent all and use the money to start other business.

[52] In Oromia a maximum of 3 years for those who apply traditional farming and 15 years for mechanised farming. In SNNP a maximum of 5 years from peasants to peasants and a maximum of 10 years from peasants to investors (a maximum of 25 years for those who cultivate perennial crops).

family. Although this is partly explained by fear of further government redistribution, the major explanation is the failure of the economy to offer jobs in the non agricultural sector and farm households are also discouraged by law to migrate by themselves for better opportunities. Farming with fragmented farm plots means the number of working hours spent per unit area significantly increases and overall cost tends to rise with the resultant decrease in production. This adversely affects the flow of goods between rural and urban and income of farm households. The land policy, however, leaves land consolidation to the will of voluntary exchange of farmlands between right holders.

The other factor that seriously affects RUL and rural transformation is the provision that stipulates conditions of deprivation of rural land use rights. Farm households are subjected to lose their use right if they are engaged in non-farm and off farm activity, staying for sometime outside their locality, fallow the land, and if they fail to conserve the land. The provisions are different from region to region. In Amhara region, for instance, if one of the partner is engaged in off-farm and non-farm activities and earn not less than the minimum salary of government employee, he will automatically lose his use right and the right to transfer his land to his families through inheritance irrespective of where s/he resides. This has serious implications on the country's strive to development. It precludes poor farmers in engaging in nonfarm activities to supplement their income and discourages farm households to transform themselves from subsistence to commercial farmers as the economic opportunity to use the extra money generated is very limited. In general farm households could not emerge as agricultural development agent striving for diversified occupations and transformation.

Unlike the federal proclamation, regional governments' proclamations also restrict access to rural land by prescribing being a resident in the region as a condition for acquiring rural land. This certainly restricts rural-rural migration across regions and adversely affects the livelihood options of peasants who are residing in a region with shortage of cultivable rural land. It should be remembered that regional states in Ethiopia are delineated by ethnicity and language and they are not economic regions. The requirement for peasant farmers, pastoralists and semi pastoralist to be a permanent resident in the rural kebele for not losing rural land use right restricts livelihood diversification into other areas and hence effectively arrests rural-urban migration and impedes rural transformation. In line with this, Dessalegn (1999) has rightly argued by saying:

> “The land system has discouraged peasant mobility and trapped the population in the rural areas… Improvements in livelihoods are impossible unless a considerable portion of this population is released from the land and moves out

> of the rural areas. … The greater mobility of peasants out of agriculture will stimulate the greater mobility of land. Land will be able to move "freely" from those who cannot use it efficiently to those who can. …The destination of a mobile peasantry will be the urban areas."

The engagement of peasants in non-agricultural activities is essential not only for rural income diversification and poverty reduction, but also for forging and strengthening RULs and rural transformation. Non-farm income augments agricultural income and increases demand for urban goods and services.

The recent work by Gete et al (2008:27) on seasonal migration from Amhara region is additional evidence. Seasonal out-migration of labour from Amhara region is predominantly carried out by young single men (55.4% of respondents) who are dependent family members who have not yet established their own family. Young dependent family members have no land use right and hence their movement is not constrained by the land policy. Considering the lack of sufficient means of subsistence (81%), shortage of farm land (79.5%), availability of employment opportunities (61.5%) and indebtedness (55%) as the underlying reasons of seasonal migration (Gete et al, 2008:30), there is an urgent need for policy makers to understand that migration and mobility are one of the livelihood strategy and not threats. Significant number of peasants are desperate and have already showed their need to diversify their livelihood by seasonal/temporary migration, by informal sale of their land use right and other means. We need a dynamic land reform that adequately responds to new developments such as this one.

In his study of the challenges of land reform to structural transformation of the economy, Getnet (2009:765-69) noted Japan's experience that the post war land reform in Japan was basically aimed at abolishing landlordism with a kind of egalitarian land reform. Thus, its target was protecting the re-emergence of the landlords by restricting and regulating agricultural land transfer through sale and lease. For instance, purchasing farmland in order to lease it to others was prohibited. Purchaser of farm land was also required to be farmer at the time of purchase and no one who was not classified as a farmer was permitted to purchase farmland. The total amount of land after purchase, including land both owned and rented by the purchaser, was not to exceed 3 cho (Kajita, 1965:40-1).[53] Nevertheless, the restrictions on land transfer ended up with very small, fragmented and unviable farm plots. In 1955, farms with operational arable land of less than 2 hectares accounted for 96.4% of all farms and operated 88.1% of the total arable land. In 1960, operations that could be considered viable farm units totalled 8.6% of all farms

[53] One cho is almost equivalent to one hectare.

(Nakayasu, 1991:143-4). The unintended consequences of the land reform were relative decline in agricultural production and an imbalance between manufacturing and agriculture (Kajita, 1965:57-58).

The land reform in Japan had not only prevented farmland expansion, land consolidation and increased productivity and production but had also retarded agrarian transformation by restricting land transfer and retaining farm households in agriculture. This generated lots of criticism. One such criticism of the land reform reads as follows:

> The basis of the landlord system was demolished by the land reform, and Japanese agriculture has progressed by leaps and bounds. However, the land reform did not solve the problem of petty farming. The percent of households farming on a reasonable scale and who make their living from agriculture alone does not total even 30% of the number of farm households…. There is also a trend toward a decline in productivity. The development of agricultural technology after the Land Reform has been remarkable, but if Japan does not make a requisite of land consolidation, enlargement of the unit of cultivation, and planned production, it will increasingly enter the stage where it will be difficult to expect increases in agricultural productivity. … The Agricultural Land Law made its objective the creation of owner-farmers as a means of confronting the landlord system. Now the next step is the problem of tackling small-scale farming. This is the problem facing agricultural administration at the present moment. (an Editorial in the Asahi Newspaper in April 1959, as quoted by Kajita, 1965:59).

Another interesting story is that due to the opportunities created in urban centres and poor agricultural performance, large number of young families of Japanese farm households flew to urban centres and was not willing to be back to rural areas. More and more farm households took on off-farm jobs. They made this move without breaking away from land ownership and utilization. This process left farm plots with old people and farming activity with sever scarcity of labour with subsequent decline in agricultural production (see Kajita, 1965:57-58). This situation led to another land reform that took agrarian reform as its framework. The basic tenet of the new land reform, the Agricultural Basic Law of 1961, was to lift restrictions on the transfer of land in order to consolidate farm plots and increase the size of holding so that as many of them as possible would become viable farm units. For this to happen the Law was also encouraging shift of the labour force out of agriculture into non-agricultural sectors (policies were also in place to accelerate growth in non-agricultural sector, basically manufacturing). By investing in agriculture and providing

all the necessary support[54] to farmers and by allowing more rural people to be engaged in industry, the pressure on land significantly reduced and size of holding has increased.[55]

The Chinese land reform has also gone through various forms: from landlordism to egalitarian land reform, from individual to collective farming system and from collective farming to decollectivisation. The egalitarian land reform was immediately followed by poor agricultural performance. The reform broke farms, which were optimum size, by taking land away from the rich and middle farm households. The country evidence showed that in places where more egalitarian land reform was pursued (northern China which was liberated before 1949), agricultural growth was poor. By contrast, in places where more lands were not taken away from rich peasants (Southern China), agricultural growth was relatively better and faster. This was also reflected in terms of the process of capital accumulation. While the accumulation process was disrupted in the northern parts of China, the process was relatively better in the South (Bramall, 2000:30, 46 and 49-50).

Despite their initial belief to egalitarian land reform, the Chinese leaders recognized the negative effects and started to think how to increase land size and consolidate land. The major driving force of the huge collectivization in 1955, the second land reform, was in fact to address the agrarian structure that was dominated by small individual farms (Bramall, 2000:49-50). The immediate result of collectivization was an increased agricultural production. The immediate success, however, could not be sustained. The situation was even worse. Grain production per capita in 1977 was lower than that of 1956. This was a clear signal to the government to change its agricultural production system. The death of Mao, which brought moderate leaders who were opposing many of Mao's agricultural development policies to power in 1978, made possible the much required change of the production system. In the same year, the new government pursued a general economic reform. As part of the general reform of Chinese economy, the government made dramatic transition from a socialist agriculture dominated by large collective farms to a more market-oriented agriculture dominated by small family farms between 1979 and 1983. This was the third land reform that took into account the agrarian reform.[56]

[54] Government has invest fixed capital formation-including farmland infrastructure (Irrigation, and drainage facilities, road construction, and land reshaping), machines, and facilities-were induced by means of subsidies and institutional loans (Nakayasu, 1991:144)

[55] For detail account of the process and results see Nakayasu, (1991:143-156) and Kajita, (1965:60-61).

[56] For detail account see Getnet (2009:769-72).

All these waves of land reform changes the use right from 3 years first to 15 years and then to 30 years, from no transfer of land to transfer, from restricting mobility of farm households to encouraging farmers to leave their land for non-agricultural work opportunities. Taking land reform as a package of agrarian transformation and a series of adjustments in land tenure reform led China to a remarkable achievement, despite the fact that farm households still do not have long-term tenure security.

In addition to series of policy revisions in land reform, both in Japan and China problems associated with smallholder agriculture were dealt with multiple entry points: provision of all the necessary supports to tackle other structural problems of agriculture (widely developed irrigation, introduction of high-yielding varieties, local production of chemical fertilizer, and heavy investment in agricultural research), and facilitation of sectoral mobility of the farm households to ease pressure on land. Thus, abolishing landlordism and creating owner cultivator must not be taken as end by itself. Land reform must be understood as a means to transform agriculture, encourage rural-urban migration and it is not a onetime action, rather it must be dynamic continuously adjusting to address constraints that emerge through the development of the economy and markets.

In sum, egalitarian land reform with no or restricted land transfer rights have adverse consequence on agricultural production and transforming agriculture. Even land reform designed in terms of land consolidation and increasing the size of land alone has little impact unless supported by public investment that can mitigate the underlying structural problems of smallholder agriculture.

4.2.3 Urban land policy and rural transformation

Like that of rural land for rural development, urban land is one of the most important factors in the development of urban centres. In Ethiopia urban land ownership is exclusively vested in the state and in the people of Ethiopia since 1975.[57] This is also renewed by the current regime in the provisions of the 1995 Constitution (see Art. 40) and the 2006 urban development policy (MoWUD, 2006:26). Like that of the rural land the law forbids sales or exchanges of urban land.

Urban land policy influences urban development, rural-urban migration and rural transformation and hence RULs by constraining or facilitating key drivers of migration, rural transformation and the linkage. Access to urban land and the right to urban land holdings influence investment decisions, mobility of people and the possibility of rural

[57] The Military regime in its Proclamation 47/1975 declared that all urban land and extra houses are owned by the state and people of Ethiopia.

farmers investing in urban areas. Thus, access to urban land (including for rural migrants) and the rights to the holdings of urban land are key for RULs and rural transformation. It is, therefore, important to see how urban land policy affects RUL and particularly rural-urban migrants.

The main types of urban land tenure are lease holding and free holding/permit system. Both types of tenure have different rights. Lease holding right includes the right to erect on the premises any building or improvements, or to alter or demolish any such buildings or improvements; the right to occupy any building on the premises in accordance with any relevant conditions or legislation, by means of a mortgage; the right to encumber the leasehold (the land and building); the right to dispose of the leasehold to any other person which shall include the right to sub-let or bequeath the leasehold; and the right to be compensated (for the land and for the building).

Free holding right includes the right to erect any building or improvements, or to alter or demolish any such buildings or improvements in the premises; the right to occupy any building in the premises in accordance with any relevant conditions or legislation; the right to encumber, by means of a mortgage (only the building); the right to dispose, transfer, bequeath (only the building); the right to reside until paying rent annually (and until the land is needed for public purpose); and the right to be compensated (but only for the building).

There is a significant difference between lease holdings and free holdings rights. Unlike the leaseholder, freeholder has no right on the land to use it as collateral, cannot dispose, transfer and bequeath the land; and has no right to be compensated for the land. This has serious implications on the mobility of urban land owners, asset buildings and livelihood diversification of urban landowners. Although we do not have empirical evidence as to the proportion of these two urban land tenures, one may be of the opinion that most of urban lands are under free holding tenure. In this context, the implications of the urban land policy on the mobility of urban land owners, asset buildings and livelihood diversification of urban land owners is immense and the subsequent implications on urban development and RUL is obvious.

The interest and policy direction of the government is to make lease holdings as exclusive urban land tenure to generate revenue for city administrations and ensure market values of land. To this end, it issued the Urban Lands Lease Holding Proclamation 272/2002 in 2002 (FDRE 2002)[58]. A prototype guideline for lease regulation had been also prepared and passed over to the regions. The Condominium Proclamation 370/2003 (FDRE, 2003) was enacted. Proclamation No.

[58] The first urban land lease Proclamation was issued in 1993.

455/2005 (FDRE, 2005), a Proclamation to Provide for the Expropriation of Land Holdings for Public Purposes and Payment of Compensation, was also enacted in order to facilitate government intervention in building condominium houses and other related activities. A prototype guideline for compensation and compensation manual have been prepared and handed over to the regions. Most regional governments followed the foot steps of the federal government and issued urban land lease holding and other related laws.

Urban land provision is carried out as per the following priorities: low cost housing preferable condominium houses, social services, industry and small and micro enterprises, others residential houses, other business activities, and recreational purposes (MoWUD, 2006:27-28). The policy also states that the government will have a leading role in the development of condominium houses in two ways. Government itself will be directly involved in building such houses by allocating adequate budget and sale to poor urban residents on annual installment basis at low interest rate for over 15-20 years period and with very low initial payment. The other form is by promoting urban residents to get organised and build such houses which in its turn can take at least two forms: promoting residents to get organised and move to new areas or stay in their places and build such houses (see MoWUD, 2006:22-24). In addition to these, the policy also encourages private investors to engage in real estate development that can build houses for rich and middle income residents.

One implication of urban land policy for RUL is the extent to which rural-urban migrants can have access to urban land both for residential and investment purposes. Access to land in urban areas is through lease/rent. There are various conditions to access urban land and types of urban houses discussed above. With the remark that there are some differences from region to region between city administrations and municipal towns, being a registered urban resident for sometime is a condition to access urban land[59] and be eligible for getting government built houses or to be organised in a kind of association to build residential houses. A resident should not have also any other house in his or partner's name particularly for government built houses if the house is for residence purpose. This automatically rules out rural migrants who might like to reside in urban centres and acquire urban land for investment.

Access to land in urban areas for migrants has several limitations. First, this is not quite available as the government priority is for low cost housing discussed above.

[59] Exception to this is efforts undertaken by various urban centres in encouraging farmers to access land in the city or town. The municipalities put up notices in rural areas and invite farmers to apply for urban land.

Secondly, the price of the lease is certainly beyond the financial capacity of the migrants. As discussed in Section 3.2, Ethiopian rural-urban migrants are mostly poor who have inadequate farm land and no farm land to feed their family. Thirdly, most people preferred free holdings than lease holdings as free holdings are less expensive and the holding right is indefinite even if lease holdings gives more rights and security. Rural migrants also do not have the opportunity to obtain urban land for short-term business investment, since short-term urban land leases in some urban centres have to be obtained through the recommendation of the micro and small enterprises development department of urban centres which only works with urban residents.

Given a large number of land holdings are illegal or informal in most urban centres, one may also include informal tenure as the third type of urban tenure which is not recognized legally. There are, however, circumstances where informal tenures are recognized as legal free holding/lease holding tenure if the land use requirements for such properties are in accordance with the master plans or developmental guidelines issued by local government that administers that specific urban centre. It can be legalized on application for the granting of rights of free holding/lease holding by the occupants thereof. Then occupants will be granted the free holding/lease holding right. Worth mentioning in this regard is that an important step is being undertaken in Addis Ababa and other major cities in order to formalize and regularize private property holdings that have been built up to standard and that fit to the approved city plans.

Most lands are claimed in an informal way (informal exchange of unregistered land) are usually in the outskirts of the urban centres that are taken from rural residents by urban residents. If there are some lands occupied by migrants usually the house built on the land are always below the standard and failed to pass the formalisation and regularisation process.

The other access to urban land open for migrants is the parallel cash land market segment for existing free holdings and lease holdings. This is again beyond the capacity of rural migrants given their economic status by the time of leaving their rural areas to the urban areas. The price in the parallel market is even much more expensive than the lease price. For instance, the small lease holding residential plots were being sold in the cash market up to 30 times and 65 times higher than the lease price of the same areas in Hawassa and Adama town respectively.[60]

[60] Own computation from GTZ-International Services (2006). Urban Land Administration and Land Markets in Oromia and in SNNPR.

5. Summary and alternative strategies for the rural-urban linkages and rural transformation in Ethiopia

5.1 Summary of main issues

The overall state of RULs in Ethiopia is constrained by the subsistence nature of agriculture, limited manufacturing base of the economy, weak industry and agriculture linkages and low infrastructural development. Agriculture provides limited surplus to the market and fails to provide effective demand for non agricultural products and services which limits the flow of goods from urban to rural areas. Manufacturing industries are dependent on imports of raw materials with limited linkage with agriculture. In addition to this, the fragile nature of the market, lack of efficient domestic transport and absence of competitive wholesale and retail operation of agricultural inputs have also their own impact on the flows of goods and services between rural and urban areas.

The other manifestation of the limited RULs in Ethiopia is the extremely low urbanisation rate, only 16.2% of the population is urban residents. One of the major important factors for rapid urbanisation is rural-urban migration. In Ethiopia, however, rural-urban migration is very low by any standard due to the very limited pull factors in the urban centres and policy and institutional constraints in the rural areas.

From the policy content analysis we found out that the macro policy environment is deficient in promoting RULs, rural-urban migration and rural transformation. ADLI, being the guiding framework of overall and sectoral development policies strategies, has been criticised for not giving adequate attention to the non agricultural sector and urban areas. It lacks to be definite in terms of time (the need to shift to non agriculture) and that it has not given enough attention to markets and to the demand side of production. In other words, the importance of intersectoral demand linkage is treated marginally.

There is no any policy that encourages rural-urban migration. Migration is still perceived negatively and the awareness towards migration as a fundamental part of rural livelihood strategies and rural transformation is inadequate. In fact macro policies in Ethiopia associated rural-urban migration with natural resource degradation, ethnic conflicts, economic instability, urban population growth and associated problems and spread of HIV/AIDS.

The rural development policy has also paid little attention to the demand side, institutional issues and the interaction of rural sector with urban sector. It seems that the policy is treating rural and agricultural development independent of other sectors.

Most critical in this regard is that the rural land policy. The rural land policy has time and again demonstrated itself as a major obstacle to create strong RUL. Farm households has no right to transfer their land use right to other on sale or in exchange by another property. Transfer of the use right short of sale and exchange by another property has various restrictions. Transfer in the form of inheritance and donation is allowed only to the right holder's family members who are residing in same rural kebele and are engaged or wish to engage in agriculture. This means those who are residing in other rural kebele and non rural resident and those who do not want to engage in agriculture do not have the right to get rural land through donation or inheritance. Transfer in the form of rent or lease is also subjected to restrictions. Farm households can rent/lease only part of their holding.

The other shortcoming of the land policy is that, it denies farm households the right to encumber their land use right by means of a mortgage. What is surprising is that while the land policy provides mortgage right for the lessee, it denies the leaser.[61] Farm households are also subjected to lose their land use right if they are staying for sometime outside their locality, fallow the land, and if they fail to conserve the land. What is even more disturbing is that in Amhara region farm households are subjected to lose their land use rights if they are engaged in nonfarm and off farm activity even they reside in the same rural kebele. If the revenue generated from the nonfarm or off farm activities is not less than average monthly salary determined by the government to be paid in minimum starting salary, loosing land use rights is automatic as per the land proclamation and regulation.

Rural land policies of various regions restrict access to rural land by prescribing being a resident in the region as a condition for accessing rural land. This is in contradiction with the federal rural land proclamation which proclaims peasants, pastoralists and semi pastoralists who are engaged or wish to engage in agriculture will be given rural land free of charge.

Limited land use right, restrictions on transferability of the use right, conditions of deprivation of use right and lack of using the use right as collateral for credit have various ramifications. The policy is forcing farm households to be permanently a rural resident and hence curb rural-urban migration and limits the capacity of farm households to create capital and be engaged in other activity as a main source of income. This has constrained rural transformation and contributes to the existing weak RULs. Engaging in nonfarm or off farm activities as a condition to lose land use

[61] An investor, who is not required to be a rural resident, acquires rural land through rent/lease from farm households is allowed to use his use right as collateral for bank loan for the effective rent/lease period.

right is totally erroneous. Erroneous because it precludes poor farmers in engaging in nonfarm activities to supplement their income and discourages farm households to transform themselves from subsistence to commercial farmers as the economic opportunity to use the extra money generated is very limited. It totally prevents farm households to emerge as agricultural development agent striving for diversified occupations and transformation. It is also completely in contradiction with the principle of PASDEP and rural and agricultural development policy of the country.

Until recently urban development has been neglected from the main stream development process. The policy, issued in 2005, was framed in the context of ADLI where rural development is not only the basis but also determines the direction and rate of urban development. This premise that urban development is to be determined by agricultural development is dictating the whole NUDP and UDP and its implementation. This is perhaps one of the main reasons for the policy not to have clear provision in linking the urban areas with rural areas. For instance, rural-urban migration, one of the core elements of RUL, is not totally addressed.

Like that of rural land, urban land ownership is exclusively vested in the state and in the people of Ethiopia since 1975. Thus, the law the country forbids sale or exchange of urban land. Lease hold and free hold/permit system are the two forms of urban land tenure where free hold is dominant at present. The problem, however, is the right given to free holding is very limited. Unlike the leaseholder, freeholders have no right to use their use right as collateral for credit, cannot transfer and bequeath their use right; and has no right to be compensated for the land. The implications of the urban land policy on the mobility, asset buildings and livelihood diversification of free holders is immense and the subsequent implications on urban development and RUL are obvious.

One implication of urban land policy for RUL is the extent to which rural-urban migrants can have access to urban land both for residential and investment purposes. Access to land in urban areas is through lease/rent with following conditions. With the remark that there are some differences from region to region and between city administrations and municipal towns, being a registered urban resident for sometime is a condition to access urban land[62] and be eligible for getting government built houses or to be organised in a kind of association to build residential houses. A resident should not have also any other house in his or partner's name particularly for government built houses if the house is for residence purpose. This automatically rules out rural

[62] Exception to this is efforts undertaken by various urban centres in encouraging farmers to access land in the city or town. The municipalities put up notices in rural areas and invite farmers to apply for urban land.

migrants who might like to reside in urban centres and acquire urban land for investment. In addition to this, the price of the lease is certainly beyond the financial capacity of most migrants. As discussed in Section 3.2, rural migrants are mostly poor who have inadequate farm land and no farm land to feed their family. Furthermore, most people preferred free holdings than lease holdings as free holdings are less expensive and the holding right is indefinite even if lease holdings gives more rights and security. But free holding is discouraged by policy.

To recap the country's economic potential to form a reasonable basis for rural-urban economic linkage is very limited and there has been no conscious attempt to foster linkage between the rural and urban areas through the instrumentality of policy.

5.2 The way forward

This study is intended to explore the impact of macro policy, urban and agricultural policies and land policy on RULs, rural transformation and rural-urban migration in Ethiopia and indicate the way forward. What has come out from the analysis of the policies is that there are no convincing efforts justifying any claim that what is accomplished to date is satisfactory. This means that it is high time for both federal and regional governments to proactively engage in a wide variety measures that could lay a solid foundation for forging strong RUL and rural transformation.

Experiences of other countries have shown that strong RULs and rural transformation cannot be achieved by good rural development policy alone. It also needs a comprehensive urban development policy, industrial policy and urban land policy. Such policies should aim to cater incentive goods for rural population, critical inputs for rural based economy, effective demand for goods and services of rural based economy, employment for rural migrants and access to urban land for rural migrants. In addition rural land policy that responds to new economic and market developments and promotes rural urban migration and land consolidation is also a necessary condition for rural transformation and to create strong RUL.

What is inherent in the process of rural transformation and strong RUL is rural-urban migration. Rural transformation can be facilitated by rural-urban migration if migration is promoted by rural land policy and vibrant urban economy that can create opportunities in urban centres. In the light of this, the primacy of entrenching economic linkages and mobility of people as a feature of strong RUL and rural transformation and considering rural development policy and rural land policy in a structural transformation context take precedence over fragmented efforts and policies that focused on one sector alone. This calls for introducing feasible policy

reforms accompanied by practical measures. In line with these, it is proposed that federal and regional governments collectively have to consider the following policy issues as an alternative way forward so as to achieve strong RULs and rural transformation.

i) Macro policy: Despite the recognition of the role of RUL and non agricultural sector in the process of rural transformation, the macro policy's (PASDEP) potential to fully form a basis for RULs and rural transformation is very limited. The policy failed to factor RUL as one entity in its own right and as a result has no any strategy and programs for RUL. There is a need to get out of the usual development debate-the role of agriculture versus industry- and consider RUL as a virtuous circle in the context of intersectoral demand linkages and as the basis for a macro policy framework and development strategy.

The recognition of the role and importance of rural-urban migration and rural transformation in the development process is not still embedded in a macro policy framework. While rural-urban migration is the major strand of RUL that facilitates rural transformation as part of the socioeconomic dynamics and attribute of development process through reallocating labour from less productive sectors (usually agriculture) to vibrant sectors such as manufacturing industry, the fact that various policies are hampering instead of facilitating rural-urban migration is not commendable. As discussed in the preceding section, the macro policy associated migration with natural resource degradation, ethnic conflicts, economic instability, spread of HIV/AIDS and urban population growth. As a result the macro policy direction is to curb rural-urban migration. There is a need for policy makers to shift from perceiving rural-urban migration as a threat to the country and economy, and to take migration as a means of livelihood diversification, opportunity for economic growth and an inherent process in the structural transformation of the economy. Therefore, policies must provide opportunities for mobility of people.

The attempts to curb migration and lack of adequate policy space for RUL are the characteristics of the macro policy which automatically indicates the policy gap in rural transformation. This demonstrates that rural transformation is not in the heart of the macro policy of the country. Thus, considering rural transformation as the necessary condition for structural transformation of the economy, policy makers need to give adequate space and recognise the linkage among RUL, rural-urban migration and rural transformation.

ii) Rural development policy and rural land policy: The macro policy environment that tries to curb rural-urban migration and gives little attention for RUL

and rural transformation has systematically influenced rural development policy and rural land policy formulations. The main flaw inherent in rural development and rural land policies in addressing rural development is the question of rural-urban migration. Curbing rural-urban migration as a central characteristic of the overall development strategy of the country might lead policy makers to focus on rural development without giving the necessary attention to RUL. Given this context it may not be surprising to find out rural land policy that discourages mobility of farm households.

Strong RUL in Ethiopia has been and will be for some time to come agriculture constrained. One of the driving forces for agricultural growth and rural transformation is land policy. What makes land more important in the Ethiopian context is the number of people it supports and its role in the overall economy. The livelihood of more than 80% of the country's population is directly dependent on farming which is characterised by rain-fed, small size of land holding, fragmented farm plots, and so on. Thus, what happens to land is almost tantamount to what happens to the economy. As a result, land policy is fundamental entry point to achieve rural transformation and strong RUL, and needs to be dynamic and responsive to characteristics of smallholder subsistence farming and population pressure on land.

The need for a new land policy/land reform is, therefore, imperative to change the existing small and fragmented unviable farm plots to viable farms, to encourage off-farm and non-farm engagements of farm households, and to stop regular in-house redistribution which aggravates fragmentation. The land policy needs to consider the following issues in order to play a significant role in forging strong RUL (flow of goods and rural urban migration) and promote rural transformation.

a) The policy needs to be revised in order to allow farmers to rent all of their holdings if they want to do so,
b) The policy should encourage rural-urban migration either in permanent or temporary basis by respecting the land use right of farm households irrespective of their area of residence so as to promote livelihood diversification,
c) Instead of leaving land consolidation to the will of voluntary exchange of farmlands between right holders of farm households, the land policy should encourage land consolidation through policy instruments,
d) Land policy should reward successful farm households in livelihood diversification and respect their land use right instead of penalising them,
e) Allow farm households to transfer their land use right to other on sale or in exchange by another property with some restriction that will be eased through time,
f) The policy needs to discourage right holders from in-house redistribution of land (sharing with their offspring), and

g) The policy has to allow farm households to use their land use right as collateral to access credit.

In order to exercise some of the above possible changes, there is a need to modify the existing rural land use right from unlimited time use right to time limited use right (lease hold). This has a number of advantages. Farm households will be certainly sure that they really own the land for that specific period so that they get rid of in-house redistribution, consolidate fragmented farm plots, increase size of holdings, encourage mobility of farm households, get involved in non-farm activities and mitigate the existing pressure on land. Furthermore this allows banks to value the land for that specific period and provide credit to farm households by taking the land as collateral as they do it for those who take agricultural land on the basis of lease for specific period.

iii) Urban policy and urban land policy: The flaw in the macro policy that discourages rural-urban migration and pay little attention to RUL has also influenced the formulation of urban development policy and urban land policy. The urban development policy has, for instance, no clear provision in linking the urban areas with rural areas. Similarly, the urban land policy does not provide access to urban land for rural-urban migrants. There is also a need to move from freehold to leasehold in urban land holdings as lease hold has much more rights than free hold. In addition, the urban land policy needs to have a special slot to accommodate the needs of rural-urban migrants.

The perception that rural development is not only the basis but also determines the direction and rate of urban development need some reflection. Manufacturing is like an internal engine to move the economy forward by providing non-agricultural source of livelihoods, enhance productivity and income in agriculture by processing agricultural products. It provides market for agricultural products and incentive goods and other agricultural inputs that boosts agricultural production. The poor performance of agriculture, very low rural urban migration and lack of rural transformation is partly due to lack of vibrant urban economy. Thus, the focus must be on both areas, rural and urban.

There will be no strong RUL and rural transformation if we wait for the agriculture sector to grow and dictate the rate and pattern of urban development. Policies need, therefore, to recognise the interdependence between the two areas and the intersectoral linkage between agriculture and manufacturing.

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