

THE EFFECTS OF RAPID GROWTH OF POPULATION ON SOCIO-ECONOMIC DEVELOPMENT IN ETHIOPIA

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Abstract

Rapid population growth induces increased demand for resources and the level of utilisation of resources. Where technology has not been adapted to enhance production and meet the demand, unproductive methods of resource exploitation have been resorted to. As a result, the population carrying capacity of the environment declined, and the quality resources (forests, soil, animals, climate, etc.) have deteriorated.

In this paper, analyses are made to indicate the relationship between population variables and development to explain the causes of underdevelopment in the country. The question, however, is whether population is the cause or effect of underdevelopment of the country.

High birth rate and declining mortality rate have been the major factors that contributed to high growth rate of population in Ethiopia. Fertility has been on the rise over the past decade. There has also been a slow but persistent decline in mortality despite war and natural disasters.

The distribution of population has an influence on development. It determines the trend in population and socio-economic development. The age and sex distribution indicates future patterns of population growth, while the spatial distribution defines access of population to land and other natural resources.

The impacts of rapid population growth on economic development could be observed in terms of productivity changes in the economic sectors. In the agricultural sector, particularly in crop production, the effect of population growth on productivity has been negative and measures taken to reverse it have been ineffective. Thus, the attainment of the goal of food self-sufficiency has become the task of Tantalus.

Rapid increase in enrolment relative to facilities, the increase in student/teacher ratio, and increase in the number of students per class room reflect the decline in the quality of education. This problem is aggravated by budgetary constraints in the education sector. The provision of health services to the rapidly increasing population is a formidable task. Health infrastructure has been limited in its scope and the situation has deteriorated in the face of civil strife. The rehabilitation, maintenance and provision of

health services to the increasing size of population required huge resources. Housing conditions are good indicators of the level of the standard of living of the people. The deteriorating condition of housing has an implication to the health and well-being of the people. A large proportion of houses lack even the most basic sanitary facilities. With increase in the size of population, the magnitude of the labour force rises. This heralds increase in the working age population that would move into the labour market. The rate of economic growth being less than that of the labour force growth rate, the market provides lesser employment opportunities to the school-leavers. Unemployment and under-employment would be rampant unless appropriate measures are taken in good time.

1. INTRODUCTION

Rapid population growth induces increased demand for resources and the rate at which these resources are utilised. Where technology has not been developed to meet this demand, unproductive methods of resource exploitation have been resorted to. Consequently, the population carrying capacity of the environment declined and the quality of land and associated resources (forests, soil, animals, climate, etc.) have deteriorated.

The rapid growth rate of population is attributed to high birth rate and slowly declining mortality rate. Fertility has actually increased over the past decade. There has been a slow but persistent decline in mortality despite war and natural disasters.

Beside the numerical growth in population, its distribution influences the interaction between population and development. Population distribution by age, sex, and space determines the trend in population and socio-economic development. The age and sex distribution indicates future patterns of population growth, while the spatial distribution defines access of population to land and other natural resources.

The impact of rapid population growth on economic development could be observed in terms of productivity changes in the economic sectors. In the agricultural sector, particularly in crop production, the effect of population growth on productivity has been negative and measures taken to reverse it have been ineffective. Thus, the attainment of the goal of food self-sufficiency has become the task of Tantalus.

In the education sector, a large proportion of the school age population has remained outside the school system. Moreover, the rapid increase in enrolment relative to facilities, the increase in student/teacher ratio, and increase in the number of students per class room reflect the decline in the quality of education. This problem is aggravated by budgetary constraints in the education sector.

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The provision of health services to the rapidly increasing population is a formidable task. Health infrastructure has been limited in its scope and the situation has deteriorated in the face of civil strife. The rehabilitation, maintenance and provision of health services to the increasing size of population required huge resources.

Housing conditions are good indicators of the level of the standard of living of the people. The deteriorating condition of housing has an implication to the health and well-being of the people. A large proportion of houses lack even the most basic sanitary facilities.

With increase in the size of population, the magnitude of the labour force rises. This heralds increase in the working age population that would move into the labour market. The rate of economic growth being less than that of the labour force growth rate, the market provides lesser employment opportunities to the school-leavers. Unemployment and under-employment would be rampant unless appropriate measures are taken in good time.

This paper analyses the relationship between population variables and development to explain the causes of underdevelopment in the country. The question to be raised is whether population is the cause of underdevelopment of the country. The answer could be yes and/or no. If we have long-term vision of the management of the economy, creating appropriate technologies that utilise our human resources, then population becomes a positive element in our development endeavour. Short-termism, in which the economy is managed for quick returns only, would render population a liability with multiple and complex social, economic and political consequences.

2. POPULATION GROWTH, DYNAMICS, STRUCTURE AND DISTRIBUTION

In this part, we will try to see the demographic variables in brief. The trend in population growth will provide a basis for comparing economic and social development within a given period of time. The population dynamics, structure and distribution would help in analysing the future use of resource in the country.

2.1. Trends in Population Size and Growth

"Ethiopia entered the 20th century with about 11 million people and left it with about 62.6 million people."¹ The average annual rate of growth of population which was only 0.2 per cent at the beginning of the century rose to 2.92 per cent at the end of the same century. Among the major factors that could cause a change in population are economic growth and development, investments in health and education, epidemics and other health threats, public health interventions, and availability of family planning and reproductive health services.

According to the Second Population and Housing Census of 1994, the size of the population was 53.5 million in 1994, and it was projected to reach 61.6 million in 1999, and 88.0 million in 2012. If we consider the doubling time since the beginning of the last century, it doubled to 22.0 million in 1960; to 44.0 million in 1987; and it is projected to reach 88.0 million by 2012.² We observe that the doubling time has shrunk with time, demanding attention from policy makers.

Considering the rate at which population is growing, we notice a rising trend. In the period 1900-1925, the rate of growth of population ranged between 0.2 and 1.0 per cent; between 1945-1950 it reached 2.0 per cent; and between 1985-1990 it peaked to 3.0 per cent. This dramatic increase in the rate of population growth is attributed to a sharp increase in fertility and a slight decline in mortality.³ Net migration could have contributed to the increase in size and growth of population, but it is insignificant to have dramatic impact. Also the dearth of information on net migration renders the analysis difficult.

In the future, the annual growth rate of population is estimated to decline and reach 1.85 per cent in the period 2025-2030. Though the rate is declining, the size of population continues increasing.

2.2. Population Dynamics

i. Fertility: According to the CSA projection, total fertility rate is currently 6.35 children per woman, and it is expected to decline to 3.3 in the period 2025-2030. In Table 1, it is shown that TFR for the country declined from 7.5 in 1984 to 6.74 in 1994, reflecting a decline of 10 per cent; it further declined to 6.35 in 1998. The CSA revealed that the decline in TFR could be due to an increase in age at marriage, and a moderate use of family planning services.

Table-1 Total Fertility Rates for the Country, 1970-1998

Year	Urban	Rural	Total
1970	4.7	5.8	5.2
1984	6.3	8.1	7.5
1990	5.7	8.2	7.7
1994	4.5	7.19	6.74
1998	3.31	6.99	6.35

Source: CSA, The Population and Housing Census (1999); Analytical Report, Vol. II, Addis Ababa.

Another survey also indicated that the level of fertility in Ethiopia is declining. The Health and Nutrition Survey came out with an adjusted TFR of 6.35 in 1998, with 6.99 for rural areas, and 3.31 for urban areas. The TFR has declined by 1.35 children per woman between 1990 and 1998 for the country; and by 1.21 children in rural areas and 2.39 in urban areas. In all cases, the fertility rate is high in the country. Factors

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that contribute to high level of fertility could be early marriage, traditional values attached to children, low status of women in the society and lack of access to family planning services.⁴

Why is fertility rate among rural women high? The difference in rural and urban TFR increased from 1.80 children per woman in 1984 to 2.69 children per woman in 1994. The high fertility in rural areas is due to low level of education among rural women. It was found out that illiterate women had more probability of bearing children than urban women who had better access to education. In 1994 the highest estimated fertility rate was recorded in the rural settings of Oromiya (7.4) and SNNPR (7.2) while in Addis Ababa fertility was estimated to be 2.1 children per woman.

The decision to give birth is not left to women alone. They would have delayed the decision to give birth to a child if they were given better the chance, since the opportunity cost of their time would increase.

ii. Mortality: Another important variable in population dynamics is mortality. Mortality is linked to factors such as age, sex, occupation, race, and health. Since mortality and health have close relation, it serves as an indicator of status of health, but it does not tell us everything about health, because health is complex and difficult to gauge.

The data available indicate that Ethiopia has one of the lowest life expectancy at birth and highest infant and child mortality.⁵ As an indicator of mortality conditions life expectancy at birth, declined from 51.9 years in 1984 to 50.7 in 1994, revealing that it is one of the lowest rates in Africa. In the same period infant mortality rate increased from 110 deaths per 1000 live births in 1984 to 116 in 1994, and this was one of the highest rates by African standards. According to the CSA medium variant projection, infant mortality rate (IMR) is projected to decline to 110 in 2000 and to 42 by 2030. In the rural areas, IMR increased from 116 in 1984 to 121 in 1994, while in the urban areas, it increased from 94 to 98 in the same period. In this period it was noted that male infants die more than female ones in both rural and urban areas. Considering the regions, Benshangul Gumuz had the highest IMR with 139 and Addis Ababa had the lowest, 78 in 1994. Generally speaking, IMR is very high in all regions of the country⁶

Children under age 5 faced high mortality rate, which increased from 159 per 1000 to 171 in 1994. Child mortality was higher in the rural areas than in urban areas. Education had effects on both fertility and mortality; children whose parents had senior secondary and higher education were less likely to die than children whose parents had little or no education. In 1994, IMR in a family where parents were illiterate was 122 and for parents with senior secondary education was 50. Differences in levels of child mortality were also observed between regions in the country. The highest mortality rate for children under age 5 was estimated to be 206 for Benshangul Gumuz, while the lowest rate of 109 was for Addis Ababa⁷

Maternal mortality rate (MMR) in the country is estimated to be between 560 to 850 deaths per 100, 000 live births⁸. Because of lack of reliable data it has been difficult to measure MMR. The causes of MMR are, however, identified as obstetric complications such as hemorrhage sepsis, eclampsia, obstructed labour and abortion. These are only part of the story. In reality, health-service factors, their availability, access, and logistics determine MMR. Lack of access to improved health care, pregnancy complications, or emergency services could cause death. Barriers to such accesses could be physical, economic, and socio-cultural in their nature. The physical barriers could be related to distance and lack of transport; the economic barriers linked to lack of resources to pay for the services; and the socio-cultural factors are related to low status of women, lack of decision making and restrictions on their mobility.

Another factor that adversely affects mortality schedules is HIV/AIDS pandemic in the country. The Ministry of Health (MOH) estimates show that more than 2.5 million HIV infections had occurred in the country, of which more than 90 per cent occurred in the age group 15-49. Over half a million children are orphaned due to HIV related deaths of parents. The number of orphans is expected to rise to 1.0 million in the coming five years. The epidemic is extending into the lower risk rural areas of the country.⁹

HIV/AIDS has demographic, economic and social impacts in the society. It has a devastating effect on individuals, families and communities. AIDS patients have claimed more and more of the health services of the country. Weak health systems are finding it difficult to cope with the multitude of people that fell victims to the epidemic. Life expectancy at birth is expected to decrease drastically. The UN Revision of World Population (1998) indicates that in 29 African countries, life expectancy at birth is projected to decrease on the average by 7 years in 1995-2000, falling from 54 years to 47. However, the size of population is not expected to decrease because of high fertility in sub-Saharan Africa, including Ethiopia.

In this section, an attempt has been made to analyse population dynamics in terms of fertility and mortality. However, international migration as a component of population dynamics has not been treated because of its negligible effect on total population. There is, however, internal migration taking place within the country, without affecting the total population.

2.3. Population Structure

Population structure is an important aspect of demographic characteristics that would enable us to understand changes in population. The structure of population deals with age-sex structure, sex ratio, children, youth, adolescents, the elderly, the working age population, women in reproductive age, school age population and dependants.

i. Age-Sex Structure: A number of factors determine changes in the composition of population by age and sex. Among these factors are included fertility, mortality, in-

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migration and out-migration. Where the migration factor is less significant, birth rates influence the age-sex composition more than death rates. This is true for Ethiopia. A breakdown of the population by age and sex depicts what proportion of a given age and sex constitute a given population. In Ethiopia, those under age 5 comprise 17.6 per cent of the population, with 8.7 per cent females. The population pyramid of the country has a broad base, implying a large proportion of the population to be young. This is a result of high fertility as new births are added to the population, and producing broad based age and sex distribution.

ii. Sex-Ratios: In Ethiopia the sex-ratio was 101 males per 100 females in 1994. Afar region had the highest sex ratio with 130 males per 100 females in 1995. The sex ratio is projected to remain constant for a long time to come.

iii. Child Population: The child population (0-14) of Ethiopia reached 24.1 million in 1995 and 27.8 million in 2000. It is projected to reach 31.4 million in 2005 and 35.5 million in 2010. Currently the child population comprises 43.8 per cent of the total population. This proportion is expected to decline to 42.6 per cent in 2010 and to 33.2 per cent in 2030. The child population has been growing at 2.9 per cent in the period 1995-2000, and this rate is expected to decline to 2.5 per cent in the coming five to ten years.

iv. Youth Population: Population in the age group 10-19 years is identified as adolescent, while that part in the age group 15-24 as youth, and that in the age group 10-24 is known as the young people.¹⁰ The latter one is an age group that determines future health situations in the country. The young people are identified as the most vulnerable group in the society. This group takes sexual risks and suffers from its consequences, including teenage pregnancy. The incidence of sexually-transmitted diseases (STDs), including HIV/AIDS is very high. As the young are poorly informed on how to protect themselves, they act as agents of contracting and transmitting STDs.

When we consider the youth, their number is increasing at an alarming rate. They were 6 million in 1984, accounting for 15 per cent of the population. This number rose to 10.7 million in 1994, and to 13 million in 2000, comprising 20 per cent of the population. It is projected to increase in absolute terms in the future. Because of the rapid growth in the number of children, the youth is expected to grow a little faster than the growth of the population.

v. Adolescents: According to World Health Organization (WHO), there is a two-stage definition of adolescence. Adolescents in the age group 10-14 are termed as "early adolescents" and those in 15-19 as "late adolescents." The total number of adolescents reached 13.2 million in 1995 and 15 million in 2000. Comprising about 24 per cent of the population, this number is expected to grow to 16.3 million in the coming five years. Adolescents represent a huge demand for social and economic services particularly education and health services. Female adolescents also

represent formidable challenge to the reproductive health family planning (RH/FP) services in the country. Female adolescents reached 7.4 million in 2000, representing nearly a quarter of the total number of women in reproductive age (15-49) in Ethiopia.

vi. The Elderly and Old Age Population: The elderly population are those aged 60 years and above, while the old age population are those aged 65 years and above. The former numbered 2.81 million and 2.93 million in 1995 and 2000, respectively. The old age population reached 1.88 million and 1.89 million for the same period.¹¹ Assuming that mortality and fertility rates will decline, the CSA projected that the elderly would reach 7.8 million, consisting 6 per cent of the total population by the year 2030, by which time the old age population would also reach 4.8 million. The elderly and the old age population are now being left in the open without supporters. Moreover, the traditional means of caring for the elderly are being discarded without any alternatives or substitutes. The process of modernisation that nurtures and cares for the nuclear family is a threat to the old generation. There is no social security for those who thrived to survive out of the formal production and service sectors. Even those elderly persons who had worked in the formal sectors could not stand the rising cost of living with a pension income, a mere pittance for most of them.

vii. Dependency Ratios: Dependency ratios can be classified into three. These are youth dependency ratio (the ratio of population aged 15-24 to the working age population, 15-64), old age dependency ratio (the ratio of population aged 65 and above to the working age population) and total dependency ratio (youth and old age dependency ratio).

The dependency ratio for the young declined from 83.8 per cent in 1995 to 82.2 in 2000. The old age dependency follows the same trend. Overall dependency ratio is expected to decline from 2000 onwards.

viii. Women of Reproductive Age: Women in the age group of 15-49 are referred to as women of reproductive age. They numbered 12.8 million in 1995 and 14.9 million in 2000. Their number is projected to reach 17.5 million in 2005, and 19.9 million in 2010. They comprised 23.6 per cent of the total population in 2000. The annual growth rate of the number of women in reproductive age was 3.23 per cent by 2000, but it is projected to fall to 2.67 per cent and 2.04 per cent in the coming five and ten years, respectively.

The size of women population in reproductive age has implications on the health services of the country, particularly reproductive and family planning services. They represent a real challenge to the maternal and child health programs in the country in the face of the current poor health infrastructure.

Most of the women in reproductive age reside in the rural areas, representing 82.3 per cent of the total female population of reproductive age in the country in 2000. This proportion is expected to decline in 2005 and 2010.

ix. School Age Population: The school age population of Ethiopia is classified into primary, junior secondary and senior secondary levels. Table 10 shows the details of this classification for selected years.

The school age population in primary level comprised those aged 7-12 years, while junior secondary consisted of those aged 13-14, and senior secondary referred to those aged 15-18 years. The table shows the school age population, but those who had access to the respective levels of education are low in number, because the country could not afford providing educational services to all school age population. Those who had access to primary level of education were only 30 per cent of those aged 7-12 in 1995. This is discussed in section 3, in which the social impact of population growth is presented.

2.4. Population Distribution

The population distribution of the country is presented here briefly in terms of percentage distribution, density of population, population concentration, rural, and urban population.

i. Percentage Distribution: The population of Ethiopia is not evenly distributed among its regions. Three regions comprise 80 per cent of the population and 50 per cent of the total land area of the country.¹² The most populous region is Oromiya with a population of 22.3 million, accounting for 35.1 per cent of the total population of Ethiopia, which reached 63.5 million in 2000. This is followed by Amhara region with a population of 16.3 million (26 per cent) and by SNNPR with 12.5 million (19.7 per cent). Harari region is the least populous region accounting for 0.25 per cent of the total population. Oromiya, Amhara, SNNPR, and Harari regions covered 28 per cent, 12.7 per cent, 9.0 per cent, and 0.02 per cent of the total land area of the country, respectively. The total land area of the country is 1.25 million sq.km.

The average annual growth rate of population was 2.92 per cent for the period 1995-2000 and it is expected to decline to 2.73 in the next five years and 2.62 after that. The highest annual growth rate of 4.0 per cent was recorded in Dire Dawa, followed by Harari (3.5%), SNNPR (3.26%) and Oromiya (3.09%). All the regions of the country are expected to have a declining growth rate of population in the coming two or more decades in relative terms, while they are projected to have huge increase of population in absolute terms (see, Table1).

ii. Density of Population: The gross population density of Ethiopia was 49.3 persons per sq. km. in 1999. This is expected to be more than double by 2030. Addis Ababa is the most densely populated area with 4572 persons per sq. km., followed by Harari, with 494 persons, and DireDawa, with 252 persons per sq. km. Comparing densities in other regions, we find 108 persons per sq. km. in SNNPR, 99 persons in Amhara, and 71 persons in Tigray. The lowest density is recorded in Gambella with 8 persons per sq. km. At Woreda levels, the population density ranged from 2.3

persons in Guba Woreda of Benshangul to 61,140 persons in Woreda 05 in Addis Ababa in 1999.¹³

The net density of population is more meaningful than the gross density discussed above. The net density relates the size of the rural population to the amount of cultivated land covered by crops. The net density per hectare of cultivated land was five and six persons per hectare for the years 1995 and 1997, respectively. This indicates the shortage of arable land for cultivation. A density of six persons per hectare of arable land is not, by any standard, conducive to agricultural productivity. Both total and marginal productivity of land would decline infinitesimally.

iii. Population Concentration: Studies show that there is uneven spatial distribution of population within the regions of Ethiopia. The Gini Concentration Ratio computed for the country was 0.46 in 1999.¹⁴ This is far from the zero-value, which reflects complete equality of population distribution.

iv. Rural and Urban Population: The urban population of Ethiopia was 7.59 million in 1995, and it reached 9.47 million in 2000. It comprised 14.9 per cent of the total population and this proportion is projected to rise to 16 per cent and 17 per cent in 2005 and 2010, respectively. The rate of growth of the urban population was 4.44 per cent by the year 2000, and it is projected to decline to 4.18 per cent in the coming five years. The details are shown in Table 2 below.

Table-2 Rural and Urban Population of Ethiopia, 1995-2010 (in '000)

Year	Urban	Rural	Total
1995	7587	47062	54649
2000	9473	54022	63495
2005	11675	61369	73044
2010	14351	69132	83483

Source: Source: CSA, The Population and Housing Census (1999), Analytical Report, Vol. II, Addis Ababa.

The size of the rural population of Ethiopia was 47.1 million in 1995 and it reached 54.0 million in 2000. It is projected to be 69.1 million in 2010. In 1995 the proportion of the rural population out of the total population was 86.1 per cent and this proportion declined to 85 per cent in 2000. It is projected to decline further to 84 per cent and 83 per cent in 2005 and 2010, respectively. Also, the rate of growth of the rural population is expected to decline from 2.76 in 2000 to 2.55 per cent and 2.38 per cent in 2005 and 2010 respectively.

The above data on urban and rural population is indicative of economic transformation from agriculture to industry, however slow that might be. The urban population assumes more and more of its share in the total population through time and with industrialisation. This, of course, implies urbanisation, which was 1.8 per cent per

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annum.¹⁵ Regionally speaking, Addis Ababa is completely urbanised, followed by Dire Dawa and Harari, with 70 and 59 per cent of their population residing in urban areas, respectively in 1999. Tigray and Gambella have 15 per cent of their population in urban areas.

The estimated rate of growth of urban population indicated that the SNNPR has the highest rate of 5.35 per cent, followed by Gambella, with 5.03 per cent in 2000. The lowest rate is in Addis Ababa. The urban growth rate is projected to be more than 3 per cent per annum, by 2025-2030, in all regions with the exception of Addis Ababa and Harari, where the rate is projected to be 1.7 per cent and 2.9 per cent, respectively.¹⁶ Though the rate is declining, the urban population is growing in absolute terms. The urban population of Ethiopia is distributed in cities of different sizes. Addis Ababa has the highest share with 27 per cent of the total urban population, followed by Dire Dawa and Nazareth. The region that has the highest share of the total population, Oromiya, has a low share of the urban population (17.3 per cent).

3. EFFECTS OF RAPID POPULATION GROWTH ON SOCIAL AND ECONOMIC DEVELOPMENT

The effects of rapid growth of population on social and economic development are complex and adverse in their nature. In this paper economic effects are explained in terms of crop production, savings and investment ratios, labour force and employment and environment.

3.1. Some Economic Effects

i. Effects on Crop Production: Crop production is essentially determined by the availability of land. The man/land ratio has been increasing with rapid population growth reducing the supply of arable land for crop production. The cropland, it is reported, represented only 12.7 per cent of total land area, pasture land 41.0 per cent, forest and woodland 25.0 per cent, and other land including wilderness 21.4 per cent¹⁷. Moreover, the traditional farm technology could not cope with the demand for food by the rapidly growing population.

The problems associated with crop production have obstructed the attainment of the goal of food self-sufficiency. Moreover, the growth in population does not seem to accommodate the attainment of the goal in the coming few decades.

As mentioned earlier, with increase in population, the size of land holding diminishes with a consequent decline in per capita food production. Table 3 below reveals the situation in the country.

Table-3 Population Growth, Per Capita Food Output, and Land Holding in Ethiopia
1960/61-1989/90

Year	Population (000)	Per Capita Food Output (kg.)	Per Capita Land Holding (ha.)
1960/61	23550.0	240.2	0.28
1969/70	28784.4	242.7	0.25
1979/80	36663.3	204.4	0.13
1989/90	48648.8	141.7	0.10

Source: Ezra (1997) in Befekadu Degefe and Berhanu Nega, Annual Report on the Ethiopian Economy, Vol. I, 1999/2000, p. 85, EEA, Addis Ababa.

As the population increased from 23.5 million in 1960/61 to 48.6 million in 1989/90, the per capita food output declined from 240.2 Kg to 141.7 Kg in the same period. At the same time per capita land holding almost diminished from 0.28 ha to 0.10 ha.

Food production is related to access to and size of farmland, which is negatively related to population size as reflected above. Food production was fluctuating between years, and in drought and famine years food production declined drastically while population continued to grow unrestrained. Food production has been increasing at a decreasing rate since 1987, while population has been increasing at an increasing rate.¹⁸ As a result, the gross domestic production and per capita GDP have been declining.¹⁹

As population increases, food production should also increase. With limited land, high food requirement leads to continuous cultivation of land without fallowing. This increases erosion and soil degradation, consequently decreasing yield as shown in the table above. On the other hand, production could not be intensified where shortage of land is felt because farmers could not afford the use of modern technology.

ii. Savings and Investment: The pace of economic development depends largely on investment. Investment in turn depends on the amount of national income that is saved. According to one study, if Ethiopia is to reach the level of per capita income already achieved by the average sub Saharan African countries, the economy has to grow by 10 per cent per year in the coming two decades. This requires a saving rate of 16 per cent of the GDP. The highest level of savings achieved in Ethiopia was 13 per cent towards the end of the imperial era.²⁰ After that period, the savings ratio had been consistently on the decline, and it had reached an average rate of 7.2 per cent during the last ten years of the Derg regime.

The rates of savings and investment in Ethiopia have been increasing in the previous seven years, but at lower rates. Gross domestic saving (GDS) increased from 3.0 per cent in 1991/92 to 9.9 per cent in 1996/97 as shown in Table 4. The average GDS was 6.5 per cent and it could not cover the gross fixed capital formation (GFCF), which was on the average 15.2 per cent. This led to a resource gap of 8.7 per cent,

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which had to be covered through foreign loan and assistance. This led to a debt burden of 91 per cent in 1993/94.²¹

Table 4. Trends in Savings and Investment Rates 1991/92-1997/98

Year	GDS Rate	GFCF Rate	Resource Gap Rate
1980/91 Av.	7.2	14.3	-7.1
1991/92	3.0	9.2	-6.2
1992/93	5.6	14.2	-8.6
1993/94	5.0	15.2	-10.1
1994/95	7.4	16.4	-9.7
1995/96	7.0	16.9	-9.5
1996/97	9.9	17.0	-7.1
1997/98	7.4	17.6	-10.2
1991/98 Av.	6.5	15.2	-8.7
Overall Av.	6.9	14.7	-7.7

Source: Annual Report on the Ethiopian Economy, Befekadu and Berhanu (2000).

The low savings ratio could not cover the investment required in the last two decades as could be observed in Table 4. Consequently, the resource gap reached an overall average of 7.7 per cent of the GDP, and the yearly comparison shows that over time the resource gap has widened. This has led to an increase in debt burden.

The decline in the savings ratio could partly be explained by a rise in total consumption. Total consumption was 93.1 per cent of the GDP. A greater proportion of income is spent on consumption, which would not abate in the face of increasing size and growth of population. With high proportion of income spent on consumption little is left for investment.

With a per capita income of USD 110, Ethiopia is one of the poorest countries in sub-Saharan Africa. With such a low income one would not expect savings after consumption. Furthermore, the consumption habits of the people reflected extravagant expenditure during holidays, and on occasions such as weddings and funerals, which are not conducive to savings.²² However, in the modern sector positive real interest rate has resulted in recent increases in saving deposits due to financial liberalisation in the country.²³

The gross fixed capital formation reached its highest level in 1997/98, registering 17.6 per cent of the GDP. In the previous year, the level of savings was the highest in seven years time, reaching 9.9 per cent. Yet, the level of GFCF is not big enough to create the required level of employment. Moreover, the capital intensity of new investment or new projects did not seem to address the demand for jobs, which is fuelled by the increasing size of the labour force. This aspect of the employment problem is discussed in detail in the next section of this paper.

With the high growth rate of population, a large proportion of income is spent on consumption of goods and on social services, such as food, education and health, leaving little for savings. Also due to the rise in the dependency ratio, income earners are left with little saving. Even those who could afford to cover the cost of basic needs do not save because of conspicuous and extravagant consumption habit, for the reasons mentioned earlier. Thus, economic and cultural factors could not allow for the creation of savings that would sustain investment.

Because of increased demand for social services the available resources are diverted from investment/capital to recurrent expenditure. The capital expenditure of the government has a much lower share of the total budget throughout the past two decades. Such diversion will continue with rapid growth of population, which increases demand for health, education and other social and economic services.

iii. The Labour Force and Employment: The working age population is located in the age group 15-64. The size of the working age population was 28.7 million in 1995 and it reached 33.8 million in 2000, and it is projected to be 39.6 million in 2005. It comprises over 50 per cent of the total population and it is expected to increase in the future both in absolute and relative terms. However, the rate of growth of the working age population would decline from 3.3 per cent recorded in the five years up to 2000 to 2.8 per cent by 2010.

The size of population of age 10 and above in 1994 was calculated to be 36.6 million. With an annual average growth rate of 5.3 per cent, the proportion of this age group increased from 51 per cent in 1984 to 68 per cent in 1994. Such a change in the structure of the population has impacts on the labour force and hence unemployment, given the limited capacity of the economy to generate employment.²⁴ The size of the economically active population has increased from 14.7 million in 1984 to 26.5 million in 1994. This increase is attributed to the rapid growth of the population, the shift in its structure and the increase in activity rate.²⁵

The increase in activity rate was caused by a decline in the proportion of the young attending school and home-makers in the total population of ages 10 and above. A relatively high school attendance in urban areas has contributed to lower activity rate in urban areas than rural areas. The relatively lower school attendance rate for females in rural areas explains the gap in activity rate between urban and rural female population that remained wider than the gap for men.

With increasing activity rate in the labour force, the burden of creating productive employment became difficult for the economy to bear. Employment generation became the task of Tantalus, the goal receding further as we approach it, compounded by the demobilised ex-soldiers (about half a million) and about the same number of refugees flooding from the neighbouring countries. Internally displaced persons due to civil strife and famine have also changed the size of the labour force.

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The increase in the urban labour force could also be attributed to the rural- urban migration.

The level and pattern of employment, as indicated in the 1994 census, reveals that the rural small-holder peasant sector and the informal sector account for more than 85 per cent of the economically active labour force. The proportion of the urban labour force was about 15 per cent of the total.

Agriculture is the major provider of employment engaging 90 per cent of the total labour force. Wholesale and retail trade, hotels and restaurants, personal and social services and other service sectors have their minor share of the employed labour force. A significant decline in labour absorption was observed in the public administration and defence sector, and this seems to have aggravated the unemployment problem.²⁶ The share of public administration and defence in the total active labour force has dropped sharply from 45 per cent in 1984 to 10 per cent in 1994. But this share of employment in the defence sector must have increased due to the recent Ethio-Eritrean war. This has direct and indirect bearing on the general level of employment.

The employment status of economically active population reflects that the self-employed and unpaid family workers account for more than 90 per cent of the employed labour force. There has been a shift within the composition of the labour force between 1984 and 1994. The proportion of the self-employed dropped from 57 per cent to 39.5 per cent, while the unpaid family workers rose from 34 per cent to 51 per cent. There has also been a shift in the pattern of employment from government to the private sector (CSA 1999).

The limited job opportunities in the formal sector and the increasing urban labour force have given rise to the informal sector employment in urban areas. The urban informal sector survey conducted by the CSA in 1996 reveals that a total of about 731,000 persons were employed in the urban informal sector. The informal sector has engaged 51 per cent of the economically active population in Addis Ababa. The survey result indicates that the service workers, sales workers and crafts and related workers account for 85 per cent of the urban informal sector employment. Women account for 65 per cent of urban informal sector employment.²⁷

Of the total economically active population of 14.7 million in 1984, about 1.2 per cent were unemployed, while 2.9 per cent of 26.5 million economically active population were unemployed in 1994. The rate of unemployment in the urban areas was 2.8 per cent in 1984 and it became 22.0 per cent in 1994. Rural unemployment was less than 1 per cent. Unemployment was severe among women population than among men. Urban unemployment has increased by threefold in the decade between the two censuses. The number of the unemployed rose from 114 thousand in 1984 to 605 thousand in 1994. With the increase in population, both in relative and absolute terms, the rate of unemployment is expected to rise.

iv. Environment: With rapid rate of growth of population in the country, the carrying capacity of the environment declined. Obviously, a high growth rate of population creates demand for more resources. It also influences the rate at which resources are exploited. In a situation where technology lags behind the demand for resources, primitive methods of exploiting land and other resources continue to operate in order to meet basic needs. The traditional means of exploiting natural resources have proved to be environmentally harmful and economically unproductive. Moreover, man-made and natural disasters have ravaged the country.

The land covered with forest has been devastated at alarming rates. It is believed that the land size covered by forests has been reduced from 40 per cent at the turn of the century to about 3.0 per cent at the present time. About 88,000 hectares of land is deforested every year, while only 6,000 hectares is replaced through afforestation every year.²⁸

Soil erosion continues without arrest in the absence of sustainable conservation programs. Awareness of soil conservation issues has not been fully developed. In the absence of sustainable soil conservation efforts, billions of cubic meters of soil is being eroded by torrential rains down the valleys severely reducing the population carrying capacity of the highlands.

The demand for fuel wood and construction materials increased with increase in the size and growth of population. This led to cutting of trees but without replacing them. It is believed that the state ownership of forests and the exclusion of the private sector from the management and utilisation of forest resources caused the lack of effort to replace trees cut for fuel and construction and other uses. The shortage of construction materials makes it difficult to improve the housing conditions in the face of increasing size of the population.

Another factor that aggravated the problem of environmental fragility is the massive movement of people from one part of the country to another. Displacement of people due to political and war-related reasons has compounded the problem associated with environmental interaction.

The life style of the nomadic pastoralists, who move with large herds of livestock, create damage to the environment. Pastoralists suffer from hardship due to environmental damage. In the same manner, the non-pastoralist groups are affected by the environmental degradation. This has led to frequent conflicts between the two groups facing the same need for land.²⁹ The demand for land continues to create political, economic and social problems among communities.

3.2. Some Social Implications of Population Growth

Rapid growth rate of population has serious social effects on the quality of life of the people of the country. Attempt is made here to show some of these effects in terms of access of the people to education, health and housing facilities in the country.

i. Education: It is recorded that enrolments, in absolute terms, have significantly increased at all levels of education. However, a large proportion of the school age population is outside of the school system. With rapid increase in enrolment relative to teaching facilities, the quality of education has seriously deteriorated. Indicators of quality of education show how seriously the quality of education is affected. Student/teacher ratio, number of students per classroom, and number of students per textbook have all increased. Thus, the quality of education is directly affected by the rapid growth of school age children, which is only a segment of the total population. The school age population is expected to increase from 12 million in 1984 to 42.5 million in the year 2020. Under this situation, it is not difficult to appreciate the cost implications of achieving the goal of the education policy of the country.

In the Education Sector Development Program (ESDP), it is clearly and honestly stated that the educational system has enormous problems, particularly in primary schools. Enrolment ratios remain low; rural areas and girls are not well served; the quality of education is low; the system is inefficient; funding is inadequate; and capacity for planning and management is weak.³⁰

Though more primary school children are attending school, the ratio is low. At secondary level, only 10 per cent of the school age youth is enrolled while the tertiary level has lesser percentage. The limited number and location of schools have created inaccessibility. Security for children and girls is a problem. School attendance in the rural areas is impractical due to child labour during agricultural peak season. School fees deter some parents from sending their children to school.³¹

The quality of education is low causing many children to repeat or to drop out of school, especially girls. Nearly 30 per cent of beginners drop out in grade 1, while a fifth of the remaining pupils repeat class. The ESDP links such quality of education to inadequate facilities, shortage of books, inadequate teacher training and poor curricula. The shortages and inadequacies of resources are aggravated by rising demand due to increase in the size of population.

The school system suffers from lack of adequate funding. Spending on education has increased from 2.6 per cent of the GDP in 1992/93 to 3.8 per cent in 1995/96 only. 13.7 per cent of the government budget is allocated for the education sector. Though the budget is on the increase, it is far short of the requirement because of the country's low-income base and the increasing size of the population.

To address the problems of the education system in the country, the government embarked on a set of reforms, one of which is the 1994 Education and Training Policy. The goal of the policy is to restructure and expand the education system to make it more relevant to the needs of the economy. The education policy has the goal of universal primary enrolment by 2015. The government has developed the ESDP as a policy instrument for the implementation of the Education and Training Policy.

Considering the supply side problems and capacities to implement the Education Policy of the country, it seems that the demand side is equally problematic. The ever-increasing size of the population in absolute terms is a burden on the educational system of the country.

ii. Health: Ethiopia has registered a poor health status when compared to other sub-Saharan countries. The poor health status is largely attributable to preventable infectious diseases and nutritional deficiencies.³² In the Health Sector Development Program (HSDP), it is stated that poverty, low education levels, inadequate access to clean water and sanitation facilities, and poor access to health facilities have contributed to the poor health situation in the country.

The health status indicators show that Ethiopia is among the lowest in the world. Life expectancy at birth is low; infant mortality and maternal mortality rates are high.

The health service utilisation is also very low. Total out-patient utilisation of government health facilities in Ethiopia is about 0.25 visits per person per year. Studies show that only 10 per cent reporting illness obtained treatment from any health facility. The rate of utilisation by the rural population is 9.5 per cent, while it is 14 per cent in the urban area. The most important determinants of health service utilisation are the cost of treatment; the distance (absence) and quality of the service; and the educational status of mothers.³³

The overall health service coverage in the country is estimated to be 48.5 per cent. The reason for the low coverage of health services is the limited access of the population to health facilities and staff. This is illustrated by the facility to population ratios. There is 1 hospital to a population of 587,620; 242 health centres to 222,850; 1175 health posts to 44,509 and 2515 health stations to 20,195³⁴. Despite the low coverage, the health care facilities are unevenly distributed among the regions.

The quality of health service delivery has suffered from the shortage of trained health personnel. Moreover, it suffered from poor distribution and inappropriate mix and training of health staff. Under-utilisation and lack of staff motivation is also a major problem that hampers the delivery of quality health service.

The Health Policy of Ethiopia has the goal of improving the health status of the people. It is rooted in the primary health care approach that embodied basic health service components. The network of health services, however, is limited in its capacity

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to meet the health needs of the people. The rehabilitation of the health infrastructure, the delivery of quality health service, and the provision of health commodities are not easy tasks. These problems do not seem to subside in the face of high rate of growth of population.

It is time to implement the HSDP plan of action to achieve the goal of the health policy of the country. This, of course, requires allocation of huge resources to the sector. But allocation of resources is not enough. There should be the commitment to utilise the resources for the planned activities and the capacity to translate into action both the health policy and the health sector development program of the country.

iii. Housing: Housing is among the basic necessities of the population of Ethiopia. The country is facing a serious problem of housing shortage. The shortage is aggravated by the high rate of growth of the urban population and by the stagnation in the construction of residential houses.³⁵ The current urban population of 9.5 million is projected to reach 14.4 million by 2010 to constitute 17.2 per cent of the total population. One of the main factors of urban population growth is rural-urban migration. This led to higher demand for shelter and other urban services.

The serious over-crowding in the urban areas is an evidence of the shortage of housing in the urban centres of the country. The spread of homelessness also attests the existence of the problem. The number of homeless persons or squatters who live in bus stations, pavements, church verandas, mosque compounds and in any open space has increased.³⁶

Local governments have not been in a position to maintain the nationalised houses. They have not been able to increase the housing stock. It is feared that the existing shortage of houses would be aggravated by loss of houses due to lack of maintenance.

The housing sector lacks a comprehensive urban housing policy, which would create favourable-condition for the housing market. The economic policy of the transition period emphasises the major role of private investors in urban development, housing and construction sectors. The policy ensures that anyone is entitled to security of ownership and the right to sell, rent, and transfer the house. The policy also encourages the construction of co-operative houses and low cost housing. Despite the provision of incentives, the contribution of the private sector in supplying affordable housing units for the majority of the people is assessed to be unsatisfactory.³⁷

To appreciate the dimension of the housing problem, an attempt has been made to estimate the demand for housing. The current housing deficit by housing need category for Addis Ababa and other nine regional capitals in the country has been computed.³⁸ Four elements have been chosen to estimate the housing needs: new

household construction, relieving of overcrowding, replacement of dilapidated houses, and replacement of improvised houses.

A total of 699,471 housing units are needed to overcome the housing deficits in the urban areas. This represents about 42 per cent of the total housing stock, indicating the magnitude of the housing problem.

The housing sector suffers from inefficiencies in implementing the housing policy of the government. The private sector is not fully participating in the construction of houses due to lack of confidence and support from municipal administrations. Lack of maintenance and meagre additions to the housing stock will aggravate the housing problem unless serious measures are taken to meet the demand for urban houses and services. Of course, the problem will further be compounded by the fast growth rate of the urban population.

4. CONCLUSIONS

There is a dramatic increase in the rate of population growth which is attributed to a sharp increase in fertility and a slight decline in mortality. The monitoring of this dynamics is of the essence if we are to check the trend of population growth, size and distribution. Proper records of vital statistics should be in place for the purpose of monitoring and follow up. Women should also be given the opportunity to decide on the number of children they would like to give birth to.

The elderly suffer untold miseries in times of economic crises. The extended family system becomes weak to support unproductive family members, particularly the aged. In a family that depends on single breadwinner, the burden of maintaining a family is not tolerable. Therefore, there is a need to devise a social security scheme to care for the elderly.

Another issue is the size of overt unemployment in the country. Without employment, we cannot think of provision of the basic necessities of life for the citizens of this country. To create employment opportunities in this country, we have to encourage domestic savings and investment. To complement our effort, there is a need to attract foreign capital investment.

With the increasing size and growth of the Ethiopian population, we are bound to feed more mouths than we used to do. The goal of food self-sufficiency will remain on paper unless we raise the level of agricultural productivity, particularly in the area of crop production. Agricultural specialists have to be motivated and the working conditions have to be improved.

As population increased, the carrying capacity of the environment has decreased in the country. The high growth in population induced increased demand for resources.

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Such a rising demand has only to be met with greater productivity. But, the traditional system of exploiting resources has been environmentally harmful and economically unproductive. Yet, there is an argument that the environmental damage had been caused by the ever-increasing rate of growth of population. Contrary to such an argument, however, it is contended that population is an important source of wealth, given the means of production. With modern system of production, and appropriate technology, the population could satisfy its needs and create surplus for further development.

NOTES

- ¹ NPO (National Office of Population) (2000), The Ethiopian Population Profile: 1999, p.1. MEDAC, January, Addis Ababa.
- ² Ibid., p. 2.
- ³ Ibid., p. 3.
- ⁴ Ibid., p. 9.
- ⁵ Profile, p.12.
- ⁶ Ibid., p. 17.
- ⁷ Ibid.
- ⁸ Ibid., p. 18.
- ⁹ Ibid., p. 19.
- ¹⁰ Ibid., p. 25.
- ¹¹ CSA, 1994 Population and Housing Census, Analytical Report, Vol. II, 1999, Addis Ababa.
- ¹² Profile, p. 31.
- ¹³ Ibid., p. 32.
- ¹⁴ Ibid., p. 33.
- ¹⁵ Ibid., p. 34.
- ¹⁶ Ibid., p.35.
- ¹⁷ TGE (1993), National Population Policy of Ethiopia, p. 10.
- ¹⁸ Befekadu and Berhanu, p. 86.
- ¹⁹ Ibid.
- ²⁰ Ibid., p. 31.
- ²¹ Ibid., p. 36.
- ²² Ibid., p. 46.
- ²³ Ibid.
- ²⁴ Survey of the Ethiopian Economy, MEDAC, 1998, Addis Ababa.
- ²⁵ Ibid.
- ²⁶ Ibid.
- ²⁷ Survey of the Ethiopian Economy, Ch. 6.
- ²⁸ TGE (1993), National Population Policy of Ethiopia, p. 7. Addis Ababa.
- ²⁹ Ibid.
- ³⁰ ESDP, Ministry of Education, June, 1999, Addis Ababa, p.1.
- ³¹ Ibid., p. 2.
- ³² Program of Action for Health Sector Development Program, Ministry of Health, October, 1998, Addis Ababa, p.1.
- ³³ Ibid., p. 4.
- ³⁴ Ibid.
- ³⁵ Tadesse G.Giorgis, The Urban Housing Situation in Ethiopia, Symposium For Reviewing Ethiopia's Socio-Economic Performance, IAG, ECA, Addis Ababa, April 26-29, 2000, p.1.
- ³⁶ Ibid.
- ³⁷ Ibid., p. 10.
- ³⁸ Ibid., p. 18.

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