CHAPTER TWO

GENERAL THEORETICAL FRAMEWORK

2.1. Introduction

The main objective of this chapter is to review the theoretical framework for public expenditure and social development. This chapter begins with introduction, followed by section (2.2) that discussed macroeconomic policies. Section (2.3) presents the public expenditure definition and concepts followed by public expenditure outcomes in section (2.4). In section (2.5) social development is discussed in more details. Finally, in section (2.6) we concluded the chapter with some final remarks.

2.2. Macroeconomic Policy

Macroeconomics policy is defined as the set of government actions that indirectly control or stimulate the aggregate indicators of an economy. Aggregate indicators involve national income, inflation, unemployment rate, growth rate, interest rate and many more. In short, policies framed to meet the macro goals. Two main macroeconomic policies groups are fiscal policy and monetary policy. Fiscal policy is the macroeconomic policy where the government makes changes in government spending or tax to affect the macroeconomic performance. Monetary policy deals with changes in money supply or changes the interest in the economy. Contract laws, debt management policy, income policy are some of the other macroeconomic policies designed to modify macroeconomic indicators of the economy.

2.2.1. Monetary Policy

Monetary policy is the macroeconomic policy conducted by the central bank. It involves management of money supply and interest rate and is the demand side economic policy used by the government of a country to achieve macroeconomic objectives like, low inflation, higher consumption, growth and liquidity. It involves management of money supply and interest rate and is the demand side economic policy used by the government of a country to achieve macroeconomic objectives like inflation, consumption, growth and liquidity. Monetary policy can be expansionary and contractionary in nature. Increasing money supply and reducing interest rates indicate an

expansionary policy. The reverse of this is a contractionary monetary policy. Khan and Knight (1981, 1982), in their fixed exchange rate model, an increase in domestic credit will in the short run increase domestic inflation, raise domestic output, and worsen the balance of payments. Eventually, the decline in the money supply due to the outflow of international reserves will cause a reversal of the process, so that once again in the long run monetary relationships will continue to hold. Furthermore, while Friedman (1956) and Lucas (1972) in the standard monetary theory argue that in the long run the rate of growth of output will be independent of the rate of monetary expansion, the IMF (1987) points out that in the short run the changes in domestic credit can influence output and thus cause shifts in the demand for money

"Milton Friedman‟s famous statement that inflation is always in everywhere a monetary phenomenon is correct. However, governments do not print money at a rapid rate out of a clear blue sky. They generally print money to cover their budget deficit. Rapid money growth is conceivable without underlying fiscal imbalances, but it is unlikely. Thus rapid inflation is almost always a fiscal phenomenon" (Fischer and Easterly (1990:138-139).

2.2.2. Fiscal Policy

Fiscal policy defined as government spending and taxation policies that influence macroeconomic conditions. Through fiscal policy, regulators attempt to improve unemployment rates, control inflation, stabilize business cycles and influence interest rates in an effort to control the economy. Fiscal policy is based on the theories of British economist John Maynard Keynes (1883–1946). This theory basically states that governments can influence macroeconomic performance by increasing or decreasing tax levels and public spending. This influence, in turn, curbs inflation (generally considered to be healthy when between 2-3%), increases employment and maintains a healthy value of money. Fiscal policy affects aggregate demand, the distribution of income and wealth, and the economy's capacity to produce goods and services. In the short run, changes in spending or taxing can alter both the magnitude and the pattern of demand for goods and services. Over time, this aggregate demand affects the allocation of resources and the productive capacity of an economy through its influence on the returns to factors of production, the development of human capital, the allocation of

capital spending, and investment in technological innovations. Tax rates, through their effects on the net returns to labor, saving, and investment, also influences both the magnitude and the allocation of productive capacity. Macroeconomics has long featured two general views of the economy and the ability of fiscal policy to stabilize or even affect economic activity. The effect of government expenditures, taxation, and debt on the aggregate economy is of immense important and therefore great controversy, in economics. A broad range of essential services is provided by governments, requiring the collection of taxes and fees.

Fiscal policy concerns the use of changes in the amount of government spending, and taxation to influence the national economy. This policy can affect both aggregate demand and aggregate supply, though it is worth noting that the effect on aggregate demand is much more direct and immediate, whereas aggregate supply is affected through indirect means over a greater period of time. It is also just about impossible to isolate the two effects; any change in fiscal policy will ultimately affect both aggregate demand and aggregate supply.

According to the IMF (1987) fiscal policy was considered as an aspect of monetary policy and presumed to have no independent effects on aggregate demand and the balance of payments. However, it is argued by Ahmad (1986) that the key to successful stabilisation is a lower fiscal deficit. Rapid increases in fiscal deficits have been an important source of macroeconomic imbalances. Moreover, the IMF (1987) stressed that changes in fiscal deficits may be the chief available means of offsetting changes in other components of aggregate demand.

The increased awareness of the need to scale up efforts to achieve the Millennium Development Goals (MDGs) has focused attention of the role on macroeconomic policy in achieving social as well as macroeconomic objectives. In this context, there has been much criticism of the macroeconomic policy stance espoused by the international financial institutions, primarily the IMF, as being too narrowly focused on achieving and maintaining macroeconomic stability, often limiting legitimate efforts by developing countries to step up their poverty reduction expenditures. This debate is in large part colored by the misconception that macroeconomic policy is driven only by considerations of macroeconomic stability.

Preservation of macroeconomic stability is indeed important, not as an end to itself, but as a necessary precondition for sustained economic growth, which is the single most important factor influencing poverty reduction. Without a disciplined macroeconomic policy stance achievement of sustained economic growth and social objectives becomes much more difficult. However, reasonable growth rate focusing on social development is needed to maintain the increases in human welfare through improved consumption, human capital, social equity (World Bank, 2004).

Macroeconomic policies affect a wide range of diverse socioeconomic groups in different ways which vary across countries and across time. Assessing this multidimensional impact, particularly on poor people, implies understanding their transmission mechanisms, which in turn are affected by social, economic, political, and institutional structures. The integration of macroeconomic and social policies therefore requires an interdisciplinary approach that combines social, economic, environmental and political analysis (World Bank, 2004).

Otherwise, adherence to the standard demand management policies required by the conventional structural adjustment package slows, rather than increases, the supply response in many LDCs. The identification of the sources of the instability is important:

1. If the sources of the shock that drove the economy out of equilibrium are exogenous (e.g. terms of trade shock, reverse capital flows, natural disaster, etc), demand management alone may not suffice to restore equilibrium. It must be combined with other supply-side measures to restore stability.
2. If the sources are endogenous (e.g. excessive fiscal and monetary expansion which increases aggregate demand), then the standard demand management could be a powerful tool. The LDCs at times face both: external shocks and supply rigidities, as well as inappropriate domestic policies. Appropriate adjustment also depends on whether the shock is temporary or permanent. (Ames *et al,* 2001). With this in mind, we define a situation of macroeconomic instability in here as either (a) an episode of negative real GDP or per capita real income growth over more than two consecutive years, or (b) an onset of inflation above 40 per cent per annum over more than two years, or both, Ferreira et al (200l).

2.3. Public Spending: Definition and Concepts

In broad terms, public expenditure is a simple concept; it denotes the dispensation by the state, on non-market criteria, of economic resources that it has acquired from firms and households. However, the detail is highly complex because the modern state is such a difficult concept to analyses. Consequently, care is always required in the interpretation of public expenditure figures, particularly when these become the subject of heated political debate. Public spending represents one of the most important policy instruments for governments. Consequently, they are expected to engender large effects on economic growth. The neoclassical growth model of Solow (1956) or its version in optimal growth formalized by Cass (1965) following previous evidence in Ramsey (1928), leaves little place for public policy to economic growth interaction. Long-term economic growth is zero (or exogenous). Governments subsidize services because they want to improve certain critical outcomes among the population. Health and education subsidies, for example, can be justified if they improve living standards, preventing and curing disease, improving cognitive skills and so on. But there are many links in the chain between government spending and the outcomes that the government wishes to influence, Filmer, Hammer and Pritchett (1998) provide a helpful framework to assess these links taking the example of health spending. This is summarized in following:

They distinguish four basic links: First the link between total public spending on health and its composition, If the health budget is devoted mainly to activities which have little impact on health outcomes among the population at large, the link will be weakened. Typically spending on tertiary health facilities (teaching hospitals for example) will not benefit the population at large; as such facilities are used mostly by better-off urban residents. The second link concerns the translation of the budget into effective health services. If the sector is inefficient, the level of spending

will not be a good indicator of service provision (even if the spending is on potentially relevant services). Reinikka and Ablo (1998), estimated that for every dollar devoted to primary education in Uganda, only 37 cents reached the primary school. The third link establishes how the total provision of effective services is affected by public spending, which depends on the response of the private sector. If the provision of publicly provided services crowds out private providers, the net effect on total health care provision will be somewhat reduced. The final link is between the provision of health services (both private and public) and health outcomes at the individual level. Health services interact with many factors to generate improved health outcomes: better water, better education (especially of women), better nutrition etc., are important complementary factors leading to better health. The impact of better health services in part depends on these other influences.

2.4. Public Expenditure Outcomes

There is a fair amount of research on the relationship between public spending and outcomes. The research on endogenous growth in the 1990s had produced several models linking public spending with the economy's long-term growth rate. Aschauer (1989), Barro (1990, 1991), among others, have studied the relationship between public spending and economic growth. A number of these studies find conflicting results regarding the growth impact of different types of sectoral spending. For example, Easterly and Rebelo (1993) shows that public investment in transport and communication in developing countries is positively correlated with growth with a very high coefficient.

On the other hand, using data from 43 developing countries over 20 years, Devarajan et al. (1996) find that capital spending in particular, public investments in transport and communication–has a negative correlation with real per capita GDP growth. In addition to the work on the relationship between public spending and economic growth, many researchers have examined the link between sectoral public spending (mostly in the health and education sectors) and outcomes in those sectors. For example, Harbison and Hanushek (1992) examined 12 studies on developing countries that look at the association between public education spending and educational outcomes. Six of these studies report a statistically significant positive

relationship between the two; others found no evidence of any measurable impact of spending on outcomes. In explaining the negative link between capital spending and per capita growth, Devarajan et al. (1996) note that this may reflect a problem in the link between public spending and service delivery. They argue that while public capital stocks in developing countries have been shown to be associated positively with economic growth, it may be the case that public spending as measured by official figures in countries' budget documents does not creates any productive capital.

Surveying the literature on the link between public spending and outcomes, Pritchett (1996), notes that all of the negative or ambivalent findings on public spending could potentially be a reflection of differences in the efficacy of spending. These differences could arise due to a variety of reasons including corruption and patronage, and need not necessarily be attributed to bad economic policy. In other words, a unit's worth of public spending does not necessarily buy a unit's worth of service. Yet another reason the link between public spending and outcomes could be broken if the displacement of private sector effort by public spending. This argument is eloquently made in Filmer et al. (2000).

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2.4.1. Public expenditure on Health and Education

UN WDR (2000) reported that successful poverty reduction is related to public investment in basic health and education. Health and education capabilities of the poor are likely related to three aspects of public expenditure: first, the aggregate level of public expenditures devoted to social sectors, second, the distribution of that level of social expenditure across socioeconomic groups, and third ,the efficiency of that spending. The

first point about the impact of the level of public social sector expenditures on human capabilities is a debated point, because not all studies have found an empirical link between the two. This leads to the question whether the second and third points, about equity and efficiency in spending, explain why aggregate public social spending may have varied outcomes across countries. According to the IMF data, in 1999 Sudan's spending on education amounted to 1 per cent of GDP, compared to 4.6 per cent for African countries, 4.8 per cent for MENA countries, and 4.6 per cent average for developing countries. Spending on health in Sudan amounted to 0.7 per cent of GDP compared to 2.3 per cent, 1.7 per cent, and 2.5 per cent for African countries, MENA countries, and average for developing countries, respectively (Bruxiova, et al., 2003).

2.4.2. Public Expenditure and Economic Growth

The second half of the twentieth century witnessed unparalleled growth in the world economy. Economies grew significantly and steadily both in the advanced countries and in many less developed countries. The leading ideology of the times viewed growth as inherently a good thing, and essentially in the interest of society, through its creation of more jobs, more income, more goods and services to be enjoyed (Goldstein 1985).

However, the ideology of economic growth came under attack in the early 1970s, as it did not adequately anticipate the ecological, international and domestic consequences of growth. By the early 1970s, it was obvious that widespread poverty had not vanished and that economic growth had widened the gap between the rich and industrialized countries of the North and the poorer countries of the South. In traditional Keynesian macroeconomics, many kinds of public expenditures, even of a recurrent nature, can contribute positively to economic growth. High levels of government consumption are likely to increase employment, profitability and investment via multiplier effects on aggregate demand. Thus, government spending raises aggregate demand, leading to increased output depending on the size and effectiveness of expenditure multipliers. The opposite view maintains that government consumption crowds out private investment, dampens economic stimulus in the short run and reduces capital accumulation in the long-run. Strictly, crowding-out results from a fiscal deficit and the associated effect on interest

rates, but adverse economic impacts may be due to government spending in general (Diamond, 1989).

According to Barro and Sala-i-Martin (1992), expenditures are categorized as productive if they are included as arguments in private production functions and unproductive if they are not. The issue of which expenditure items should be categorized as productive or unproductive is debatable, as is the appropriate identification of non-distortion as against distortion taxes. Most studies on the relationship between public spending and economic growth assume implicitly that all government investment spending is productive (Barro, 1990). Various scholars have thus arrived at different results.

Diamond (1989) observed that social expenditure exhibited a significant (positive) impact on growth in the short-run whilst infrastructure expenditure had less influence. In addition, he found that capital expenditure had a negative influence on economic growth. He attributed this negative relationship to a long gestation period and inefficiency associated with the use of public funds. Devarajan and Vinaya (1993) found a negative and insignificant relationship between productive expenditure and economic growth, while Lin (1994) found that nonproductive spending had a negative and insignificant impact on industrialized countries but a significant positive impact for developing countries. A good government is expected to pursue a goal ensuring that social progress and economic growth go hand in hand, enabling the whole population to enjoy the fruits of economic growth. Therefore, basic human needs, improvement in quality of life and human development began to emerge as new frameworks for looking at economic development. There is general dissatisfaction with the utilization of per capita GDP as the only measure of the standard of living or well-being, and the emphasis has shifted to focus on alternative measures of development.

2.4.3. Public expenditure and Quality of Life

Quality of life, social indicators, and basic needs are the new approaches that are being discussed. All these approaches are clearly related to the concept of the standard of living. Kakwani (1993) defines the standard of living in terms of functioning and capabilities. Therefore, functioning is directly related to what life people really lead, while capabilities are linked with the

freedom that people have in the choice of life or functioning. Consequently, the problem faced by policy makers is whether a country should attempt to improve social development, as measured by social indicators, or focus solely on economic growth and leave the question of social development to take care of itself. The research on development is not consistent in its treatment of the relation between social development and economic growth. Researchers have identified at least four ways of treating the relation between social development and economic growth: (a) the trickle -down approach, in which social development is a product of economic growth; (b) the view that economic growth and social development are two separate variables; (c) the view that neither social development nor economic growth is a primary cause of the other, but that they are related; and (d) the trickle-up approach, in which social development precedes economic growth.

The first approach, that social development is a product of economic growth, has generally been adopted in development policy. These policies are inclined to put a heavy emphasis on economic programmes and are based on the assumption that economic growth tends to produce social development. Although this trickle-down approach has been criticized since 1970 for being ineffective in meeting basic needs, studies that follow this approach still appear. To cite two examples, Ram (1985) proposes that the increase in average per capita income should improve the level of basic needs fulfillment, and Goldstein (1985) hypothesizes a causal model based on the assumption that economic factors will strongly affect at least one component of basic needs, the infant mortality rates, and that this basic needs indicator will have a weak impact on the economic indicator, if at all. On the basis of 81 indicators in cross-country data over 1960, 1970, 1980 and 1990, Easterly (1999) established that there was a positive relation between income per capita and many indicators of the quality of life, although it took a long and variable time for economic growth to exert its effect.

Barro and Sala-I-Martin (1995) also found that per capita income was positively associated with two measures of health: infant mortality and life expectancy. Bils and Klenow (2000) found that growth led to more schooling. Dollar and Kraay (2000) noted that economic growth improved peoples' health. All of this literature on the first approach has featured cross-national association. However, a spurious correlation between income and social development indicators may be made for the following two reasons:

first, if other variables that may matter a great deal are correlated with average incomes; and secondly, if there are country fixed factors. The second approach, that social development and economic growth are unrelated events, is illustrated in a paper by Newman and Thomson (1989), in which they highlighted the view of Zuvekas (1979), who showed that economic growth can occur without social development and expressed the opinion that the distribution of domestic benefits of growth could be limited to a privileged elite at the expense of widespread social welfare development. Consequently (according to Newman and Thomson); Zuvekas argues that without specifically targeting the poor for assistance in meeting basic needs, economic growth could produce an ever-widening gap between the wealthy and the poor. The analysis of empirical evidence by Grant (1973) lends support to the above contentions. Using correlation analysis, London and Williams (1988) propose that basic needs measures are both analytically and empirically distinct from economic growth measures.

Mazumdar (1996) as one of the pioneers of the third view, that economic growth and social development are highly interdependent. Sirinivasan is of the view that policies for economic growth and policies promoting basic needs development are interwoven. Mazumdar (1996) states that too much stress on basic needs would, at least in the short run, hurt economic growth, which consequently, would harm future improvement in the fulfilment of basic needs.

Fedderke and Klitgaard (1998), who studied the connection between social conditions and economic growth, showed that webs of association link economic indicators and social indicators. Such webs of association suggest the possibility of distinct groupings of social indicators with differentiated effects on economic growth. However, such correlations, especially when the theorizing is weak, the data are not reliable, and the number of observations is small, also make it difficult to disentangle causal relationships. Mazumdar (1996) showed that there is no uniform causal relationship between social development and economic growth. According to Mazumdar, this relation varies with change of variables as well as with change of income group. There are some studies in economic development that express the fourth approach, that social development precedes economic growth. Streeten (1977) provided a critique of the income approach to

poverty reduction by pointing out that extra income would not always be spent on items basic to the individual's welfare. In addition, Streeten noted that public services (including access to clean water, schools and health services) could effectively satisfy some basic needs and, as a result, were not directly associated with individual income. Based upon data for 46 countries over 1960, 1970 and 1980, and utilizing a lagged dependent variable model, Newman and Thomson (1989) reported that economic and social developments are correlated and that, with a lag, the index for physical quality of life affects economic development positively, but not vice versa. Barro (1991), in his analysis of the growth rate of real per capita GDP for 98 countries in the period 1960-1985, found a positive relation between per capita GDP and initial human capital, represented by 1960 school enrolment rates. According to Hanushek and Kimko (2000) and Chen and Dahlman (2004), schooling is a major determinant of economic growth.

2.5. Social Development

The level of social development of a region depends, to a large extent, on the performance vital sectors that are collectively known as the social sector. The term social sector is generally used to refer to all those sectors in Sudan that are essential for improving people quality of life. It encompasses sectors like education, health and nutrition, as well as sectors concerned with eradication of poverty and other programmes of social welfare (Prabhu, 2001). Within the social sector, education and health are two vital areas that can be of great strategic importance in the process of social development. Dreze and Sen (1995) have identified education and health as two vital importance "promoting" sectors. They point out that in addition to being valuable achievement in themselves, a person's education and health can help her/him to do many other valuable things. They also argue that education and health can be important instruments of social changes.

2.5.1. Social Development Concept

The concept of development has undergone radical changes in the recent past decades and social development has come to acquire a new salience in development thinking. This new thinking on development, and particularly the space yielded to social development in it, was institutionalized at the global level through the "Summit Conference on social development" held in

Copenhagen in 1995, and the "Declaration and Programme of Action" adopted at this Conference. Social development is now recognized both as a means to economic prosperity as well as an end in itself. It is concerned with the transformation of an entire society (involving its social processes, attitudes and institutions) in such a manner that it leads to a better "quality of life" for the people (Jaya and Banerjee 2009).

In fact, the concept of social development is broader than the concept of human development. While human development focuses on the well-being of individuals in isolation, social development views the level of individuals in relation to their social development. It is concerned not only with the expansion of basic human capabilities but also with the level of social infrastructure, the nature of social institutions, the process of social change, and the like (Council for Social Development,2006).

2.5.2. Social Development Indicators

Social indicators data are statistical time series "used to monitor the social system, helping to identify changes and to guide intervention to alter the course of social change." (Land, 1999). The term social indicators was born in the United States in the 1960s when the American Academy of Arts and Science, in a project funded by the National Aeronautics and Space Administration (NASA), attempted to "detect and anticipate the nature and magnitude of the second-order consequences of the space program for U.S. society" (Land, 1999). Frustrated by the lack of sufficient data to detect such effects and the absence of a systematic conceptual framework for analysis, an attempt was made to develop a system of social indicators to detect and anticipate social change as well as to evaluate the impact of specific programs and policies, culminating in the publication in 1966 of the massive volume Social Indicators, edited by Raymond Bauer.

A variety of social indicators can be used, including: education, health, clean water, sanitation, and electricity. However, for practical purposes, this study focuses on those indicators that have the most direct link with social development: the education and health indicators. The indicators used by UNDP to monitor the progress in achieving the United Nations Millennium Development Goals (MDGs), is to achieve universal primary education, and goal 4 is to reduce child mortality. Most social indicators measure the average level of social progress for the whole society. Consequently, the figures on average life expectancy, average infant mortality and adult

literacy rates do not provide any notion of the scope between rich and poor. Two countries with the same average statistics for infant mortality, for example, could have different infant mortality rates for their least privileged groups. It would be more helpful if social indicators provided data independently for the different income groups within a population (Hicks 1980). As noted in the above-mentioned, World Bank publications report (1993), the reported figures for infant mortality are frequently based on extrapolation, interpolations, or just on comparisons with other countries. While these estimated figures would probably be reasonably accurate for their intended role of comparing levels across countries at a given point in time, a great deal of the variations over time in the reported series is entirely artificial (Pritchett and Summers 1996).

2.5.3. Types of Social Indicators

According to a recent survey of social indicators by Ken Land, a sociologist at Duke University (Land, 1999), three types of social indicators can be identified: normative welfare indicators, life satisfaction and/or happiness indicators, and descriptive indicators.

2.5.3.1. Normative Welfare Indicators

The first types of social indicators relate directly to social policy-making considerations, and have been termed criterion indicators, normative welfare indicators, and policy indicators. Mancur Olson, principle author of one of the key social indicator volumes of the 1960s, characterized a social indicator as a "… statistic of direct normative interest which facilitates concise, comprehensive and balanced judgments about the condition of major aspects of society." Such a measure is a direct measure of welfare and changes in the "right" direction means everything else being equal, people are better off. Land points out that use of social indicators in this sense requires that society agree about what needs to be improved, that agreement exist on what "getting better" means, and that it is meaningful to aggregate the indicators to the level of aggregation at which policy can be defined.

2.5.3.2 Life Satisfaction Indicators

A second type of social indicators, called life satisfaction, subjective well-being, or happiness indicators, attempt to measure psychological satisfaction, happiness, and life fulfillment through survey research instruments that

ascertain the subjective reality in which people live. The approach is based on the belief that direct monitoring of key social-psychological states is necessary for an understanding of social change and the quality of life. It is argued that the link between objective conditions and subjective wellbeing can be paradoxical and, therefore, subjective as well as objective states of wellbeing should be monitored.

2.5.3.3 Descriptive Social Indicators

A third type of social indicator focuses on social measurement and analyses designed to improve our understanding of society. This type of social indicators may be related to public policy objectives, but is not restricted to this use. Descriptive social indicators come in many forms, and can vary greatly in the level of abstraction and aggregation, from a diverse set of statistical social indicators to an aggregated index of the state of society. According to Land (1999), social indicators, identifies three uses for social indicators: monitoring, social reporting for public enlightenment, and social forecasting. A key principle motivating the social indicators movement was the desire to monitor change over time in a broad range of social phenomena beyond traditional economic indicators. This desire came from a number of sources, including government, social activists, academics, and market researchers. A second principle was the belief that social indicators represented a form of social reporting that could lead to public enlightenment on social issues and in time action to deal with these issues. Finally, social indicators have been used to forecast trends in social conditions and turning points.

2.5.4. Social Indicators Measures Health Outcome

The most important indicators that is useful in measuring health outcomes:

2.5.4.1. The Infant Mortality Rate

This is the probability of death between birth and exactly one year of age, expressed per 1000 live births. In a country, infant mortality is a good indicator of the availability of the sanitation and clean water facilities that are crucial because of the susceptibility of infants to water-borne diseases. Infant mortality has also been characterized as an outcome variable summarizing the degree of existence of contagious disease in a country, as infants are more susceptible to these problems. In addition, this indicator

demonstrates rapid response to many health policies. Thus a high figure would show that there are many people living in conditions under which basic health needs are not met (Mazumdar 1996; Goldstein 1985).

2.5.4.2. The Under-Five Mortality Rate

This is the probability of dying between birth and exactly five years of age, expressed per 1000 live births. It is widely documented as the most appropriate indicator of the cumulative exposure to the risk of death because it provides the best means of capturing mortality risks during the most vulnerable years of childhood, the first five years of life. It has several advantages over the infant mortality rate as a composite measure of health risks at childhood. Specifically, the risk of death from several of the diseases that are primary causes of infant mortality remains high in the early years of childhood. Consequently, it is also a suitable outcome measure in assessing the impact of various intervention programmes intended at improving child survival (Ahmad and others 2000).

According to World Bank (2002) data set, in the 1990s, a new infant born in SSA has expected 42 life-years to live, but if the same infant were born in high-income countries of the world during the same period, it would have expected 70 years to live. In low and middle-income countries, the average life expectancy at birth has improved from the 1960s to the 1990s by about 13 to 15 life-years; in SSA, however, it has only changed by about 7 life-years during the same period. This change is also far below the world average of about 11 years. It is clear that when life expectancy is low in a country, there is a sizeable percentage of the population who face poor living conditions as well as a lack of adequate health facilities.

2.5.4.3. Life Expectancy at Birth

Life expectancy is the number of years a newborn infant would live if prevailing patterns of age-specific mortality rates at the time of birth were to stay the same throughout the child's life. In other words, it is the theoretical number of years a newborn will live if the age-specific mortality rates in the year of birth are taken as constant. It seems appropriate to use life expectancy at birth as one basic measure of the efficacy of a country's success in providing for basic needs (Hicks 1980). These single indicators directly reflect the level of health, nutrition, sanitation improvements, clean

water and income, and thus indirectly link employment and shelter (Mazumdar 1996). It is clear that when life expectancy is low in a country, there is a sizeable percentage of the population who face poor living conditions as well as a lack of adequate health facilities. Table (3.1) below reports estimates of life expectancy for Sudan and some selected countries in 2006, as well as expected values by sex for the period 2005-2010. From this table we observe that, estimates of overall average life expectancy at birth for the period 2005-2010 ranges from 82.6 years in Japan to 39.6 years in Swaziland. For Sudan, the estimate of overall life expectancy is at 58.7

Table (2.1) Life Expectancy (years) at Birth in Selected Countries, 2005-2010

	Country/territory	**2005-2010**			**2006**
		Male	Female	Overall	Overall
	World average	65.0	69.5	67.2	68.0
1	Japan	79.0	86.1	82.6	82.0
156	**Sudan**	**57.1**	**60.1**	**58.6**	**58.0**
169	Namibia	52.5	53.1	52.9	52.0
174	Botswana	50.5	50.7	50.7	48.0
178	South Africa	48.8	49.7	49.3	50.0
180	Malawi	48.1	48.4	48.3	47.0
184	Guinea-Bissau	44.9	47.9	46.4	46.0
187	Central African Republic	43.3	46.1	44.7	44.0
	Zimbabwe	44.1	42.6	43.5	42.0
191	Lesotho	42.9	42.3	42.6	42.0
193	Zambia	42.1	42.5	42.4	41.0
194	Mozambique	41.7	42.4	42.1	42.0
195	Swaziland	39.8	39.4	39.6	40.0

Source: United Nations: World Population Prospects (2006 Revision) and UNECIF (2008).

HIV/AIDS epidemic has become one of the most serious and widespread disease that has attracted the attention of policymakers and concerned institutions worldwide. It is well known that Africa occupies a rather unfortunate position in the worldwide HIV/AIDS record on the epidemic, as

the 19 countries with the highest prevalence of reported infections worldwide are all African countries. Table (3.3) above; gives a list of some countries by people living with HIV/AIDS and the prevalence rate among different age groups. It is estimated that nearly 39 million people in the world live with HIV/AIDS in 2005. South Africa is reported to have the largest population living with the disease, at well over 5 million people infected, representing more than 14.0 percent of the world total. On the more fortunate end of the African spectrum, Eritrea is reported as having the smallest infected population in the continent. The countries of southern Africa registered the highest HIV/AIDS prevalence rate among the adults as well as among young males and females. Indeed, according to UNECIF (2008), the highest ten prevalence rates among adults are registered by African countries. Among the reported nations, Sudan is reported to have the lowest prevalence rate of the disease among adults, at approximately 1.6 percent, which is 74 percent lower than the average rate for Sub-Saharan Africa, and 85 percent lower than the rate in it neighboring Central African Republic.

As the majority of people infected with HIV are unaware they have the virus, it is reasonable to expect that there may be significant cases of under-reporting and inaccuracies in certain listed statistics. For the case of Sudan, it is clear from table (3.3) that the total numbers of those living with the disease are estimated at 350 thousand, representing 0.9 percent of the world total and 1.0 percent of the total population of Sudan. Adult women (15 years and above) living with the disease represent 51 percent of the total, while children (0-14 years) represent 8.6 percent of the total. The prevalence rate among adults is estimated at 1.6 percent (Sulieman, 2010)

2.5.5. Social Indicators Measures of Education of Outcomes

There are many international indicators that can be useful in measuring educational outcome, but the most important ones of these indicators are:

2.5.5.1 Net Enrolment Ratio in Primary Education

Net enrolment ratio is defined as the ratio of the number of children of official school age enrolled in primary education to the population of the corresponding official school age. Alternatively, gross enrolment ratios are defined as the ratio of the number of students enrolled in primary education

to the total population of the corresponding age group. While some economists view enrolment ratios for different levels of schooling as indicators of the stock of human capital (Barro, 1991), they may be inappropriate proxies for human capital stocks for current economic production. One problem with this approach is that enrolment ratios are both flow variables, which represent human capital investment flows and the stock itself (Thomas and others 2000).

2.5.5.2 Adult Literacy Rate

Literacy is typically defined as the ability to read and write, with understanding, a simple statement related to everyday life. The adult literacy rate is defined as the number of literate adults (persons aged 15 years or more) as a percentage of the adult population. Alternatively, the youth literacy rate for those 15-24 years old is defined as the number of literate adults (persons between 15-24 years of age) as a percentage of the adult population.

This indicator is direct measures of the attainment of one basic human right, a minimum education. This indicator is also associated with many other indices of the quality of life, such as measures of employment, income or health, and therefore adult literacy can be considered an excellent overall quality of life indicator. While there has been some criticism concerning the international comparability of the adult literacy rate because of the difficulty of ensuring that it is applied systematically (Chen and Dahlman, 2004), it is commonly used to measure progress in achieving universal primary education. For the purpose of monitoring progress in meeting needs for primary education, adult literacy is a better indicator than primary school enrolment since it is oriented towards effects rather than efforts (Hicks 1980).

2.6. Summary

In this chapter “theoretical framework”, public expenditure and social development were discussed in details. Thus macroeconomic and macroeconomic policies were presented and discussed manifestation of policies and the concepts, also we were delineated the public expenditure outcomes on health and education. In addition to that, the effects of public expenditure on economic growth and quality of life were explored. Also, in

this chapter, we was discussed the social development, in term of concepts, indicators and types, and social indicators that measures health and education outcomes. Then we concluded the chapter with some final remarks. In the following chapter we will discuss the empirical literature review.