Affordability of Coherent Emergency-Responsive Life-Cycle Cash Transfer Systems in Six Developing Countries

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The findings, interpretations and conclusions expressed in this paper are those of the authors and do not necessarily reflect the policies or views of the Balsillie School of International Affairs.

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## 1. METHDOLOGICAL APPROACH AND RESULTS SUMMARY

This study proposes a set of inclusive cash transfer interventions based on the life-cycle approach for six developing countries that vary in terms of their development path and regional affiliation. It further conducts a costing exercise for the proposed interventions for each country until 2030. In doing so, the study analyses the underlying demographic, inflation, and economic growth environment for each country separately, which established the need and opportunities for country-specific social sector investments that are pro-demographic window of opportunity and promote macroeconomic stability. Ultimately, this study is hoped to shed lights on affordability of coherent life-cycle cash transfer systems as opposed to the more traditional limited safety nets. It is hoped that this will initiate a broader discussion with stakeholders to arrive at policy recommendations to better respond to opportunities and challenges identified to support the realization the Social Protection Floor Initiative (SPF-I) in line of the ILO Recommendation 202 (ILO 2012) on Social Protection Floors as well as national-level commitments.

## 1.1. Definitions

Definitions and terminology used in discussing social protection have evolved over time and tend to differ slightly among different schools of thought. Social protection is generally understood as the combination of social insurance – (i.e. contributory forms of social provisioning) and social assistance (i.e. transfers which cover wide chapters of the population), and are generally funded from public sources (ILO 2012) (see figure 1). A broader understanding refers to social protection as the set of public and private policies and programmes aimed at preventing, reducing and eliminating economic and social vulnerabilities to poverty and deprivation (UNICEF 2012). A life-cycle approach posits social protection in the three phases of life - infant and childhood, adulthood and working life, and old age - with access to health services as a component accompanying all three phases. This framework is used in the social protection floors initiative adopted in ILO Recommendation 202 a (ILO 2012).





Source: Based on the ILO definition of Social Protection (ILO 2012)

One can identify a range of instruments of social protection:

Social cash transfers;

- Programs to ensure economic and social access to education, health, water and sanitation and other social services;
- Social support services such as care facilities;
- Legislation and policies to ensure child rights, equity and non-discrimination in children's and families' access to services and employment/livelihoods (UNICEF 2012).

The income security package discussed in this study falls under the social cash transfer component. Social cash transfers are defined as flows of money to households to alleviate household poverty, hunger or malnutrition, and achieve other social outcomes. The grants are generally designed to address income insecurity, avert or protect from risk, and give greater freedom of choice in consumption decisions. Although the benefit amounts in most schemes found in low-income countries tend to be small, they have nevertheless demonstrated some positive effects on food consumption, diet diversity, and expenditures on health and education as documented in section 1.7.

## **1.2.** Global Perspective of Social Protection<sup>1</sup>

Some form of universal social protection coverage has been in place in most higher-income countries since the 1950s, in the context of their post-World War II welfare state arrangements (Esping-Andersen 1990). While most low income countries have featured social security for the formal sector since their independence, broader forms of social protection covering rural populations and the informal economy was introduced in waves. The Latin American examples of large-scale programmes such as Bolsa Familia (the Family Grant) in Brazil, and Oportunidades (opportunities) programme in Mexico have been in place in various forms since the 1990s, as a response to cushion the economic and social impacts of structural adjustment programmes. Moreover, at the time, beyond its role as a safety net, social protection was presented as a macroeconomic stabilizer, with the argument that the higher propensity to consume of lower income quintiles would increase aggregate demand and revitalize an economy in recession. The introduction or upgrading of social protection as crisis responses was the first wave. Recently, the discourse has moved on into a more normative mode, with progressive governments, Civil Society Organizations, academics and multilateral agencies make a case for social protection from a rights-based angle. The recent decade has in fact seen a surge in social protection: research suggests that nearly 100 countries across the world have constituent elements of social security in place and more than 50 low-income countries have introduced social assistance (ILO 2014; United Nations 2013).

At the global level, many of the multilateral agencies have been promoting the right to social protection. In 2012, the ILO annual conference adopted the Recommendation on the Social Protection Floors (R 202), which is now being vetted in numerous countries (ILO 2012). It uses the life cycle approach. Many analysts and advocates have shown how child-oriented social protection is particularly important (see box 1). Other notable examples include the work of the Special Rapporteurs of the Office of the High Commissioner on Human Rights (Sepulveda and Nyst 2012; Alston 2014), and the policy positions of the ADB (Handanyani 2010; ADB 2013; ESCAP 2011a). Most multilateral agencies have social protection strategies in place (UNICEF 2012a; World Bank 2012; European Commission 2012).

Two additional challenges are shaping the social protection agenda. One is the intensifying impact of climate change and civil conflict, which result in complex emergencies. Social protection in the form

<sup>&</sup>lt;sup>1</sup> Citation in this section is from Koehler 2014c unless stated otherwise.

of transfers to displaced populations is increasingly important, and in many countries, social protection includes an emergency fund for social assistance that can come into play quickly if needed.

The second globally recognized challenge stems from the increasingly disparate in-country income and wealth disparities (Milanovic 2010; Ortiz, Chai and Cummins 2011; Piketty 2014). If social protection expenditures are covered from national taxation revenues, and have a pro-poor expenditure bias, they can serve to shift income from the higher to lower income quintiles. There are also proposals for a dedicated fund to jump-start social protection in low-income countries, financed from special forms of funding in rich countries. In that format, social protection could take on a redistributive function.

## BOX 1 Child-related Social Protection

Social protection is a strategic and essential tool in helping children and their families fulfil their rights and in expanding their opportunities to reach their full potential. However, across the world, children and families with children are at great risk of income poverty and multidimensional poverty. Many of the 18,000 children who die every day across the world could survive if adequate social protection were in place (UNICEF 2014; ILO 2014). The life-cycle approach to social protection is therefore particularly relevant.

For example, at the global norm-creating level, the ILO Recommendation 202 on social protection floors posits income security for children as a core point, with the objective being to ensure access to nutrition, education, care, health services, and other goods and services (ILO 2012). Minimum income security is understood as related to a life in dignity, and is to correspond to at least national poverty lines. Another principle is universality, meaning that income security refers to all children resident in a country, as per the commitment of the CRC (ILO 2014).

Child-relevant social protection can come in various formats – free access to social services or school meals, monetary family benefits, or child grants. Currently, 108 countries have in place specific child or family benefit legislation (ILO 2014). Public expenditure on child-related social protection measures are estimated at 0.4 per cent of GDP worldwide, average 0.2 per cent of GDP in Asia and the Pacific, and reach as much as 3 to 4 per cent in Europe (ILO 2014). In Western Europe, Australia and Canada, and in Mongolia, the schemes are universal (ILO 2014).

Evidence from various studies shows that social protection benefits have resulted in better nutritional status, an increase in the use of health services, including for ante- and post-natal care, higher school enrolment, and to a lesser extent to better outcomes on school performance. Child-sensitive social protection, therefore, considers different dimensions of children's well-being

and addresses "the inherent social disadvantages, risks and vulnerabilities children may be born into, as well as those acquired later in childhood" (UNICEF 2014)

Social protection is an important policy tool for the realization of human security and achieving equity and social justice. Building on the Universal Declaration of Human Rights, the CRC posits the right to social protection for children in its Article 26:

- 1. "States Parties shall recognize for every child the right to benefit from social security, including social insurance, and shall take the necessary measures to achieve the full realization of this right in accordance with their national law.
- 2. The benefits should, where appropriate, be granted, taking into account the resources and the circumstances of the child and persons having responsibility for the maintenance of the child,

as well as any other consideration relevant to an application for benefits made by or on behalf of the child."

It is important to underline here that social protection is a cross-sectorial issue. For instance, social protection can play a key role in addressing some of the barriers that stand in the way of ensuring child rights and improving children's wellbeing (UNICEF 2012). Social protection needs to be universalized for all, but from a child-rights commitment, social protection needs to be child-sensitive and therefore prioritize measures that directly or indirectly impact children, especially young children. This is because children face age-specific vulnerabilities that differ from those of adults (ILO 2014). These include the fact that child needs for nutrition and intellectual and emotional stimulation cannot be postponed, and if these rights and requirements are not met, the negative impact is irreversible. This fact is coupled with the observation that children tend to be over-represented among the poor. The interests of children, therefore, require special attention during the process of designing or re-designing of the country's social protection system. Moreover, by reaching out to those who are economically and socially excluded, social protection complements and underpins sector interventions in health and nutrition, education, water and sanitation, child protection including issues around children in conflict and child labour, HIV/AIDS and other areas. It can thus reinforce support to child rights, improve outcomes and increase equity for children, while at the same time supporting social justice and national cohesion (UNICEF 2012).

Clearly, no social protection program, no matter how encompassing and generous, can eradicate poverty, especially when it is widespread and deep, but social protection measures can decrease vulnerability and risk, and supplement incomes so that families and households can at least ensure minimum food and income security. Further, such policies could potentially have longer term impacts on intergenerational transmission of poverty as they could address some of the fundamental drivers of poverty.

## 1.3. Framework

This study supports the realization of the UN adopted Social Protection Floor Initiative (SPF-I). The SPF-I emphasizes the need to guarantee a basic set of rights across the life cycle (from children to old-age). This basic set of right aims at enabling and empowering all members of a society to access a minimum package of transfers and services at all times.





Establishing a relief response to natural disasters can be built in this framework. The above income security package can be used as the base to provide a short-term emergency relief in the form of emergency "top-up". This temporary benefit will provide an increment to the current benefit program for the above-described vulnerable groups (children, senior citizens, pregnant mothers and possible others). It will cover the affected districts by the disaster, using the methodology as well as distribution mechanisms already in place for the regular income-security package part of the SPF.

Within this framework, two main limitations have been identified in this exercise:

1- It does not map out all existing social protection provisions that might also fall under the economic security part of the SPF.

A wide selection and fragmented cash transfer programs exist in countries selected. Due to data availability and time constraints, this exercise does not cover them all. In addition, the proposed integrated system is sought to complement the existing programs for stronger impact, particularly among vulnerable households. More specifically, the proposed system is promoted as the first level of the safety net where households receive the benefit to help meet part of the expenses associated with school, nutrition, old-age and other vulnerability. The existing programs are additional benefits that can address the extra and special needs of the particular household. The combined benefits will, therefore, have a consolidated and stronger impact.

2- It does not cover access to essential services part of the SPF, which needs to be carefully looked at in a separate exercise and by theme (e.g. access to health, access to quality education etc.). Having said that, this exercise is thought to be the first step in this area and is recommended to be followed an important exercise on costing a primary health benefit package and integrating a social health insurance.

## 1.4. Targeting, Benefit Parameters, and Conditionality

## Targeting

Using the lifecycle approach in line with the SPF, this paper looks at broad groups: pregnant women, children (pre-school and school age), persons with disability, orphans, and old-age individuals. The period of greatest vulnerability for the survival and development of the child is from pre-birth to 5 years, and within that the period as a foetus and the first two years (UNICEF 2011b). One consideration in the selection of benefits therefore relates to the observation that an impact on child malnutrition in particular would require an intervention to set in before the infant's birth. This leads to include a benefit during a mother's pregnancy. The purpose would be to help ensure that she has resources for her own better nutrition, to cover pregnancy-related health or social expenditures, or to be able to afford some rest during her pregnancy, post-partum and during breastfeeding by outsourcing some of her work burden. The fact that the first two years are the most sensitive in turn leads to one suggestion proposing a grant for the first 1000 days (i.e. between the start of a woman's pregnancy and her child's second birthday).

Further, poverty has age dimension as observed in many countries. Young children, especially children age 0 -5, are generally more represented in people lives in poverty. Selecting this group makes a lot of sense as an effective targeting approach. Moreover, the link between poverty and lack of education is highlighted in development literature and evidence. Inadequate education is a main barrier to moving out of poverty. A scholarship program can provide the incentive structure to keep children in school and transition from primary into upper level school. The selection to cover persons with disability and orphans can be socially unifying with an element of social inclusion added to the poverty reduction outcome. Finally, an old-age pension's cost will not be significant for most developing countries given the demographic profile, but can be a mechanism not only to meet the needs of the senior citizens, but also to inject the transfer in the households' overall budget.

The case for universalization within the groups discussed above also derives from the difficulty to single out particularly disadvantaged communities, or to limit the grant only to the lowest wealth quintiles, as administrative capacity in many countries are limited and poverty widespread. Using a lifecycle approach in line with the SPF covering broad groups will also support the policy objective to consolidate the fragmentation and small scale programs that characterize the current systems in many developing countries.

It is to be noted that while benefits proposed hypothetically cover all individuals falling under the eligibility criteria of the particular group it belongs to, it is assumed that a form of targeting is implicitly built in:

- 1- Self-selection targeting: the low level benefit amount coupled with other administrative burden to register and receive the benefit, are likely to result in less than 100 per cent take up, as higher income groups may not claim the benefit.
- 2- Categorical targeting: the lifecycle approach recognizes that poverty is positively correlated with age groups e.g. childhood and old-age. It is also to note that poverty is positively correlated with the number of children in the household. Therefore, cash transfers that varied with the number of children in the household are pro-poor, even if non-poor households receive the same per-child benefit amount. Moreover, with the inclusion of financing mechanism such as

tax, the impact can be even further strengthened and the result is a net transfer from the rich household to the poor household.

## Benefit Parameters: benefits covered, eligibility, and benefits amount

In line with the SPF, the investigated integrated system of Social Protection consists of the following set of interventions: pregnancy benefit, child benefit, disability benefit, orphan benefit, education stipend, and old-age pensions. The following table summarizes key benefit parameters:

| Category           | Benefit amount as Percentage<br>of GDP per Capita | Eligibility  |
|--------------------|---|--|
| Pregnancy benefit  | 5 %   | Pregnant mothers   |
| Child benefit      | 5 %   | less than 5 years-old  |
| Disability benefit | 15%   | Person with disability who does not<br>receive child benefit or old age<br>pension |
| Orphan benefit     | 15%   | Orphan child who is less than 15 and does not receive child benefit                |
| Education Stipend  | 10%   | Girls and boys in high school  |
| Old-age benefit    | 20 %  | Age 65+  |

Table 1: Key Parameters for the Investigated Integrated System

While the above benefit amounts are low in value as a stand-alone benefit, they are meant to complement each other and provide the first level of income security for the household as a unit explained in the SPF in figure 2, especially in the event of loss of income. An example of a poor household can help illustrate this point. For this purpose, let us assume that a household consists of a grandmother taking care of 4 orphan children with no breadwinner in the household. The children ages are 2,4, 7, and 13. The 7 year-old child lives with disability. In the absence of any form of support, this family relies on domestic garden ran by the grandmother to support the family, but also on the 15-year old female child who left school to work and support the family. If the SPF is implemented, the family together will get a total of 70 percent of GDP per capita.

## **Conditionality**

There is increasing evidence on the impact and outcomes of both conditional cash transfers<sup>2</sup> and unconditional transfers. Although there is evidence to suggest that both have positive outcomes, the particular role and attribution of these outcomes to conditionality remains an open debate. The study proposes that the cash transfer directed to children in school age is to be conditional on attending school. For other populations groups, linkages to other sought positive behaviour changes can be also investigated (eg health check-ups). The study is hoped to initiate a broader discussion with cross-sectorial experts to ultimately decide whether conditionality and linkages are desired, and if yes, what they are. A separate exercise is needed to make sure that whatever conditionalities imposed are costed and within the supply side constraints.

 $<sup>^{2}</sup>$  conditional cash transfers are given to beneficiaries conditional on particular actions, such as sending children to school or attending regular health check-ups

## 1.5. Results Summary, Scaling up strategies and Monitoring and Evaluation

The study costed the above-proposed income security package for each of the 6 countries. Costing methodological approach and detailed results are found under each country in chapter 3. These results show that a life-cycle income security package can be implemented at a cost that range between 1.93 percent of GDP (Haiti) and 2.23 percent of GDP (Afghanistan). While the demography profile differs between countries, for the majority of the 9 countries will benefit from favorable demographic conditions that will result in costs even decline as a percentage of GDP over time.

|            | Afgha | nistan | Bangla | adesh | Ha     | aiti   | Sierra | Leone  | Tanz   | ania   | Yen    | nen    |
|------------|-------|--------|--------|-------|--------|--------|--------|--------|--------|--------|--------|--------|
|            | 2016  | 2030   | 2016   | 2030  | 2016   | 2030   | 2016   | 2030   | 2016   | 2030   | 2016   | 2030   |
| Pregnancy  | 0.05% | 0.04%  | 0.03%  | 0.01% | 0.034% | 0.026% | 0.044% | 0.027% | 0.055% | 0.040% | 0.044% | 0.032% |
| Child      | 0.55% | 0.44%  | 0.34%  | 0.16% | 0.40%  | 0.31%  | 0.51%  | 0.32%  | 0.62%  | 0.45%  | 0.51%  | 0.39%  |
| Disability | 0.77% | 0.61%  | 0.78%  | 0.35% | 0.74%  | 0.53%  | 0.71%  | 0.41%  | 0.70%  | 0.45%  | 0.74%  | 0.54%  |
| Orphan     | 0.26% | 0.16%  | 0.18%  | 0.06% | 0.19%  | 0.12%  | 0.23%  | 0.11%  | 0.25%  | 0.14%  | 0.23%  | 0.14%  |
| Education  | 0.20% | 0.26%  | 0.15%  | 0.14% | 0.15%  | 0.19%  | 0.17%  | 0.18%  | 0.17%  | 0.21%  | 0.16%  | 0.22%  |
| Old-age    | 0.40% | 0.51%  | 0.73%  | 0.65% | 0.42%  | 0.51%  | 0.37%  | 0.30%  | 0.46%  | 0.40%  | 0.41%  | 0.48%  |
| Total      | 2.23% | 2.02%  | 2.21%  | 1.37% | 1.93%  | 1.68%  | 2.03%  | 1.34%  | 2.25%  | 1.69%  | 2.09%  | 1.80%  |

Table 2: Summary Results from the Projection of Costs

## Strategies Towards Universalization

If immediate universalization is not possible for political or fiscal reasons, it is proposed to set a defined, agreed and realistic timeline for its progressive realization. Universalization could in that case be achieved by continuously expanding geographical targeting. For example, the above described cash transfer system could be introduced at a universal level in the poorest districts of the country, and extended district by district over a defined period of time. The extension could proceed progressively and continuously, from worst-off to better off districts, measured by an indicator considered most appropriate, and that is at the same time easily available and periodically updated. There are a host of identification criteria to choose from for sequencing among the districts. They include the national poverty line or poverty head count data; GDP per capita; malnutrition and food insecurity mapping; or the Human Development Index (HDI). Most of these indicators would likely end up identifying the same districts as most disadvantaged, and the selection decision could cross-reference several of the indicators, so as to be analytical and transparent.

While the previous universalization option might be a challenge when poverty is widespread, alternatively, there are more appealing options. One would be, to start with introducing the 1000-days benefit nationally (pregnancy until under age 2). Over time, age cutoff can be increased to cover up to 5 years of age as well as introducing gradually other benefits such as old-age pension and scholarship.

## Monitoring and Evaluation

Alongside the introduction and gradual expansion of the system, monitoring and evaluation are central to the strategy. Systematic and frequent monitoring can address the problems that might arise in the execution, such as: delays in delivery, exclusion of eligible population, corruption, or other issues. Collecting and analysing real-time information will not only help identifying problems related to

program implementation, but will also create a great database that can be used for further improvement of the program. Further, collecting the empirical evidence on the effect of the system will be crucial to build broad political and public support for the expansion and continuation of the such system. For solid impact evaluation, it is necessary to collect baseline information at the inception of the proposed system to be able to compare and measure the impact. Not surprisingly, cash transfers in other countries are found to have positive institutional externalities (Fiszbein, Schady, & Ferreira, 2009). Through their emphasis on monitoring and evaluation, cash transfer programmes have strengthened a results culture within the public sector. It is expected that establishing a robust monitoring and evaluation system for social protection schemes will have cross-sectoral external effects to strengthen other policy implementation.

## **1.6. Emergency Response Component**

The study proposes a mechanism that systematically provides short-term assistance to the population affected by natural disasters as part of the proposed income security package described earlier. Specifically, the above income security package for the general population can be used as the base to provide a short-term emergency relief in the form of emergency "top-up". This temporary benefit will provide an increment to the current benefit program for the above-described vulnerable groups (children, senior citizens, pregnant mothers and possible others). It will cover the affected districts by the disaster, using the methodology as well as distribution mechanisms already in place for the regular income-security package proposed earlier. For instance,

| Table 3:  | Emergency  | "top-up" | Benefit | Parameters  |
|-----------|------------|----------|---------|-------------|
| 1 uoie 5. | Linergeney | top up   | Denem   | 1 unumeters |

|    | Group         | Coverage           | Top-up<br>Benefit as %<br>of GDP per<br>capita | Eligibility                       |
|----|---------------|--------------------|--|-----------------------------------|
| 1. | Pregnancy     | Affected Districts | 50 %   | Pregnant women                    |
| 2. | Under 5 years | Affected Districts | 50 %   | All children under 5 years of age |
| 3. | Old-age 65+   | Affected Districts | 50 %   | All persons age 65 and above      |

The main advantage of this approach is its flexibility, cost efficiency, immediate scalability, and building on systematic approach as opposed to the fragmented parallel mechanisms. It can also complements the more traditional cash-for-work emergency response rolled out in most emergencies. Administratively, eligible beneficiaries can be identified real time from the list of income security package outlined above. This is the most efficient and transparent option for identifying the beneficiaries in the emergency situation and in a short period of time. It is to be noted that natural disasters affect a large share of the population and many households are displaced and temporarily seeking shelter. If alternative targeting (other than the proposed) or beneficiary identification approaches were used, it is likely to take 3 to 4 months and could further create division within communities. This is one of the reasons why the use of the income security package provided above, which uses universal coverage (within a category) is the most appropriate measure.

It is also suggested that the rounds of emergency top ups are accompanied by behavioral change messages that can contribute to reducing the household's vulnerability to disaster. These messages will be targeted both to specific vulnerable groups and to specific sectors, and linked to relief and recovery

outcomes. Such messages will also be relevant since the top up, or other source of income, might well be used for housing reconstruction. Messages on gender awareness and the risk of child labor can also be reinforced.

## 1.7. Impact of the Integrated System of Social Protection

The integrated system approach for Social Protection offers an adaptable set of interventions that can achieve equitable outcome, promote human dignity, and minimize social unrest. It also promotes macroeconomic stability. The following are three main dimensions for the integrated system impact.

## Impact on consumption poverty<sup>3</sup>

Assessing the potential impact of the integrated system on consumption requires the availability and use of household data. There are several models that can be used to simulate the impact on poverty resulted from introducing the integrated system. But this would be beyond the scope of this study. Nevertheless, the following list collects evidence from selected country examples of impact on poverty and inequality:

- Mexico: The Oportunidades program reduced the poverty headcount ratio by 10%, the poverty gap by 30%, and the poverty severity by 45%
- South Africa: Social pensions and transfers have reduced poverty gap by 47%.
- Senegal: Social pension is estimated to reduce poverty by 35%
- Tanzania: Social pension is estimated to reduce poverty by40%
- Kyrgyz Republic: Social Protection is estimated to have reduced extreme poverty headcount and poverty gap among beneficiaries by 24% and 42%, respectively. Total poverty ratios are estimated to have reduced by 10% and 22% for the extreme poverty headcount and poverty gap, respectively.
- Brazil: the combination of the Continuous Cash Benefit (BPC) —a means-tested pension and disability grant—and the Bolsa Família contributed an estimated 28% of the fall in the Gini coefficient between 1995 and 2004

## Impact on non-income dimensions

While simulating the impact of the proposed system on non-income dimensions is challenging and beyond the scope of this exercise, evidence from different countries shows that progress to non-income social gains can be achieved when cash transfer programs and approaches are used to complement supply side interventions by increasing demand to services. Below is a list of selected country examples:

School enrolment, child labour, and early marriage

- Bangladesh: The stipend program for girls' education (FSP) is believed to have increased girls' net primary enrolment between 1996 and 2002/3 from 48% to 86%.
- Ethiopia, South Africa, Malawi, Mexico, Nicaragua, Brazil, Ecuador, Cambodia, Pakistan and Turkey: Transfer programmes have demonstrated significant percentage point increases in enrolment and/or attendance.

<sup>&</sup>lt;sup>3</sup> The evidence was collected from multiple sources and used in the brief (UNICEF, 2010), available at http://www.unicef.org/socialpolicy/files/Social\_Protection\_Accelerating\_the\_MDGs\_with\_Equity(2).pdf

- Zambia, Malawi, Brazil, Columbia, Nicaragua, Mexico: overall positive effects on girls' education.
- Malawi: new enrolment was twice as high in households participating in cash transfer scheme (8.3% vs 3.4%) within a one year period.
- Malawi: cash transfers to adolescent girls increased school attendance, and led to a significant decline in early marriage, pregnancy, self-reported sexual activity and HIV prevalence among beneficiaries.
- Mexico: Oportunidades had little impact at primary level (where enrolment was already high), but secondary school enrolment of girls increased by 11-14%, compared to 5-8% for boys. It also resulted in a reduction in probability of working for ages 8-17.

• Brazil: the Programa de Erradicaçao do Trabalho Infantil (PETI) reduced both the probability of children working and their likelihood to be engaged in higher-risk activities.

Nutrition:

- Nicaragua: The Red de Protección cash transfer programme reduced stunting among children 6-59 months by 5.3 percentage points, with stronger impacts among poorer families. Moreover, during the coffee price shock, beneficiaries of this program were able to maintain and modestly increase per capita food consumption, while in other comparable households per capita consumption declined sharply.
- South Africa: children in households receiving a pension have on average 5cm greater growth than those in households without a pension this is the equivalent of approximately half a year's growth for Black and Coloured children.
- Mexico, Malawi, and Colombia: Social Protection programmes demonstrate reductions in stunting.

#### Health

- Mexico: Oportunidades led to a 17 per cent decline in rural infant mortality (8 percentage points on average). It also led to a reduction of maternal mortality by 11% among women participating and impacts were strongest in more marginalized communities.
- Bolivia: between 1993 and 1997, infant mortality rates among participating households in Bolivia's Social Fund declined from 61 to 31 per 1000. For non-participating comparable households, infant mortality rates did actually increase from 60 to 67 per 1000. Under 5 mortality rates fell over the same period from 94 to 55 per 1000 in participating households, but rose from 93 to 108 per 1000 in comparable non-participating households.
- Peru: The Juntos conditional cash transfer programme reduced women giving birth at home, in an area with high levels of maternal mortality.
- In all cash transfer programs for which there is data, with the exception of the PATH programme in Jamaica, incidence of illness has decreased among children, particularly younger children.

## HIV/AIDS

- Malawi: cash transfers to adolescent girls increased school attendance, and led to a significant decline in early marriage, pregnancy, self-reported sexual activity and HIV prevalence among beneficiaries.
- Kenya: cash transfers were used by households to increase ARV treatment for children and adults.

## Impact on economic growth

A coherent social cash transfer program that ultimately results in an income transfer from the rich to the poor can play a significant role as an economic stimulus to foster economic growth. This is due to the fact that poor households have a high marginal propensity to consume. The additional incomes poor households receive (from the program or other sources) are spent in large on basic necessities, whereas richer households' incremental reductions of their incomes (resulted from financing the benefit) are not expected to reduce their consumption with the full amount. This gives a rise to a multiplier effect: the increased consumption resulted from the benefit leads to increased incomes of local producers and service providers, which further leads to increased consumption, etc. In other words, the initial amount spent on the proposed system of benefits may cause a change in aggregate output that is a multiple of the initial change. For instance, an increase of 1 percent of GDP in Bolsa Familia program in Barzil was estimated to result in a positive change of 1.44 percent in GDP (ILO, 2011). Not surprising, cash transfers programs comprise a significant portion of the fiscal stimulus packages in rich and poor countries alike. It was estimated that on average about 25 percent of fiscal stimulus spending was invested in social protection in both middle and higher income countries (UNICEF, 2010b).



Figure 3: Size of Social Protection Component of Stimulus Packages (% of total announced amount)

Source: UNICEF (2010)

## 2. COUNTRIES' SOCIOECONOMIC BACKGROUND

## 2.1. Afghanistan

## 2.1.1. <u>Demographic Profile</u>

The United Nations Population Division estimates Afghanistan's 2015 population at 32.5 million (UN, 2016). Approximately 27 per cent of inhabitants live in urban communities (UN, 2016). Over the past decade, Afghanistan's population grew at an average annual rate of 2.9 per cent, which is more than double the rate of the South Asia region (1.42 per cent) and greater than Least Developed Countries (2.37 per cent) (UN, 2016).

| Period    | Population<br>growth rate | Population<br>change per<br>year | Birth | Death | Net<br>Migration |
|-----------|---------------------------|----------------------------------|-------|-------|------------------|
| 1980-1985 | -2.6                      | -295                             | 626   | 262   | -659             |
| 1985-1990 | 0.1                       | 13                               | 596   | 211   | -372             |
| 1990-1995 | 6.4                       | 896                              | 688   | 204   | 412              |
| 1995-2000 | 3.4                       | 610                              | 871   | 230   | -31              |
| 2000-2005 | 4.2                       | 916                              | 1022  | 251   | 145              |
| 2005-2010 | 2.8                       | 727                              | 1097  | 259   | -111             |
| 2010-2015 | 3.0                       | 898                              | 1088  | 260   | 70               |

| Table 4:  | Afghanistan        | 's Population | Change in | thousands. | 1980 - | 2015 |
|-----------|--------------------|---------------|-----------|------------|--------|------|
| 1 abic 7. | <i>i</i> ngnamstan | 5 I Opulation | Change m  | mousanus,  | 1700   | 2015 |

Source: Based on data from (UN, 2016).)

The pattern of natural population growth (excluding migration) can be explained by two underlying factors: fertility rates and mortality rates. Since 1980, the Total Fertility Rate (TFR) has decreased from 7.45 children per woman in 1980-1985 to 4.65 children per woman in 2015 (UN, 2016).

Figure 4: Afghanistan's Total Fertility Rates, 1980-2015



Source: Based on Data from (UN, 2016).

The second factor, the mortality rate, has shown significant improvement over the same period, yet still remains high. The infant mortality rate declined from a rate of 161.2 infant deaths per 1,000 live births

in 1980-1985 to 71.9 deaths per live births in 2010-2015. The crude death rate was estimated at 8.7 deaths per 1,000 live births in 2010-2015, a decrease by more than half the rate of 21 deaths per 1000 live births in 1980-1985. Life expectancy at birth increased steadily, while still remaining low at 59.82 in 2010-2015, compared to 43.55 in 1980-1985 (UN, 2016).

As a result of declining fertility rates, improved mortality, and increased life expectancy, the population structure has changed notably over the past few decades. However, the median age in Afghanistan remains relatively unchanged, increasing from 17 in 1980 to 17.5 in 2015 (UN, 2016).



Figure 5: Afghanistan's Population Pyramids, 1980-2050

The expansion of the working age population and the subsequent enlargement of the labour force can present a favourable condition, but also a major challenge for the local economy to create jobs to absorb the new entrants to the labor market.

Figure 6: Afghanistan's Population Growth Rates by Major Age Groups, per cent, 2000-2015



Source: Author's calculation based on data from (UN, 2016).

#### 2.1.2. <u>Macroeconomic Profile</u>

Over the past decade, GDP grew at an average annual rate of 4.87 per cent in real terms (IMF, 2016). This is almost 2 percentage point above the population growth, resulting in an improvement in real GDP per capita. However, economic growth in 2014-2015 slowed much more than anticipated due to political uncertainty and increased levels of violence. Afghanistan suffers from a sporadic inflation environment – CPI inflation was calculated at -1.55 per cent in 2015, which was a 6.22 per cent decrease from the previous year (IMF, 2016).

It is estimated that 15 per cent of households in rural location receive remittances from abroad (IMF, 2015). The two main destinations for Afghan outmigrants are Pakistan and the Islamic Republic of Iran. There are approximately 1.6 million Afghans registered in Pakistan and 840,000 in the Islamic Republic of Iran (IOM, 2016).

| Economic Indicators      | 2006     | 2008     | 2010     | 2012     | 2013     | 2014     | 2015     |
|--------------------------|----------|----------|----------|----------|----------|----------|----------|
| GDP, current prices,     | 345.82   | 517.51   | 711.76   | 1,033.59 | 1,116.83 | 1,173.18 | 1,174.13 |
| Billion LC               |          |          |          |          |          |          |          |
| GDPper capita, current   | 13,492.0 | 19,144.2 | 25,063.9 | 34,655.7 | 36,557.4 | 37,507.6 | 36,683.5 |
| LC                       |          |          |          |          |          |          |          |
| GDPper capita, current   | 270.2    | 380.9    | 539.7    | 680.5    | 660.2    | 653.6    | 600.0    |
| US\$                     |          |          |          |          |          |          |          |
| Inflation (CPI), percent | 6.79     | 26.42    | 2.18     | 6.44     | 7.39     | 4.67     | -1.55    |
| GDP growth, real         | 5.36     | 3.86     | 8.44     | 13.97    | 3.93     | 1.28     | 1.47     |
| Exchange rate, LC per 1  |          |          |          |          |          |          |          |
| US\$                     |          |          |          |          |          |          |          |

Table 5: Afghanistan's Main Economic Indicators, 2006-2015

Source: Author's calculation based on data from (IMF, 2016).

Afghanistan remains reliant on donor grants in order to finance the budget and assist with expenditures (IMF, 2015). Donors currently finance the majority of security expenditures in Afghanistan, while also making significant contributions to infrastructure development and maintenance. According to the IMF, donor support is estimated to remain close to current levels over the next decade (IMF, 2015).

According to the WHO, Afghanistan's allocation towards health is greater than most regional comparators in terms of spending as a percentage of government expenditure (WHO, 2016). However, Afghanistan's per capita health spending is below the majority of its regional comparators (WHO, 2016). This indicates that even though Afghanistan spends an adequate proportion of its expenditure on health, the country's GDP is too low to provide sufficient per capita health spending for a populace of its size.

Figure 7: Afghanistan's Expenditure on Health as a Percent of Total Government Expenditure and Per Capita US\$, 2014



#### 2.1.3. Poverty and Hunger Profile

The recent slowdown in the economy discussed earlier has put upward pressure on poverty, resulting in an increase in the number of individuals below the poverty line (World Bank, 2016). According to the most recent data, 39.1 per cent of Afghanis remain below the national poverty line as of 2015 (IMF, 2016). The poverty gap (the percentage of per-capital expenditure from the poverty line) was estimated at 8.4 in 2012 (Government of Afghanistan, 2010). Children under the age of 15 comprise more than half of the population below the poverty line, with poverty rates highest in rural areas (Government of Afghanistan, 2010). Poverty in Afghanistan has an education dimension. More than 70 per cent of the poor population come from households whose heads have no education or are illiterate (Government of Afghanistan, 2010). 75.6 per cent of the poor population age of 15 and above are illiterate (World Bank, 2016).

Afghanistan suffers from severe rates of malnutrition among children under five years old and is one of the top ten countries with the highest burden of undernourished children (WFP, 2016). Undernourishment in Afghanistan has resulted in alarming proportions of stunting. Nearly half of all children (49.4 per cent) in the poorest quintile of households are stunted, while rates improve to 31.1 per cent in the richest quintile (Government of Afghanistan, 2013). Stunting prevalence varies across regions, with rates being lowest in the province of Ghanzi (24.3 per cent) and highest in the provinces of Farah (70.8 per cent) and Nuristan (63.3 per cent) (Government of Afghanistan, 2013). Such high rates of stunting in these provinces are attributed to food insecurity. However, stunting rates of children have actually reduced from 60.5 per cent in 2004 to 40.5 per cent in 2013, according to national data. Additionally, over 15 per cent of children ages 0-59 months suffered from wasting. Unlike stunting, there was not reduction in wasting rates. Wasting actually increased between 2004 and 2013, rising from 8.7 per cent to 9.5 per cent (Government of Afghanistan, 2013).

| Table 6: Afghanistan's Nutritional | Status of Children 0-59 m | onths by Wealth Group (2013 | 5) |
|------------------------------------|---------------------------|-----------------------------|----|
| 0                                  |                           |                             | /  |

| Wealth Quintiles | Stunted | Wasted |
|------------------|---------|--------|
| Lowest           | 49.4    | 9.8    |
| Second           | 48.5    | 10.2   |
| Middle           | 44.7    | 11.4   |
| Fourth           | 39.1    | 11.1   |
| Highest          | 31.1    | 6.8    |

Source: (Government of Afghanistan, 2013).

According to the most recent National Risk and Vulnerability Assessment, 33 per cent (9.3 million) people in Afghanistan are food insecure (Government of Afghanistan, 2013). Of those, 3.4 million

people are estimated to be severely food insecure, with 5.9 million being moderately food insecure (Government of Afghanistan, 2013). Extreme weather events and conflict have contributed to to the prevalence of food insecurity in the country. In 2016 it is estimated that 235,000 people who are affected by natural disasters and 750,000 who are affected by conflict will be in need of humanitarian food assistance (WFP, 2016).



#### Figure 8: Afghanistan's Millennium Development Goals Indicators

Source: Based on Data from (The United Nations, 2016), (UNDP, 2016), and (Government of Afganistan, 2012).

## 2.2. Bangladesh

## 2.2.1. <u>Demographic Profile</u>

The most recent population census of 2011 estimated Bangladesh's population at 149.8 million (BBS 2013). Over the past decade, Bangladesh's population growth rate has fallen dramatically. It currently sits at an average rate of 1.2 per cent annually, which is slightly less than 1.35 per cent average of the South Asia region (UN, 2016). It is also important to note that a high proportion of Bangladesh's population resides in rural communities, as only 23.4 per cent lives in urban settlements (BBS 2013).

| Period    | Population<br>growth rate | Population<br>change per<br>year | Birth | Death | Net<br>Migration |
|-----------|---------------------------|----------------------------------|-------|-------|------------------|
| 1980-1985 | 2.7                       | 2307                             | 3644  | 1166  | -171             |
| 1985-1990 | 2.6                       | 2581                             | 3758  | 1135  | -42              |
| 1990-1995 | 2.3                       | 2496                             | 3721  | 1052  | -173             |
| 1995-2000 | 2.1                       | 2569                             | 3667  | 953   | -146             |
| 2000-2005 | 1.7                       | 2,375                            | 3564  | 894   | -295             |
| 2005-2010 | 1.2                       | 1775                             | 3351  | 866   | -710             |
| 2010-2015 | 1.2                       | 1855                             | 3192  | 859   | -479             |

| Table 7: Bangladesh's | Population | Change in | thousands, | 1980 - 1000 | 2015 |
|-----------------------|------------|-----------|------------|-------------|------|
| 0                     | 1          | 0         |            |             |      |

Source: Based on data from (UN, 2016).

This change in Bangladesh's population dynamics can largely be explained by its declining fertility rates as well as recent improvements in health services provision. As highlighted in Figure 1, the Total Fertility Rate (TFR) has decreased by almost two thirds from 6.36 children per woman in early 1980 to 2.14 children per woman in 2010-2015 (UN, 2016).

Figure 9: Bangladesh's Total Fertility Rates, 1980-2010



Source: Based on data from (UN, 2016).

Indicators of health have also shown significant improvement over the same period of time. For instance, the infant mortality rate declined from a rate of 125.7 infant deaths per 1,000 live births in the early 1980s to 32.2 per 1,000 births from 2010-2015. Over this period of time, life expectancy also increased steadily increased to 71.2 years in 2010–2015, compared to 54.3 years in 1980-1985 (UN, 2016). The Crude Death Rate fell by 60 per cent from the early 1980s when it was 13.5 deaths per 1000 lives to 2010-2015 when it reached 5.5 deaths per 1,000 lives (UN, 2016).

As a result of dramatically declining fertility rates, improved mortality and increased life expectancy, the population structure has changed significantly over the past few decades.



Figure 10: Bangladesh's Population Pyramid, 1980-2050

Source: Author's calculation based on data from (UN, 2016).

One of the most notable developments in the above figures is the broadening of the middle segment. This suggests that Bangladesh will likely undergo two demographic transitions:

- Demographic Momentum despite the declining fertility rate, Bangladesh's population will continue to rise as more woman than before will be in their reproductive years.
- Demographic Window of Opportunity the working-age population increases at a greater rate than the general population, which is often considered a favourable demographic development.

Although this could be considered a favourable transition, Bangladesh is already struggling with issues of high rates of youth unemployment and the management of its predominantly informal labour sector. Accordingly, creating highly productive and decent income jobs will remain a priority for the country, along with other relevant issues such as minimizing the high rates of female unemployment (World Bank, 2008).



Figure 11: Bangladesh's Population Growth Rates by Major Age Groups, per cent, 2000-2015

Source: Author's calculation based on data from (UN, 2016).

## 2.2.2. <u>Macroeconomic Profile</u>

Bangladesh's economy has been recently undergoing intense transformational change. For instance, over the past decade the country's real GDP grew at an average annual rate of 7.7 percent (IMF, 2016). This is 6.5 percentage points above the population growth rate, which has resulted in a doubling of GDP per capita. However, Bangladesh's economy also suffers from high inflation. This is demonstrated by the CPI index reaching 11.5 percent in 2011. More recently, inflation has declined and stood at 6.4 percent in 2015 (IMF, 2016).

| <b>Economic Indicators</b>          | 2004      | 2006      | 2008      | 2010      | 2012      | 2014      | 2015       |
|-------------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|------------|
| GDP, current prices,<br>Billion BDT | 4,082.13  | 5,160.68  | 6,668.77  | 8,566.84  | 11,270.64 | 14,286.37 | 16,158.23  |
| GDPper capita, current<br>BDT       | 28,903.08 | 35,623.17 | 45,068.41 | 56,686.92 | 72,856.97 | 90,295.79 | 101,079.41 |
| GDPper capita, current US\$         | 485.663   | 523.025   | 655.954   | 807.531   | 916.025   | 1,161.85  | 1,286.87   |
| Inflation (CPI),<br>percent         | 6.103     | 6.77      | 8.9       | 9.365     | 6.229     | 7.009     | 6.431      |
| GDP growth, real                    | 6.108     | 6.851     | 5.515     | 6.03      | 6.26      | 6.292     | 6.402      |
| Exchange rate, BDT per 1 US\$       | 59.51     | 68.11     | 68.71     | 70.20     | 79.54     | 77.72     | 78.55      |

Table 8: Bangladesh's Main Economic Indicators, 2004-2015

Source: Author's calculation based on data from IMF database (IMF, 2016).

Bangladesh has one of the lowest tax-to-GDP ratios in the world, at 8.5 percent in 2015 (IMF, 2016). the country's tax collections have significantly underperformed in the past two years (IMF, 2016). One way the country is currently seeking to address this issue is by introducing a value added tax in July 2016. While this is expected to broadening the tax base and create fiscal space to fund investments in social sectors, it might result in welfare loss as VAT is generally regressive form of taxation. The government plans include exempting those who are within the lower income brackets (IMF, 2016). A

social security intervention as the one described can mitigate the welfare loss and improve the progressivity of the tax system in Bangladesh.

## 2.2.3. Poverty and Hunger Profile

Bangladesh has made such significant progress in human development that it has been hailed as a "success story among developing countries" as well as a "role model in achieving the MDGs" (World Bank, 2008). Advancements in extreme poverty, gender equality, and child health have all been highlighted as some of its major accomplishments. Progress in these areas has also played a role in the country being able to lift over 16 million people out of poverty within a decade (World Bank, 2013).

Figure 12: Bangladesh's Millennium Development Goal (MDGs) Indicators



Source: Based on data from (Government of Bangladesh, 2015).

To continue to improve Bangladesh's social development and economic growth, there has been an increasing focus on female participation in the labour market. Although the country has experienced substantial success improving gender equality in education, which was demonstrated by the greatly improved girl/boy ratios in primary and secondary schools, this progress has not been mirrored in other sectors. The creation of decent wage employment for women remains one of the country's largest obstructions to further development. Based on estimates from the 2013 Labour Force Survey (LFS), Bangladesh falls approximately 18 percent short of meeting the 2015 MDG target of having a 50 percent share of women in wage employment in non-agriculture sectors (Government of Bangladesh, 2015). The country is also lagging behind in female representation in politics. According to 2014 data, only 20

percent of seat in the Jatiya Sangsad are held by women compared to the targeted 30 percent (Government of Bangladesh, 2015).

Current estimates suggest that 78 percent of the labour force is engaged in low-income and lowproductivity jobs in the informal sector (IMF, 2013). Despite that the increase in per capita income and large-scale reductions in poverty have been largely attributed to the growth in labour income, the informal nature of these jobs means they fall outside government regulation and protection. Productive employment is prescribed by the IMF to be the most potent means of reducing poverty on a sustained basis (IMF, 2013). Thus, the challenge that remains for Bangladesh is to create high-productivity and high-income jobs for new workers, and also to facilitate the substantial transfer of labour from the informal to the formal sector (IMF, 2013).

To be able to foster a new healthy and productive workforce, Bangladesh will have to manage its high levels of food insecurity and nutritional inadequacy. As it is one of the world's most densely populated countries, Bangladesh has continuously struggled with adequate food provision. The near tripling of rice production over the past 40 years has helped to decrease the country's dependency on imports and has allowed it to become nearly self-sufficient (IMF, 2013). This has increased Bangladesh's resiliency, which was demonstrated by the limited impact of the 2007-2008 global food crisis. However, hunger and malnutrition are still rampant problems. The 2014 Demographic and Health Survey indicated that 41 percent of children under five suffer from stunted growth, and 36 percent of children are underweight (Government of Bangladesh, 2015). Bangladesh's numerous demographic, social, and ecological challenges will continue to make it particularly vulnerable to food insecurity (IMF, 2013). Climate change, specifically rising sea levels and extreme weather events, will make managing this problem even more difficult.

## 2.3. Haiti

## 2.3.1. Demographic Profile

The most recent population estimate for Haiti was 10.57 million in 2014 (World Bank 2016). Approximately 57.43 per cent of inhabitants live in urban communities (World Bank 2016). Over the past decade, Haiti's population grew at an average annual rate of 1.45 per cent, which is higher than that of Latin America and the Caribbean (1.18 per cent), but is lower than that of Least Developed Countries (LDCs), estimated at 2.37 per cent (UN, 2016).

| Period    | Population<br>growth rate | Population<br>change per<br>year | Birth | Death | Net<br>Migration |
|-----------|---------------------------|----------------------------------|-------|-------|------------------|
| 1980-1985 | 2.3                       | 137                              | 252   | 93    | -22              |
| 1985-1990 | 2.1                       | 143                              | 264   | 94    | -27              |
| 1990-1995 | 1.9                       | 144                              | 265   | 93    | -28              |
| 1995-2000 | 1.8                       | 146                              | 267   | 93    | -28              |
| 2000-2005 | 1.6                       | 143                              | 266   | 94    | -29              |
| 2005-2010 | 1.5                       | 147                              | 267   | 93    | -27              |
| 2010-2015 | 1.4                       | 143                              | 265   | 92    | -30              |

Table 9: Haiti's Population Change in thousands, 1980-2015

Source: Based on data from (UN, 2016).

The pattern of natural population growth (excluding migration) can be explained by two underlying factors: fertility rates and mortality rates. The total fertility rate (TFR) decreased from 6.06 children per woman in 1980 to 2.97 children per woman in 2015 (UN, 2016).



Figure 13: Haiti's Total Fertility Rates, 1980-2015

Source: Based on data from (UN, 2016).

The second factor, the mortality rate, has shown significant improvement over the same period. The infant mortality rate declined from a rate of 123.5 infant deaths per 1,000 live births in 1980-1985 to 47.5 per 1,000 live births in 2010-2015. The crude death rate was estimated at 9.0 deaths per 1,000 lives in 2010-2015, a decrease of just less than half of 15.5 deaths per 1000 lives in 1980-1985. Life expectancy at birth, therefore, increased by over ten years and reached 62.1 years in 2010–2015, compared to 51.6 years in 1980-1985 (UN, 2016).

As a result of declining fertility rates, improved mortality and increased life expectancy, the population structure has changed notably over the past few decades. The median age in Haiti increased from 19.1 in 1980 to 23.0 in 2010 (UN, 2016).

Figure 14: Haiti's Population Pyramids, 1980, 2015 and 2050



Source: Author's calculation based on data from (UN, 2016).

The broadening mid-chapter of Haiti's population pyramid has two main potential consequences:

- First, the likelihood of steady and possibly increased population growth, despite the declining fertility rate. This phenomenon is known as the "demographic momentum," which occurs due to the fact that more women are in their reproductive years. This might come into effect in the near future in Haiti, and translate into an increase in the pace of the population growth.
- Second: a situation where the working-age population expands at a higher rate than the general
  population. This is considered a favourable demographic development, which is widely referred
  to as "demographic window of opportunity".

The expansion of the working-age population relative to the general population, and the concomitant enlargement of the labour force, can present a favourable condition. However, it also constitutes a substantial challenge to the economy to create decent work and sufficient numbers of adequate jobs to absorb the incoming labour market participants.



Figure 15: Haiti's Population Growth Rates by Major Age Groups, per cent, 2000-2015

Source: Author's calculation based on data from the (UN, 2016).

## 2.3.2. <u>Macroeconomic Profile</u>

The economy of Haiti presents a mixed picture. Over the past decade, GDP grew at an average annual rate of 1.7 per cent in real terms (IMF, 2016). Growth was largely hindered by negative rates in 2004 and 2010, due to a coup d'état and earthquake, respectively. If these two years were not counted, growth would have been 2.9 per cent over the same time period (IMF, 2016). GDP growth of 1.7 per cent is less than one percentage point above the population growth rate, resulting in in decline in real GDP per capita. Nevertheless, Haiti's inflation is moderate – CPI inflation was 4.1 per cent in 2010, and was 7.3 per cent in 2015 (IMF, 2016). Roughly 1.0 million outmigrants were registered in 2010 (World Bank, 2016), many travel to the United States, Dominican Republic, Canada and France. Migrant remittances estimated to have reached about 22.7 per cent of GDP in 2014 (World Bank, 2016).

| Table | 10: | Haiti's | Main | Economic | Indicators. | 2004-2015 |
|-------|-----|---------|------|----------|-------------|-----------|
|       |     |         |      |          |             |           |

| Economic                                |           |           |           |           |          |           |           |          |
|---|-----------|-----------|-----------|-----------|----------|-----------|-----------|----------|
| Indicators                              | 2004      | 2006      | 2008      | 2010      | 2012     | 2013      | 2014      | 2015     |
| GDP, current prices,<br>Billion Gourdes | 140.387   | 197.138   | 250.59    | 266.952   | 328.061  | 364.526   | 388.809   | 424.83   |
| GDP per capita,<br>current LC           | 15,376.56 | 20,997.50 | 25,999.52 | 26,974.66 | 32,245.7 | 35,330.98 | 37,166.03 | 40,064.4 |
| GDPper capita,<br>current US\$          | 387.486   | 506.591   | 679.532   | 668.944   | 775.492  | 819.108   | 832.633   | 829.643  |
| Inflation (CPI),<br>percent             | 28.316    | 14.21     | 14.381    | 4.136     | 6.78     | 6.776     | 3.944     | 7.382    |
| GDP growth, real                        | -3.523    | 2.249     | 0.844     | -5.498    | 2.885    | 4.248     | 2.75      | 2.5      |
| Exchange rate, LCU<br>per 1 US\$        | 39.68     | 41.45     | 38.26     | 40.32     | 41.58    | 43.13     | 44.64     | 48.29    |

Source: Author's calculation based on data from (IMF, 2016).

Haiti's overall domestic revenue to GDP ratio is low by regional standards in part due to foregone fuel tax revenues (IMF, 2015). A drop in international oil prices has provided the government the opportunity to raise fuel taxes, lower electricity subsidies and remove regressive fuel subsidies ((IMF, 2015). The fuel subsidies are regressive as 90 per cent accrued to the richest 20 per cent of the population (IMF, 2015) Reforming the fuel subsidy can provide space for the government to invest in key social sector including establishing a social protection floor, health, and/or education. A more appropriate level of social spending would promote economic growth by developing human capital through a more educated workforce, improve efficiencies in many small farms, and boost productivity by expanding access to healthcare (IMF, 2015).

External public debt (which had fallen to 9 per cent of GDP in 2011 following HIPC completion point and debt write-offs after the earthquake) rebounded to 21 per cent of GDP in 2014 (IMF, 2015). Domestic public debt was approximately 5 per cent in 2014, reflecting shallow domestic markets (IMF, 2015). In addition to debt relief/write-offs, Haiti benefited from a large flows of aid in the aftermath of the 2010 earthquake. Aid reached 17.6 per cent of GDP in 2014 (IMF, 2015). As earthquake rebuilding has winded down so too has the inflow of aid.

## 2.3.3. <u>Poverty and Hunger Profile</u>

Six years after from the devastating earthquake of 2010, Haiti has transitioned from recovery to longer term development. The country continues to improve infrastructure and strengthen institutions, increase access and quality of education and health, and stimulate investment (World Bank, 2016). Although many challenges remain, Haiti has seen a number of positive developments since the earthquake. Of the 1.5 million internally displaced people, more than 1.4 million have left camps and relocated (World Bank, 2016).

#### Figure 16: Haiti's Millennium Development Goal Indicators



62.0 58 62.6 18.0 28 18.0 4 18.0 5 18.0 4 18.0 5 18.0 4 18.0 4 18.0 5 18.0 4

Source: Calculations based on data from (The United Nations, 2016).

Despite marginal progressions, Haiti remains the poorest country in Latin America and the Caribeean and one of the poorest in the world. More than 6 million out of 10.5 million live under the poverty line of US\$ 2.42 per day and over 2.5 million live under the extreme poverty line of US\$ 1.23 per day (World Bank, 2016). The disparity between urban and rural is quite substantial as reductions in poverty have been highly concentrated in urban areas. Haiti is also one of the most unequal countries in the world with a GINI coefficient of 0.61 in 2012 (World Bank, 2016). The richest 20 per cent of the population hold more than 64 per cent of the wealth, while the poorest 20 per cent hold barely 1 per cent (World Bank, 2016). Only 8 per cent of the population received non-contributory social assistance benefits in 2012 (such as scholarships, food aid, and other transfers) (World Bank, 2016).

Primary education statistics have improved, which have been accompanied by other general improvements since 2010. Participation rates of school-age children rose from 78 per cent to 90 per cent in the six years following the earthquake (World Bank, 2016). The mean years of schooling for females is 4.2 and for men it is 5.6 (UNDP, 2016). Quality of education still remains a challenge however, as only one third of all children aged 14 are in the appropriate grade for their age (World Bank, 2016). Finally, while literacy rates remain over 70 per cent for youth, the general population (above the age of 15) had a literacy rate of 48.7 in 2015 (UNDP, 2016). In contrast, the average literacy rate for Latin American and Caribean developing countries is 92% (World Bank, 2016).

While child mortality has decreased significantly, the MDG target was not met. Child stunting remains a large problem with a prevelance rate of 22 per cent in 2015 (UNICEF, 2015). Rates of chronic malnutrition are not only high for children but for the population as a whole, which stood at 49.3 percent in 2010 (UN Stat, 2015).

## 2.4. Sierra Leone

## 2.4.1. Demographic Profile

The most recent population census of 2015 estimated the country's population to be at 6.315 million (Government of Sierra Leone 2015). Approximately 39.58 per cent of inhabitants live in urban communities (World Bank 2015). Over the past decade, Sierra Leone's population grew at an average annual rate of 2.47 per cent (UN, 2016), which is below that of the West Africa region (2.74 per cent), but is higher than that for Least Developed Countries (LDCs), estimated at 2.37 per cent (UN, 2016).

| Period    | Population<br>growth rate | Population<br>change per<br>year | Birth | Death | Net<br>Migration |
|-----------|---------------------------|----------------------------------|-------|-------|------------------|
| 1980-1985 | 2.3                       | 74                               | 152   | 77    | -1               |
| 1985-1990 | 2.6                       | 98                               | 170   | 91    | 18               |
| 1990-1995 | -0.3                      | 11                               | 178   | 105   | -62              |
| 1995-2000 | 0.8                       | 31                               | 180   | 105   | -44              |
| 2000-2005 | 4.3                       | 193                              | 198   | 99    | 94               |
| 2005-2010 | 2.8                       | 158                              | 220   | 95    | 23               |
| 2010-2015 | 2.2                       | 135                              | 227   | 88    | -4               |

Table 11: Sierra Leone's Population Change in thousands, 1980 – 2010

Source: Based on data from (UN, 2016).

The pattern of natural population growth (excluding migration) can be explained by two underlying factors: fertility rates and mortality rates. Since 1980, the Total Fertility Rate (TFR) decreased by almost a third, but still high at 4.88 children per woman in 2010-2015 (UN, 2016).





The second factor, the mortality rate, has shown significant improvement over the same period. The infant mortality rate declined from a rate of 152.2 infant deaths per 1,000 live births in 1980-1985 but remains high at 97.3 per 1,000 births in 2010-2015. The crude death rate was estimated at 14.5 deaths per 1,000 live in 2010-2015, a decrease by almost half the rate of 23.6 deaths per 1000 in the early 1980s. The increase in life expectancy, therefore, still very modest as life expectancy is only 49.7 years in 2010–2015, compared to 40.74 years in 1980-1985 (UN, 2016).

With the modest changes in fertility rates, mortality and life expectancy, the population structure has not changed notably over the past few decades. Sierra Leone's young population continues to be the main feature that characterizes its population with a median age of only 18.5 (UN, 2016).

Figure 18: Sierra Leone's Population Pyramide, 1980-2050



Source: Author's calculation based on data from (UN, 2016).

Source: Based on data from (UN, 2016).

The expansion of the working-age population relative to other population groups (general population, and pre working population) since 2007, and the concomitant enlargement of the labour force, can present a favourable condition. However, it also constitutes a substantial challenge to the economy to create decent work and sufficient numbers of adequate jobs to absorb the incoming labour market participants. In Sierra Leone, the challenge is expressed in the fact that youth unemployment (below 24 years) accounted for 31.4 percent of the overall unemployed population in 2004 (UN Stat, 2015).

Figure 19: Sierra Leone's Population Growth Rates by Major Age Groups, per cent, 2000-2016



Source: Author's calculation based on data from (UN, 2016).

## 2.4.2. <u>Macroeconomic Profile</u>

Over the past decade, GDP grew at an average annual rate of 5.07 per cent in real terms (IMF, 2016). This is 2.6 percentage points above the population growth rate, resulting in an improvement in real GDP per capita. Nevertheless, Sierra Leone's economy suffers from a high inflation environment – CPI inflation stood at 10.21 percent in 2010 (IMF, 2016).

| Table | 12: Sierra | Leone's Main | n Economic | Indicators, | 2004-2015 |
|-------|------------|--------------|------------|-------------|-----------|
|-------|------------|--------------|------------|-------------|-----------|

| Economic Indicators                                      | 2004       | 2006         | 2008         | 2010         | 2012         | 2013         | 2014         | 2015         |
|--|------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| GDP, current prices,<br>Billion Sierra Leonean<br>Leones | 3,913.44   | 5,583.98     | 7,470.55     | 10,255.61    | 16,460.08    | 21,154.02    | 22,091.33    | 22,069.30    |
| GDPper capita, current<br>LC                             | 794,096.02 | 1,057,389.33 | 1,350,389.92 | 1,782,972.35 | 2,753,107.61 | 3,465,440.54 | 3,544,553.78 | 3,492,529.70 |
| GDPper capita, current<br>US\$                           | 291.951    | 356.824      | 453.958      | 448.198      | 633.801      | 797.526      | 761.475      | 659.438      |
| Inflation (CPI), percent                                 | 14.247     | 9.546        | 14.834       | 17.782       | 13.811       | 9.799        | 8.287        | 10.205       |
| GDP growth, real   | 6.598      | 4.224        | 5.4          | 5.347        | 15.212       | 20.684       | 7.06         | -21.473      |
| Exchange rate, SLLs per<br>1US\$                         | 2,719.96   | 2,963.34     | 2,974.70     | 3,978.09     | 4,343.80     | 4,345.24     | 4,654.85     | 5,296.22     |

Source: Author's calculation based on data from (IMF, 2016).

#### 2.4.3. Poverty and Hunger Profile

The strong economic growth experienced after 2006 in Sierra Leone (excluding the decline in 2014 and 2015 most likely due to the Ebola outbreak) have translated into a reduction in the incidence of poverty. Between the years of 2003 and 2011, Sierra Leone experienced a 13.5 percent reduction in the percent of population living in poverty (The Government of Sierra Leone, 2012). However, progress on poverty reduction does not change the fact that 52.9 percent of the population (i.e. approximately 3, 340, 966 Sierra Leoneans), are still living below the poverty line in 2011 (The Government of Sierra Leone, 2012). The poverty gap (the percentage deficit of per-capita expenditure from poverty line) was estimated at 16 percent in 2011 (The Government of Sierra Leone, 2012). In the positive side, between the years 2003 and 2011, the national level of extreme poverty declined significantly from 31.3 percent to 13.9 percent (The Government of Sierra Leone, 2012)- almost meeting the target for MDG1 on extreme poverty.



#### Figure 20: Sierra Leone's Millennium Development Goals Indicators

36 | P a g e

Goal 7: Ensure environmental sustainability



Source: Based on data from (The United Nations, 2016), (The Government of Sierra Leone, 2015)

The decline in poverty is the highest in urban areas outside Freetown as a reduction from 70.9 percent in 2003 to 39.5 percent in 2011. Urban poverty as a whole decreased from 46.9 percent to 31.2 percent. However, it remains pervasive in rural areas with a rate of 66.1 percent in 2011. The average individual in poverty and living in rural areas falls short by 21 percent of their basic needs while the average urban poor fall short by 8 percent (The Government of Sierra Leone, 2012).

In many households, income poverty is coupled with malnutrition. As of 2009, 36 percent of children under the age of five in Sierra Leone are stunted, 21 percent are underweight, and 10 percent are wasted. Almost, 1 in 4 infants are born with low birth weight (UNICEF, 2015). Furthermore, Malnutrition is the cause of 57 percent of under-five mortality in 2013 (UNDP, 2015).

Most Sierra Leoneans work in agriculture industry and are very vulnerable to climate change, which has the potential to decrease the yields of critical crops. Water, soil and forest resources are threatened by population growth and the dependence of energy on biomass. The agricultural industry is further stressed by the growth in unsustainable mining activities, river pollution, as well as increased vulnerability to landslides and soil erosion due to deforestation (UNDP, 2015). The Ebola epidemic slowed down economic growth and closed businesses across Sierra Leone. It also put pressure on government budgets and limited their ability to provide basic services to vulnerable populations. Throughout the health crisis, many jobs were lost. For example, 50 percent of jobs in Sierra Leone's private sector have been lost. However, the economy has continued to recover since the outbreak and employment is returning to pre Ebola levels (UNDP, 2015). It also tore the social fabrics of communities and resulted in the stigmatization of victims and survivors (MSF, 2015).

#### 2.5. Tanzania

#### 2.5.1. Demographic Profile

The most recent population census of 2012 estimated Tanzania's population at 44.93 million (United Republic of Tanzania, 2015). Approximately 31.6 percent of inhabitants live in urban communities (World Bank, 2015). Over the past decade, Tanzania's population grew at an average annual rate of 3.1 percent, which makes it one of the world's fastest growing populations (UN, 2016).

| Period    | Population<br>growth rate | Population<br>change per year | Birth   | Death  | Net<br>Migration |
|-----------|---------------------------|-------------------------------|---------|--------|------------------|
| 1980-1985 | 3.1                       | 622.36                        | 921.23  | 303.16 | 4.29             |
| 1985-1990 | 3.1                       | 710.01                        | 1047.22 | 348.58 | 11.37            |
| 1990-1995 | 3.2                       | 881.2                         | 1181.67 | 419.04 | 118.57           |
| 1995-2000 | 2.6                       | 819.43                        | 1326.66 | 475.01 | -32.22           |
| 2000-2005 | 2.7                       | 987.12                        | 1518.09 | 466.16 | -64.8            |
| 2005-2010 | 3.1                       | 1286.67                       | 1750.34 | 415.71 | -47.96           |
| 2010-2015 | 3.2                       | 1542.08                       | 1950.94 | 368.82 | -40.04           |

Table 13: Tanzania's Population Change in thousands, 1980 – 2015

Source: Based on data from (UN, 2016).

The pattern of natural population growth (excluding migration) can be explained by two underlying factors: fertility rates and mortality rates. the Total Fertility Rate (TFR) remained high at 5.28 child per woman in 2015, a slight decrease from rom 6.58 child per woman in 1980 (UN, 2016).



Figure 21: Tanzania's Total Fertility Rates (children per women), 1980-2015

The second factor, the mortality rate, has shown significant improvement over the same period. The infant mortality rate declined from a rate of 104.6 infant deaths per 1,000 live births in 1980-1985 to 65.58 deaths per live births in 2010-2015. The crude death rate was estimated at 7.4 deaths per 1,000 live in 2010-2015, a decrease by more than half the rate of 15.2 deaths per 1000 in the early 1980s. Life expectancy, therefore, increased steadily and reached 65.58 years in 2010–2015, compared to 52.41 years in 1980-1985 (UN, 2016).

As a result of slow-declining fertility rates, improved mortality and increased life expectancy, the population structure has changed over the past few decades. Nevertheless, Tanzania's young population continues to be the main feature that characterizes its population with a median age of only 17.4 (UN, 2016).

Source: Based on data from (UN, 2016).

Figure 22: Tanzania's Population Pyramid, 1980-2050



Source: Author's calculation based on data from (UN, 2016).

The expansion of the working-age population relative to other population groups (general population, and pre working population) since 2007, and the concomitant enlargement of the labour force, can present a favourable condition. However, it also constitutes a substantial challenge to the economy to create decent work and sufficient numbers of adequate jobs to absorb the incoming labour market participants.

Figure 23: Tanzania's Population Growth Rates by Working Status, 2000-2016



Source: Author's calculation based on data from the (UN, 2016).

## 2.5.2. Macroeconomic Profile

The economy of Tanzania has performed relatively well over the past few years. GDP growth rate stood at 7 percent in 2015 (IMF, 2016), but maintained a solid premium over the population growth, which led to improved GDP per capita. Tanzania, however, faced high inflation over the past decade and spiked at 16 percent in 2012 but has fallen since then and stood at 6 percent in 2015 (IMF, 2016).

| Economic<br>Indicators              | 2006       | 2008       | 2010       | 2012         | 2014         | 2015         |
|-------------------------------------|------------|------------|------------|--------------|--------------|--------------|
| GDP, current prices,<br>Billion TZS | 23,298.40  | 32,764.80  | 43,836.00  | 61,434.20    | 79,442.50    | 89,411.06    |
| Dimon 125                           |            |            |            |              |              |              |
| GDP per capita,                     | 602,996.98 | 804,347.70 | 102,344.20 | 1,367,364.50 | 1,699,521.00 | 1,875,273.99 |
| current TZS                         |            |            |            |              |              |              |
| GDP per capita,                     | 481.70     | 671.90     | 725.80     | 870.00       | 1,028.80     | 941.80       |
| current US\$                        |            |            |            |              |              |              |
| Inflation (CPI),                    | 7%         | 10%        | 7%         | 16%          | 8%           | 6%           |
| GDP growth, real                    | 4.66%      | 5.56%      | 6.35%      | 5.14%        | 6.96%        | 6.97%        |
| Exchange rate, TZS                  | 1251.81    | 1197.12    | 141.01     | 1571.68      | 1651.94      | 1991.15      |
| per 1 US\$                          |            |            |            |              |              |              |

Table 14: Tanzania's Main Economic Indicators, 2006-2015

Source: Author's calculation based on data from (IMF, 2016).

## 2.5.3. Poverty and Hunger Profile

While the economy performed well in terms of GDP growth, it is not broad based and has not influenced the problem of poverty in the country (African Development Bank Group., 2016). Poverty in Tanzania remain widespread. In 2015, 43.5 percent of the population lived at less than \$1.90 a day. Nevertheless, it is still an improvement from the MDG base rate of 72 percent in 1990 (The United Nations, 2016). It is to be noted that poverty reduction was not even across the country. Between 2007 and 2011/2, the poverty reduction was mostly concentrated in the capital city, Dar-es-Salaam. Poverty remained virtually unchanged in other urban communities and slightly reduced in rural areas of Tanzania (World Bank, 2016).





Source: (IMF, 2016).

In terms of none-income dimensions, Tanzania made progress on MDG indicators related to reducing child mortality and gender equality. But lagged behind in other critical social outcomes. HIV/AIDS continued to be a main challenge for Tanzania. It was estimated in 2011, that 1.5 million Tanzanian were living with HIV/AIDS and that 1.2 million children were orphaned by the disease (WHO, 2016).

The adult (15-49) prevalence rate is 5.1 percent (WHO, 2016). Tanzania also lagged behind in other critical social outcomes such as education, disease burden, and Water and Sanitation.



Figure 25: Tanzania's Millennium Development Goals Indicators

Source: (The United Nations, 2016).

## 2.6. Yemen

## 2.6.1. <u>Demographic Profile</u>

The most recent population census of 2004 estimated Yemen's population at 19.6 million (UNFPA, 2012). Approximately 34.6 per cent of inhabitants live in urban communities (CIA, 2016). Over the past decade, Yemen's population grew at an average annual rate of 2.68 per cent, which is comparable to the rate for Least Developed Countries (LDCs), but higher than the average rate for Western Asia (2.21 per cent) (UN, 2016).

| Period    | Population<br>growth<br>rate | Population<br>change<br>per year | Birth | Death | Net<br>Migration |
|-----------|------------------------------|----------------------------------|-------|-------|------------------|
| 1980-1985 | 3.8                          | 335                              | 480   | 135   | -10              |
| 1985-1990 | 4.0                          | 421                              | 574   | 134   | -19              |
| 1990-1995 | 4.9                          | 651                              | 663   | 148   | 136              |
| 1995-2000 | 3.2                          | 520                              | 691   | 161   | -10              |
| 2000-2005 | 2.8                          | 534                              | 723   | 165   | -24              |
| 2005-2010 | 2.8                          | 611                              | 782   | 171   | 0                |
| 2010-2015 | 2.6                          | 647                              | 833   | 178   | -8               |

Table 15: Yemen's Population Change in thousands, 1980 – 2015

Source: Based on data from (UN, 2016).

The pattern of natural population growth (excluding migration) can be explained by two underlying factors: fertility rates and mortality rates. Since 1980, the Total Fertility Rate (TFR) decreased by almost half, from 8.79 children per woman in early 1980 to 4.42 children per woman in 2010-2015 (UN, 2016).

Figure 26: Yemen's Total Fertility Rates, 1980-2015



Source: Based on data from (UN, 2016).

The second factor, the mortality rate, has shown significant improvement over the same period. The infant mortality rate more than halved from a rate of 131.3 infant deaths per 1,000 live births in the

early 1980s to 53.9 deaths per 1,000 births in 2010-2015. The average crude death rate was 7.1 deaths per 1,000 live in 2010-2015, a decrease by more than half the rate of 15.2 deaths per 1000 in the early 1980s. Life expectancy at birth, therefore, increased steadily and reached 63.4 years in 2010–2015, compared to 53.0 years in 1980-1985 (UN, 2016).

As a result of declining fertility rates, improved mortality and increased life expectancy, the population structure has changed notably over the past few decades.



Figure 27: Yemen's Population Pyramid, 1980-2050

The expansion of the working-age population, and the concomitant enlargement of the labour force, can present a favourable condition. However, it also constitutes a substantial challenge to the local economy to create decent work and sufficient numbers of adequate jobs to absorb the incoming labour market participants. Unemployment – and especially youth unemployment – is one of the most critical challenges faced by Yemen, and one of the main factors of political instability and insecurity (UNDP, 2015). Youth unemployment rates are more than three times higher than adults, and significant gender discrepancies exist, as the unemployment rate is 3 times higher for young women (UNDP, 2015). Latest available data, according to the new government program, shows that the unemployment rate among young people aged 15-24 reached 33.7 percent in 2014 (Azaki, 2015).

Figure 28: Yemen's Projected Population Growth Rates by Major Age Groups, per cent, 2000-2016



Source: Author's calculation based on data from (UN, 2016).

Source: Author's calculation based on data from (UN, 2016).

## 2.6.2. <u>Macroeconomic Profile</u>

The economy of Yemen presents a mixed picture. Though GDP grew steadily from 2004-2014, Yemen has recently faced multiple severe shocks, which have taken a heavy toll on economic activity (IMF, 2016). A sharp decline in oil production, social unrest and sabotage activities affected investment and resulted in frequent damage to infrastructure. With the outbreak of civil war in March 2015, real activity collapsed and fiscal deficit has surged (IMF, 2016). Inflation, for example, sharply increased from 8.16 percent in 2014 to 30.03 percent in 2015 (IMF, 2016). Official reporting also suggests that Yemen's GDP contracted in 2015 by approximately 28 percent (World Bank, 2016).

| Economic         | 2004      | 2006      | 2008      | 2010      | 2012      | 2012      | 2015      |
|------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Indicators       | 2004      | 2000      | 2000      | 2010      | 2012      | 2013      | 2015      |
| GDP, current     | 2,563.49  | 3,760.04  | 5,375.83  | 6,786.81  | 7,586.55  | 8,684.83  | 7,919.11  |
| prices, Billion  |           |           |           |           |           |           |           |
| YERs             |           |           |           |           |           |           |           |
| GDP per capita,  | 126,098.0 | 173,897.4 | 233,957.6 | 278,173.8 | 293,103.0 | 325,761.7 | 279,988.8 |
| current LC       |           |           |           |           |           |           |           |
| GDP per capita,  | 682.1     | 881.6     | 1,171.2   | 1,266.8   | 1,367.7   | 1,516.0   | 1,302.9   |
| current US\$     |           |           |           |           |           |           |           |
| Inflation (CPI), | 12.49     | 10.85     | 18.98     | 11.18     | 9.89      | 10.97     | 30.03     |
| percent          |           |           |           |           |           |           |           |
| GDP growth, real | 3.97      | 3.17      | 3.65      | 7.70      | 2.39      | 4.82      | -28.10    |
| Exchange rate,   | 184.87    | 197.25    | 199.76    | 219.59    | 214.30    | 214.88    | 214.90    |
| YERs per 1 US\$  |           |           |           |           |           |           |           |

| Table | 16: | Yemen' | 's Main | Economic | Indicators, | 2004-2015 |
|-------|-----|--------|---------|----------|-------------|-----------|
|-------|-----|--------|---------|----------|-------------|-----------|

Source: Author's calculation based on data from (IMF, 2016).

## 2.6.3. <u>Poverty and Hunger Profile</u>

While Yemen has made some progress in terms of income poverty reduction, it remains one of the poorest countries in the Middle East. Even before fighting broke out in early 2015, the country had the Arab world's lowest GDP per capita (IMF, 2016). Recent violent clashes and political strife has resulted in a state of humanitarian crisis, which has caused the country's human and real capital to suffer, driving levels of poverty and food and water insecurity. Below are graphs depicting the progress Yemen has made on each of the Millennium Development Goals.



#### Figure 29: Yemen's Millennium Development Goals Indicators

Source: (The United Nations, 2016)

As of 2013, 40 percent of Yemen's population was estimated to be multidimensionally poor, while an additional 22.4 percent lived near multidimensional poverty (UNDP, 2015). Conflict between rebel and government forces has sparked a massive humanitarian crisis, displacing more than 1.5 million people and affecting millions of others (WFP, 2016). Even before fighting began in March 2015, the country was importing over 90 percent of its food. Today, more than half the country's population, an estimated 14.4 million Yemenis, are considered food insecure, of whom 7.6 million severely so (WFP, 2016).. This has been classified as an "Emergency" level of food security in 10 out of 22 Yemeni governorates in June 2015, according to the five-point Integrated Food Security Phase Classification

(WFP, 2016). Chronic hunger is both a cause and a symptom of the country's escalating political and religious violence (WFP, 2015). Child malnutrition rates in Yemen are among the highest in the world – half of the country's children are chronically malnourished (WFP, 2016). In 2015, 537,000 of Yemeni children under 5 were at risk of severe acute malnutrition and 1.3 million are moderately malnourished (Nebehay, 2015). Growing food and water insecurity further exacerbate poverty rates. The combination of high population growth and exhaustion of water has contributed to a severe water crisis in Yemen (Glass, 2010). While urban areas have greater access to water than rural areas, the decrease in water availability is more drastic in urban areas.

The Gender Inequality Index (GII), another form of measurement that reflects gender-based inequalities in the dimensions of reproductive health, empowerment, and economic activity, ranked Yemen as the lowest of the 155 countries in the 2014 index (UNDP, 2015). In Yemen, 8.6 percent of adult women have reached at least a secondary level of education compared to 26.7 percent of their male counterparts (UNDP, 2015). Further, only 25.4 percent of Yemeni females participate in the labour force, while 72.2 percent of males are involved (UNDP, 2015). Women are also disproportionately affected by the current crisis due to restrictions of mobility, decision-making power and lack of access and control over resources (UN Women, 2015).

## 3. COSTING THE SYSTEM OF CASH TRANSFERS

## **3.1. Projection Methodology**

The projection exercise is divided into two parts: First, projection of the underlying factors (demographic and macroeconomic). Second, under a set of specified assumptions on the benefit parameters discussed earlier (eligibility conditions, coverage, benefit level etc.), beneficiaries, benefit level, and overall costs are projected until 2030. The linkages and dependency structure of the projection parts are illustrated in the following diagram.

Figure 30: Projection Model Components and Dependency Structure



The following steps were used to derive the costing results in line of the above model diagram:

- 1- For the demographic projection, the study uses the medium-variant population projection made available by the United Nations Department of Economic and Social Affairs, Population Division. The data set is disaggregated by sex and single-year age.
- 2- For the macroeconomic model, the study uses the IMF's latest<sup>4</sup> medium-term forecast for real GDP growth rate and inflation rate, which covers until 2020. From 2021 to 2030, the rates are fixed at the rate of 2020. GDP in current prices and per capita GDP are calculated for the projection period. Inflation (CPI) is projected to gradually decline between 2020 and 2030.
- 3- For deriving the beneficiaries, assumptions are made regarding coverage ratio among the underlying population. The study assumes a take-up rate of 60% for pregnant, under 5 and old age populations in 2016. The rate is assumed to gradually increase to 80% by 2019 and will stay at 80% until 2030. Further, the study assumes a prevalence rate of 5% for disability and orphan populations.<sup>5</sup> For those in the education category, the study assumes that 20% of children aged 12-15 will be covered in 2016 and will gradually increase to reach 40% by 2019. It remains at 40% for the rest of the projection. Applying these rates into the corresponding age groups gives the specific program's beneficiaries.

<sup>&</sup>lt;sup>4</sup> Data obtained on July 10, 2016 from the IMF website

<sup>&</sup>lt;sup>5</sup> While prevalence rate is likely higher, administrative measures will be in place to identify the beneficiaries.

- 4- For the first year of the projection, the study uses the local currency benefit amounts equivalent to the ratio of benefit to GDP per capita specified in table 1. Over the projection period, benefit amounts are assumed to maintain real value in local currency unit (indexed with inflation). However, as the economy is expected to grow in real term, benefit level will decline in relative value over the projection period.
- 5- Multiplying beneficiaries with benefit amounts specified earlier and adding administrative cost (20 percent of benefit amount) produces cost of each individual program for each country.

## 3.2. Costing Results

Applying these 5 steps for each country, results are presented below

## 3.2.1. <u>Afghanistan</u>

| Table 17: Afghanistan | 's Population | Projection | (Medium | Variant) | ) Main | Characteristics, | 2016 - | - 2030 |
|-----------------------|---------------|------------|---------|----------|--------|------------------|--------|--------|
|-----------------------|---------------|------------|---------|----------|--------|------------------|--------|--------|

|               | Thousands |        |        |               |               |        |        |        |  |  |
|---------------|-----------|--------|--------|---------------|---------------|--------|--------|--------|--|--|
|               | 2016      | 2018   | 2020   | 2022          | 2024          | 2026   | 2028   | 2030   |  |  |
| Population    | 33,836    | 35,645 | 36,946 | 38,449        | 39,931        | 41,405 | 42,875 | 44,328 |  |  |
| Pregnancy     | 992       | 1,035  | 1,054  | 1,035         | 1,009         | 1,003  | 1,013  | 1,019  |  |  |
| Children      |           |        |        |               |               |        |        |        |  |  |
| Under 5       | 4,916     | 5,002  | 5,054  | 5,129         | 5,045         | 5,015  | 5,025  | 5,039  |  |  |
| Population    |           |        |        |               |               |        |        |        |  |  |
| Aged 12-15    | 3,576     | 3,729  | 3,858  | 3,890         | 3,861         | 3,832  | 3,856  | 3,911  |  |  |
| Population    |           |        |        |               |               |        |        |        |  |  |
| Aged 15-64    | 18,452    | 19,765 | 21,135 | 22,520        | 23,961        | 25,337 | 26,649 | 27,967 |  |  |
| Old Age (65+) | 876       | 942    | 1,010  | 1,087         | 1,165         | 1,251  | 1,345  | 1,445  |  |  |
|               |           |        | Ре     | rcentage of 1 | Fotal Populat | ion    |        |        |  |  |
| Pregnancy     | 2.93%     | 2.90%  | 2.85%  | 2.69%         | 2.53%         | 2.42%  | 2.36%  | 2.30%  |  |  |
| Children      |           |        |        |               |               |        |        |        |  |  |
| Under 5       | 14.53%    | 14.03% | 13.68% | 13.34%        | 12.63%        | 12.11% | 11.72% | 11.37% |  |  |
| Population    |           |        |        |               |               |        |        |        |  |  |
| Aged 12-15    | 10.57%    | 10.46% | 10.44% | 10.12%        | 9.67%         | 9.25%  | 8.99%  | 8.82%  |  |  |
| Population    |           |        |        |               |               |        |        |        |  |  |
| Aged 15-64    | 54.53%    | 55.45% | 57.21% | 58.57%        | 60.01%        | 61.19% | 62.16% | 63.09% |  |  |
| Old Age (65+) | 2.59%     | 2.64%  | 2.73%  | 2.83%         | 2.92%         | 3.02%  | 3.14%  | 3.26%  |  |  |

Source: Study's calculation based on data from (UN, 2016).



Figure 31: Afghanistan's Population Growth Rates by Major Age Groups, 2016-2030

Source: Study's calculation based on data from (UN, 2016).

Figure 32: Afghanistan's Macroeconomic Model's Assumptions - GDP Growth Rate and CPI Rate, 2016 -2030



Source: Based on data from IMF (2016)

| Table 18: Afghanistan's Cos | ting Results: Beneficiaries |
|-----------------------------|-----------------------------|
|-----------------------------|-----------------------------|

| Male Covered<br>Population (000) | 2016  | 2018  | 2020  | 2022  | 2024  | 2026  | 2028  | 2030  |
|----------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Children Under 5                 | 1,518 | 1,874 | 2,066 | 2,091 | 2,069 | 4,012 | 4,020 | 4,031 |
| Education (12-15)                | 363   | 631   | 785   | 796   | 793   | 788   | 788   | 799   |
| Orphan (5-14)                    | 244   | 248   | 249   | 249   | 250   | 251   | 252   | 253   |
| Disability (5-64)                | 715   | 751   | 786   | 821   | 859   | 895   | 929   | 963   |
| Old Age (65+)                    | 234   | 310   | 363   | 393   | 423   | 456   | 493   | 530   |
| Female Covered                   |       |       |       |       |       |       |       |       |
| Population (000)                 |       |       |       |       |       |       |       |       |
| Pregnancy                        | 595   | 759   | 844   | 828   | 807   | 803   | 811   | 816   |
| Children Under 5                 | 1,432 | 1,794 | 1,997 | 2,009 | 1,967 | 1,954 | 1,961 | 1,969 |
| Education (12-15)                | 352   | 612   | 759   | 760   | 751   | 747   | 750   | 760   |
| Orphan (5-14)                    | 235   | 238   | 237   | 237   | 238   | 239   | 241   | 241   |
| Disability (5-64)                | 688   | 723   | 757   | 791   | 827   | 862   | 896   | 929   |
| Old Age (65+)                    | 291   | 381   | 445   | 477   | 509   | 544   | 583   | 626   |

| Monthly Amount of Benefit<br>per Beneficiary (AFN)     | 2016   | 2018   | 2020   | 2022   | 2024   | 2026   | 2028   | 2030   |
|--|--------|--------|--------|--------|--------|--------|--------|--------|
| Pregnancy  | 160    | 167    | 177    | 188    | 199    | 211    | 223    | 237    |
| Children Under 5                                       | 160    | 167    | 177    | 188    | 199    | 211    | 223    | 237    |
| Education (12-15)                                      | 325    | 340    | 360    | 381    | 404    | 428    | 454    | 481    |
| Orphan (5-14)  | 470    | 491    | 520    | 551    | 584    | 619    | 656    | 696    |
| Disability (5-64)                                      | 470    | 491    | 520    | 551    | 584    | 619    | 656    | 696    |
| Old Age (65+)  | 650    | 679    | 719    | 763    | 808    | 857    | 908    | 962    |
| Amount of Benefit as a<br>Percentage of per capita GDP |        |        |        |        |        |        |        |        |
| Pregnancy  | 5.26%  | 5.17%  | 4.98%  | 4.79%  | 4.60%  | 4.41%  | 4.22%  | 4.04%  |
| Children Under 5                                       | 5.26%  | 5.17%  | 4.98%  | 4.79%  | 4.60%  | 4.41%  | 4.22%  | 4.04%  |
| Education (12-15)                                      | 10.69% | 10.49% | 10.12% | 9.73%  | 9.35%  | 8.96%  | 8.58%  | 8.20%  |
| Orphan (5-14)  | 15.46% | 15.17% | 14.63% | 14.08% | 13.52% | 12.96% | 12.41% | 11.86% |
| Disability (5-64)                                      | 15.46% | 15.17% | 14.63% | 14.08% | 13.52% | 12.96% | 12.41% | 11.86% |
| Old Age (65+)  | 21.39% | 20.98% | 20.23% | 19.47% | 18.69% | 17.92% | 17.16% | 16.41% |

Table 19: Afghanistan's Costing Results: Benefit Level in AFN and as a Percent of GDP per Capita

Table 20: Afghanistan's Costing Results: Overall Cost in in AFN, Percentage of GDP, and Percentage of Government Expenditure

|                        | 2016       | 2018      | 2020      | 2022      | 2024      | 2026       | 2028       | 2030       |
|------------------------|------------|-----------|-----------|-----------|-----------|------------|------------|------------|
| Expenditure (AFN, 000) | 27.531.132 | 36,828,40 | 45,861,08 | 53,128,49 | 61,084,27 |            |            |            |
|                        | 27,001,102 | 2         | 4         | 5         | 7         | 70,439,891 | 81,584,731 | 94,585,555 |
| Pregnancy              | 571,171    | 806,482   | 1,006,888 | 1,110,496 | 1,215,444 | 1,358,005  | 1,540,363  | 1,741,085  |
| Children Under 5       | 6 795 209  | 0 354 430 | 11,638,80 | 13,194,98 | 14,589,38 |            |            |            |
|                        | 0,795,209  | 9,554,459 | 3         | 9         | 9         | 16,289,492 | 18,336,626 | 20,654,951 |
| Education (12-15)      | 2 510 518  | 1 878 040 | 6 734 025 | 7 627 210 | 8 504 424 | 0 / 81 210 |            |            |
|                        | 2,510,518  | 4,020,949 | 0,754,925 | 7,027,210 | 0,304,424 | 9,401,219  | 10,717,833 | 12,210,665 |
| Orphan (5-14)          | 3,246,065  | 3,638,519 | 4,090,681 | 4,592,819 | 5,181,938 | 5,846,172  | 6,602,390  | 7,432,916  |
| Disability (5-64)      | 0.400.215  | 11,041,86 | 12,983,51 | 15,236,66 | 17,903,21 |            |            |            |
|                        | 9,490,215  | 7         | 5         | 7         | 9         | 20,956,530 | 24,455,472 | 28,478,322 |
| Old Age (65+)          | 1 917 954  | 7 158 146 | 9 406 271 | 11,366,31 | 13,689,86 |            |            |            |
|                        | 4,917,934  | 7,136,140 | 9,400,271 | 5         | 3         | 16,508,473 | 19,932,047 | 24,067,617 |
| Expenditure as a       | 2 23%      | 2 53%     | 2 59%     | 2 47%     | 2 34%     | 2 22%      | 2 11%      | 2 02%      |
| Percentage of GDP      | 2.2370     | 2.3370    | 2.5770    | 2.47 /0   | 2.5470    | 2.2270     | 2.11 /0    | 2.02 /0    |
| Pregnancy              | 0.05%      | 0.06%     | 0.06%     | 0.05%     | 0.05%     | 0.04%      | 0.04%      | 0.04%      |
| Children Under 5       | 0.55%      | 0.64%     | 0.66%     | 0.61%     | 0.56%     | 0.51%      | 0.48%      | 0.44%      |
| Education (12-15)      | 0.20%      | 0.33%     | 0.38%     | 0.35%     | 0.33%     | 0.30%      | 0.28%      | 0.26%      |
| Orphan (5-14)          | 0.26%      | 0.25%     | 0.23%     | 0.21%     | 0.20%     | 0.18%      | 0.17%      | 0.16%      |
| Disability (5-64)      | 0.77%      | 0.76%     | 0.73%     | 0.71%     | 0.68%     | 0.66%      | 0.63%      | 0.61%      |
| Old Age (65+)          | 0.40%      | 0.49%     | 0.53%     | 0.53%     | 0.52%     | 0.52%      | 0.52%      | 0.51%      |

| Expenditure as a<br>Percentage of Total<br>Government Expenditure | 7.68% | 8.19% | 7.83% | 7.47% | 7.07% | 6.71% | 6.40% | 6.10% |
|---|-------|-------|-------|-------|-------|-------|-------|-------|
| Pregnancy   | 0.16% | 0.18% | 0.17% | 0.16% | 0.14% | 0.13% | 0.12% | 0.11% |
| Children Under 5  | 1.90% | 2.08% | 1.99% | 1.85% | 1.69% | 1.55% | 1.44% | 1.33% |
| Education (12-15)   | 0.70% | 1.07% | 1.15% | 1.07% | 0.98% | 0.90% | 0.84% | 0.79% |
| Orphan (5-14)   | 0.91% | 0.81% | 0.70% | 0.65% | 0.60% | 0.56% | 0.52% | 0.48% |
| Disability (5-64)   | 2.65% | 2.46% | 2.22% | 2.14% | 2.07% | 2.00% | 1.92% | 1.84% |
| Old Age (65+)   | 1.37% | 1.59% | 1.61% | 1.60% | 1.58% | 1.57% | 1.56% | 1.55% |

## 3.2.2. <u>Bangladesh</u>

Table 21: Bangladesh's Population Projection (Medium Variant) Main Characteristics, 2016-2030

|                    | Thousands |        |        |             |              |        |        |        |  |
|--------------------|-----------|--------|--------|-------------|--------------|--------|--------|--------|--|
|                    | 2016      | 2018   | 2020   | 2022        | 2024         | 2026   | 2028   | 2030   |  |
| Population         | 162911    | 166735 | 170467 | 174039      | 177433       | 180646 | 183658 | 186460 |  |
| Pregnancy          | 3088      | 3033   | 2968   | 2902        | 2835         | 2774   | 2716   | 2655   |  |
| Children Under 5   | 15348     | 15212  | 15007  | 14820       | 14554        | 14256  | 13956  | 13640  |  |
| Children 12 - 15   | 13126     | 12927  | 12628  | 12363       | 12226        | 12130  | 12032  | 11963  |  |
| Population 15 - 64 | 107631    | 111889 | 115923 | 119442      | 122568       | 125323 | 127700 | 129805 |  |
| Population 65+     | 8148      | 8373   | 8692   | 9282        | 10059        | 11092  | 12360  | 13776  |  |
|                    |           |        | Perce  | ntage of To | tal Populati | on     |        |        |  |
| Pregnancy          | 1.90%     | 1.82%  | 1.74%  | 1.67%       | 1.60%        | 1.54%  | 1.48%  | 1.42%  |  |
| Children Under 5   | 9.42%     | 9.12%  | 8.80%  | 8.52%       | 8.20%        | 7.89%  | 7.60%  | 7.32%  |  |
| Children 12 - 15   | 8.06%     | 7.75%  | 7.41%  | 7.10%       | 6.89%        | 6.71%  | 6.55%  | 6.42%  |  |
| Population 15 - 64 | 66.07%    | 67 11% | 68.00% | 68 63%      | 69.08%       | 69 37% | 69 53% | 69 62% |  |
| 65+                | 5.00%     | 5.02%  | 5.10%  | 5.33%       | 5.67%        | 6.14%  | 6.73%  | 7.39%  |  |

Source: Study's calculation based on data from (UN, 2016).



Figure 33: Bangladesh's Population Growth Rates by Major Age Groups, 2010-2030

Source: Study's calculation based on data from (UN, 2016).





Source: Based on data from IMF (2016).

Table 22: Bangladesh's Costing Results: Beneficiaries

|                                 | 2016 | 2018 | 2020 | 2022 | 2024 | 2026 | 2028 | 2030 |
|---------------------------------|------|------|------|------|------|------|------|------|
| Male Covered Population (000)   |      |      |      |      |      |      |      |      |
| Universal Pension               | 2479 | 3120 | 3540 | 3783 | 4096 | 4505 | 5002 | 5548 |
| Under 5 Child Benefit           | 4703 | 5697 | 6130 | 6054 | 5946 | 5826 | 5704 | 5576 |
| Disability Benefit              | 3513 | 3604 | 3693 | 3770 | 3839 | 3899 | 3949 | 3990 |
| Orphan Benefit                  | 811  | 798  | 787  | 778  | 772  | 765  | 757  | 746  |
| Education Stipend               | 1341 | 2202 | 2580 | 2526 | 2499 | 2478 | 2459 | 2444 |
| Female Covered Population (000) |      |      |      |      |      |      |      |      |
| Universal Pension               | 2409 | 3020 | 3413 | 3643 | 3951 | 4368 | 4886 | 5473 |
| Universal Child Benefit         | 4506 | 5459 | 5875 | 5802 | 5697 | 5579 | 5461 | 5337 |
| Universal Disability Benefit    | 3458 | 3553 | 3646 | 3727 | 3802 | 3865 | 3918 | 3962 |
| Orphan Benefit                  | 778  | 765  | 755  | 746  | 740  | 734  | 725  | 716  |
| Education Stipend               | 1284 | 2108 | 2471 | 2419 | 2392 | 2374 | 2354 | 2341 |
| Pregnancy Benefit               | 1853 | 2224 | 2374 | 2321 | 2268 | 2219 | 2173 | 2124 |

| Monthly Amount of Benefit per  | 2016    | 2018    | 2020    | 2022    | 2024    | 2026    | 2028    | 2030    |
|--------------------------------|---------|---------|---------|---------|---------|---------|---------|---------|
| Beneficiary (Taka)             |         |         |         |         |         |         |         |         |
| Universal Pension              | 1903.08 | 2167.41 | 2440.17 | 2739.34 | 3075.19 | 3452.22 | 3875.48 | 4350.63 |
| Universal Child Benefit        | 475.77  | 541.85  | 610.04  | 684.83  | 768.80  | 863.06  | 968.87  | 1087.66 |
| Universal Disability Benefit   | 1427.31 | 1625.56 | 1830.12 | 2054.50 | 2306.39 | 2589.17 | 2906.61 | 3262.97 |
| Orphan Benefit                 | 1427.31 | 1625.56 | 1830.12 | 2054.50 | 2306.39 | 2589.17 | 2906.61 | 3262.97 |
| Education Stipend              | 951.54  | 1083.70 | 1220.08 | 1369.67 | 1537.60 | 1726.11 | 1937.74 | 2175.31 |
| Pregnancy Benefit              | 475.77  | 541.85  | 610.04  | 684.83  | 768.80  | 863.06  | 968.87  | 1087.66 |
| Benefit Amount as a Percentage |         |         |         |         |         |         |         |         |
| of per capita GDP              |         |         |         |         |         |         |         |         |
| Universal Pension              | 20.17   | 17.95   | 15.97   | 14.31   | 12.80   | 11.44   | 10.21   | 9.10    |
| Universal Child Benefit        | 5.04    | 4.49    | 3.99    | 3.58    | 3.20    | 2.86    | 2.55    | 2.27    |
| Universal Disability Benefit   | 15.13   | 13.46   | 11.98   | 10.73   | 9.60    | 8.58    | 7.66    | 6.82    |
| Orphan Benefit                 | 15.13   | 13.46   | 11.98   | 10.73   | 9.60    | 8.58    | 7.66    | 6.82    |
| Education Stipend              | 10.09   | 8.98    | 7.98    | 7.15    | 6.40    | 5.72    | 5.10    | 4.55    |
| Pregnancy Benefit              | 5.04    | 4.49    | 3.99    | 3.58    | 3.20    | 2.86    | 2.55    | 2.27    |

Table 23: Bangladesh's Costing Results: Benefit Level in BDT and as a Percent of GDP per Capita

Table 24: Bangladesh's Costing Results: Overall Cost in in BDT, Percentage of GDP, and Percentage of Government Expenditure

|                               | 2016  | 2018  | 2020  | 2022  | 2024  | 2026 | 2028 | 2030 |
|-------------------------------|-------|-------|-------|-------|-------|------|------|------|
| Expenditure in BDT (Billions) | 405   | 557   | 681   | 784   | 908   | 1060 | 1246 | 1467 |
| Universal Pension             | 134   | 192   | 244   | 293   | 356   | 441  | 552  | 690  |
| Universal Child Benefit       | 63    | 87    | 105   | 117   | 129   | 142  | 156  | 171  |
| Universal Disability Benefit  | 143   | 168   | 193   | 222   | 254   | 290  | 329  | 374  |
| Orphan Benefit                | 33    | 37    | 41    | 45    | 50    | 56   | 62   | 69   |
| Education Stipend             | 27    | 67    | 89    | 98    | 108   | 121  | 134  | 150  |
| Pregnancy Benefit             | 5     | 7     | 9     | 10    | 10    | 11   | 13   | 14   |
| Expenditure as a Percentage   |       |       |       |       |       |      |      |      |
| of GDP                        | 2.20  | 2.30  | 2.18  | 1.96  | 1.78  | 1.62 | 1.49 | 1.37 |
| Universal Pension             | 0.73  | 0.79  | 0.78  | 0.73  | 0.70  | 0.67 | 0.66 | 0.65 |
| Universal Child Benefit       | 0.34  | 0.36  | 0.34  | 0.29  | 0.25  | 0.22 | 0.19 | 0.16 |
| Universal Disability Benefit  | 0.78  | 0.69  | 0.62  | 0.55  | 0.50  | 0.44 | 0.39 | 0.35 |
| Orphan Benefit                | 0.18  | 0.15  | 0.13  | 0.11  | 0.10  | 0.09 | 0.07 | 0.06 |
| Education Stipend             | 0.15  | 0.28  | 0.28  | 0.24  | 0.21  | 0.18 | 0.16 | 0.14 |
| Pregnancy Benefit             | 0.03  | 0.03  | 0.03  | 0.02  | 0.02  | 0.02 | 0.02 | 0.01 |
| Expenditure as a Percentage   |       |       |       |       |       |      |      |      |
| of Total Government           |       |       |       |       |       |      |      |      |
| Expenditure                   | 14.71 | 14.13 | 12.93 | 11.63 | 10.53 | 9.62 | 8.83 | 8.14 |
| Universal Pension             | 4.86  | 4.86  | 4.64  | 4.35  | 4.13  | 4.00 | 3.91 | 3.83 |
| Universal Child Benefit       | 2.29  | 2.21  | 2.00  | 1.74  | 1.50  | 1.29 | 1.10 | 0.95 |
| Universal Disability Benefit  | 5.20  | 4.25  | 3.67  | 3.29  | 2.94  | 2.63 | 2.34 | 2.07 |
| Orphan Benefit                | 1.19  | 0.93  | 0.77  | 0.67  | 0.58  | 0.51 | 0.44 | 0.38 |
| Education Stipend             | 0.98  | 1.71  | 1.68  | 1.45  | 1.26  | 1.09 | 0.95 | 0.83 |
| Pregnancy Benefit             | 0.19  | 0.17  | 0.16  | 0.14  | 0.12  | 0.10 | 0.09 | 0.08 |

## 3.2.3. <u>Haiti</u>

|                       |        |        |        | Thou                 | sands         |        |        |        |
|-----------------------|--------|--------|--------|----------------------|---------------|--------|--------|--------|
|                       | 2016   | 2018   | 2020   | 2022                 | 2024          | 2026   | 2028   | 2030   |
| Population            | 10,848 | 11,117 | 11,378 | 11,634               | 11,883        | 12,124 | 12,356 | 12,578 |
| Pregnant              | 248    | 251    | 252    | 248                  | 243           | 240    | 239    | 237    |
| Children Under 5      | 1,234  | 1,236  | 1,237  | 1,236                | 1,222         | 1,209  | 1,198  | 1,187  |
| Children Aged 12-15   | 922    | 929    | 940    | 944                  | 943           | 940    | 940    | 945    |
| Population Aged 15-64 | 6,720  | 6,944  | 7,169  | 7,391                | 7,618         | 7,830  | 8,030  | 8,226  |
| Old Age (65+)         | 324    | 336    | 350    | 374                  | 399           | 425    | 452    | 479    |
|                       |        |        | Pe     | rcentage of <b>T</b> | otal Populati | on     |        |        |
| Pregnant              | 2.29%  | 2.26%  | 2.21%  | 2.13%                | 2.04%         | 1.98%  | 1.93%  | 1.88%  |
| Children Under 5      | 11.38% | 11.12% | 10.87% | 10.62%               | 10.28%        | 9.97%  | 9.70%  | 9.44%  |
| Children Aged 12-15   | 8.50%  | 8.36%  | 8.26%  | 8.11%                | 7.94%         | 7.75%  | 7.61%  | 7.51%  |
| Population Aged 15-64 | 61.95% | 62.47% | 63.00% | 63.53%               | 64.10%        | 64.59% | 64.99% | 65.40% |
| Old Age (65+)         | 2.99%  | 3.02%  | 3.08%  | 3.21%                | 3.36%         | 3.51%  | 3.66%  | 3.81%  |

Table 25: Haiti's Population Projection (Medium Variant) Main Characteristics, 2016 - 2030

Source: Study's calculation based on data from (UN, 2016).

Figure 35: Haiti's Population Growth Rates by Major Age Groups, 2016 - 2030



Source: Study's calculation based on data from (UN, 2016).

Figure 36: Haiti's Macroeconomic Model's Assumptions- GDP Growth Rate and CPI Rate, 2016 - 2030



Source: Based on data from IMF (2016).

|                                 | 2016 | 2018 | 2020 | 2022 | 2024 | 2026 | 2028 | 2030 |
|---------------------------------|------|------|------|------|------|------|------|------|
| Male Covered Population (000)   |      |      |      |      |      |      |      |      |
| Children Under 5                | 377  | 462  | 504  | 504  | 498  | 493  | 489  | 484  |
| Education (12-15)               | 93   | 157  | 190  | 191  | 191  | 190  | 190  | 191  |
| Orphan (5-14)                   | 61   | 61   | 61   | 61   | 61   | 61   | 61   | 60   |
| Disability (5-64)               | 225  | 231  | 237  | 242  | 248  | 253  | 258  | 262  |
| Old Age (65+)                   | 85   | 107  | 121  | 129  | 138  | 148  | 158  | 168  |
| Female Covered Population (000) |      |      |      |      |      |      |      |      |
| Pregnancy                       | 149  | 184  | 201  | 198  | 195  | 192  | 191  | 190  |
| Children Under 5                | 363  | 444  | 485  | 485  | 479  | 474  | 470  | 466  |
| Education (12-15)               | 91   | 153  | 186  | 187  | 186  | 186  | 186  | 187  |
| Orphan (5-14)                   | 59   | 59   | 59   | 59   | 59   | 59   | 59   | 59   |
| Disability (5-64)               | 230  | 236  | 241  | 247  | 253  | 258  | 263  | 268  |
| Old Age (65+)                   | 110  | 140  | 159  | 170  | 181  | 192  | 203  | 215  |

Table 27: Haiti's Costing Results: Benefit Level in HTG and as a Percent of GDP per Capita, 2016 - 2030

| Monthly Amount of Benefit<br>per Beneficiary (HTG)     | 2016   | 2018   | 2020   | 2022   | 2024   | 2026   | 2028   | 2030   |
|--|--------|--------|--------|--------|--------|--------|--------|--------|
| Pregnancy  | 175    | 194    | 214    | 235    | 260    | 286    | 316    | 348    |
| Children Under 5                                       | 175    | 194    | 214    | 235    | 260    | 286    | 316    | 348    |
| Education (12-15)                                      | 350    | 387    | 427    | 471    | 519    | 572    | 631    | 696    |
| Orphan (5-14)  | 525    | 581    | 641    | 706    | 779    | 859    | 947    | 1044   |
| Disability (5-64)                                      | 525    | 581    | 641    | 706    | 779    | 859    | 947    | 1044   |
| Old Age (65+)  | 700    | 775    | 854    | 942    | 1038   | 1145   | 1262   | 1391   |
| Amount of Benefit as a<br>Percentage of per capita GDP | 2016   | 2018   | 2020   | 2022   | 2024   | 2026   | 2028   | 2030   |
| Pregnancy  | 4.88%  | 4.65%  | 4.43%  | 4.23%  | 4.03%  | 3.84%  | 3.65%  | 3.47%  |
| Children Under 5                                       | 4.88%  | 4.65%  | 4.43%  | 4.23%  | 4.03%  | 3.84%  | 3.65%  | 3.47%  |
| Education (12-15)                                      | 9.76%  | 9.30%  | 8.86%  | 8.46%  | 8.06%  | 7.68%  | 7.31%  | 6.94%  |
| Orphan (5-14)  | 14.64% | 13.94% | 13.29% | 12.69% | 12.10% | 11.52% | 10.96% | 10.41% |
| Disability (5-64)                                      | 14.64% | 13.94% | 13.29% | 12.69% | 12.10% | 11.52% | 10.96% | 10.41% |
| Old Age (65+)  | 19.53% | 18.59% | 17.72% | 16.91% | 16.13% | 15.36% | 14.61% | 13.89% |

Table 28: Haiti's Costing Results: Overall Cost in HTG, Percentage of GDP, and Percentage of Government Expenditure, 2016 - 2030

|                                       | 2016         | 2018          | 2020          | 2022          | 2024          | 2026          | 2028          | 2030          |
|---------------------------------------|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Expenditure<br>(HTG, 000)             | 9,022,195.92 | 11,691,883.33 | 13,992,870.04 | 15,801,341.83 | 17,800,468.27 | 20,045,895.11 | 22,575,278.65 | 25,425,197.03 |
| Pregnancy                             | 156,419.87   | 214,166.66    | 258,085.86    | 280,351.28    | 303,220.48    | 330,322.29    | 361,788.89    | 395,679.67    |
| Children Under 5                      | 1,865,470.82 | 2,527,318.85  | 3,042,807.16  | 3,353,471.61  | 3,654,771.55  | 3,987,359.74  | 4,355,848.04  | 4,756,529.53  |
| Education (12-15)                     | 697,038.80   | 1,295,017.69  | 1,735,138.52  | 1,921,168.06  | 2,115,243.91  | 2,323,965.76  | 2,563,606.20  | 2,839,489.16  |
| Orphan (5-14)                         | 900,844.69   | 1,000,955.94  | 1,104,482.96  | 1,216,740.42  | 1,341,705.26  | 1,478,189.67  | 1,627,448.90  | 1,787,541.95  |
| Disability (5-64)                     | 3,441,121.87 | 3,906,523.48  | 4,411,261.59  | 4,975,751.48  | 5,612,848.43  | 6,318,740.91  | 7,100,446.14  | 7,968,469.94  |
| Old Age (65+)                         | 1,961,299.87 | 2,747,900.72  | 3,441,093.95  | 4,053,858.98  | 4,772,678.63  | 5,607,316.75  | 6,566,140.47  | 7,677,486.78  |
| Expenditure as a<br>Percentage of GDP | 1.933        | 2.103         | 2.126         | 2.033         | 1.939         | 1.849         | 1.763         | 1.681         |
| Pregnancy                             | 0.034        | 0.039         | 0.039         | 0.036         | 0.033         | 0.030         | 0.028         | 0.026         |
| Children Under 5                      | 0.400        | 0.455         | 0.462         | 0.431         | 0.398         | 0.368         | 0.340         | 0.314         |
| Education (12-15)                     | 0.149        | 0.233         | 0.264         | 0.247         | 0.230         | 0.214         | 0.200         | 0.188         |
| Orphan (5-14)                         | 0.193        | 0.180         | 0.168         | 0.157         | 0.146         | 0.136         | 0.127         | 0.118         |
| Disability (5-64)                     | 0.737        | 0.703         | 0.670         | 0.640         | 0.611         | 0.583         | 0.554         | 0.527         |
| Old Age (65+)                         | 0.420        | 0.494         | 0.523         | 0.521         | 0.520         | 0.517         | 0.513         | 0.508         |
| Expenditure as a                      |              |               |               |               |               |               |               |               |
| Percentage of                         | 0.040        | 0.659         | 0.557         | 0.129         | 9.716         | 0 211         | 7.025         | 7 557         |
| Total Government                      | 0.040        | 9.030         | 9.557         | 9.130         | 0./10         | 0.311         | 1.925         | 1.557         |
| Expenditure                           |              |               |               |               |               |               |               |               |
| Pregnancy                             | 0.153        | 0.177         | 0.176         | 0.162         | 0.148         | 0.137         | 0.127         | 0.118         |
| Children Under 5                      | 1.828        | 2.088         | 2.078         | 1.939         | 1.790         | 1.653         | 1.529         | 1.414         |
| Education (12-15)                     | 0.683        | 1.070         | 1.185         | 1.111         | 1.036         | 0.963         | 0.900         | 0.844         |
| Orphan (5-14)                         | 0.883        | 0.827         | 0.754         | 0.704         | 0.657         | 0.613         | 0.571         | 0.531         |
| Disability (5-64)                     | 3.372        | 3.227         | 3.013         | 2.877         | 2.748         | 2.620         | 2.492         | 2.368         |
| Old Age (65+)                         | 1.922        | 2.270         | 2.350         | 2.344         | 2.337         | 2.325         | 2.305         | 2.282         |

## 3.2.4. Sierra Leone

Table 29: Sierra Leone's Population Projection (Medium Variant) Main Characteristics, 2016 - 2030

|                       | Thousands |        |             |             |        |        |        |        |  |  |  |  |  |
|-----------------------|-----------|--------|-------------|-------------|--------|--------|--------|--------|--|--|--|--|--|
|                       | 2016      | 2018   | 2020        | 2022        | 2024   | 2026   | 2028   | 2030   |  |  |  |  |  |
| Population            | 6,592     | 6,875  | 7,160       | 7,445       | 7,731  | 8,018  | 8,307  | 8,598  |  |  |  |  |  |
| Pregnant Women        | 209       | 216    | 221         | 222         | 221    | 223    | 225    | 227    |  |  |  |  |  |
| Children Under 5      | 1,009     | 1,030  | 1,051       | 1,071       | 1,078  | 1,087  | 1,097  | 1,106  |  |  |  |  |  |
| Children aged 12-15   | 635       | 666    | 697         | 721         | 735    | 746    | 762    | 780    |  |  |  |  |  |
| Population Aged 15-64 | 3,641     | 3,838  | 4,053       | 4,268       | 4,500  | 4,732  | 4,962  | 5,202  |  |  |  |  |  |
| Population aged 65+   | 178       | 186    | 192         | 203         | 213    | 224    | 237    | 248    |  |  |  |  |  |
|                       |           | Percer | ntage of To | otal Popula | ation  |        |        |        |  |  |  |  |  |
| Pregnant Women        | 3.17%     | 3.14%  | 3.09%       | 2.98%       | 2.86%  | 2.78%  | 2.71%  | 2.64%  |  |  |  |  |  |
| Children Under 5      | 15.31%    | 14.98% | 14.68%      | 14.39%      | 13.94% | 13.56% | 13.20% | 12.86% |  |  |  |  |  |
| Children aged 12-15   | 9.63%     | 9.69%  | 9.74%       | 9.68%       | 9.51%  | 9.30%  | 9.17%  | 9.07%  |  |  |  |  |  |
| Population Aged 15-64 | 55.24%    | 55.82% | 56.60%      | 57.32%      | 58.21% | 59.01% | 59.74% | 60.51% |  |  |  |  |  |
| Population Aged 65+   | 2.69%     | 2.70%  | 2.69%       | 2.73%       | 2.76%  | 2.79%  | 2.85%  | 2.89%  |  |  |  |  |  |

Source: Study's calculation based on data from (UN, 2016).



Figure 37: Sierra Leone's Population Growth Rates by Major Age Groups, 2016-2030

Source: Study's calculation based on data from (UN, 2016).

Figure 38: Sierra Leone's Macroeconomic Model's Assumptions- GDP Growth Rate and CPI Rate, 2016 – 2030



Source: Based on data from IMF (2016).

Table 30: Sierra Leone's Costing Results: Beneficiaries

|                               | 2016      | 2018 | 2020 | 2022 | 2024 | 2026 | 2028 | 2030 |  |
|-------------------------------|-----------|------|------|------|------|------|------|------|--|
| Male Covered Population (000) |           |      |      |      |      |      |      |      |  |
| Children Under 5              | 304       | 379  | 422  | 430  | 433  | 437  | 441  | 444  |  |
| Education (12-15)             | 63        | 111  | 139  | 144  | 147  | 149  | 152  | 156  |  |
| Orphan (5-14)                 | 44        | 45   | 47   | 48   | 49   | 49   | 50   | 51   |  |
| Disability (5-64)             | 134       | 140  | 146  | 153  | 160  | 166  | 173  | 180  |  |
| Old Age (65+)                 | 52        | 66   | 74   | 78   | 81   | 85   | 90   | 94   |  |
| Female Covered Populati       | ion (000) |      |      |      |      |      |      |      |  |
| Pregnancy                     | 125       | 158  | 177  | 177  | 177  | 178  | 180  | 182  |  |
| Children Under 5              | 302       | 376  | 419  | 427  | 429  | 433  | 437  | 441  |  |
| Education (12-15)             | 64        | 111  | 140  | 144  | 147  | 149  | 152  | 156  |  |
| Orphan (5-14)                 | 44        | 46   | 47   | 48   | 48   | 49   | 50   | 51   |  |
| Disability (5-64)             | 137       | 143  | 149  | 156  | 162  | 169  | 176  | 182  |  |
| Old Age ( 65+ )               | 55        | 71   | 80   | 85   | 89   | 94   | 99   | 104  |  |

Table 31: Sierra Leone's Costing Results: Benefit Level in SLL and as a Percent of GDP per Capita, 2016-2030

|                          | 2016  | 2018         | 2020      | 2022      | 2024       | 2026       | 2028       | 2030       |  |  |
|--------------------------|---|--------------|-----------|-----------|------------|------------|------------|------------|--|--|
| Monthly Amount of Bene   | Monthly Amount of Benefit per Beneficiary (SLL) |              |           |           |            |            |            |            |  |  |
| Pregnancy                | 14,550.00                                       | 17,286.49    | 41,364.11 | 23,192.95 | 26,802.35  | 30,973.47  | 35,793.72  | 41,364.11  |  |  |
| Children Under 5         | 14,550.00                                       | 17,286.49    | 41,364.11 | 23,192.95 | 26,802.35  | 30,973.47  | 35,793.72  | 41,364.11  |  |  |
| Education (12-15)        | 30,000.00                                       | 35,642.25    | 41,380.65 | 47,820.52 | 55,262.58  | 63,862.82  | 73,801.48  | 85,286.83  |  |  |
| Orphan (5-14)            | 45,000.00                                       | 53,463.38    | 62,070.98 | 71,730.77 | 82,893.88  | 95,794.24  | 110,702.21 | 127,930.25 |  |  |
| Disability (5-64)        | 45,000.00                                       | 53,463.38    | 62,070.98 | 71,730.77 | 82,893.88  | 95,794.24  | 110,702.21 | 127,930.25 |  |  |
| Old Age (64+)            | 60,000.00                                       | 71,284.50    | 82,761.30 | 95,641.03 | 110,525.17 | 127,725.65 | 147,602.95 | 170,573.66 |  |  |
| Amount of Benefit as a P | ercentage of                                    | PerCapita Gl | DP        |           |            |            |            |            |  |  |
| Pregnancy                | 4.63%   | 4.52%        | 4.23%     | 3.85%     | 3.49%      | 3.17%      | 2.87%      | 2.60%      |  |  |
| Children Under 5         | 4.63%   | 4.52%        | 4.23%     | 3.85%     | 3.49%      | 3.17%      | 2.87%      | 2.60%      |  |  |
| Education (12-15)        | 9.55%   | 9.31%        | 8.72%     | 7.93%     | 7.20%      | 6.53%      | 5.92%      | 5.36%      |  |  |
| Orphan (5-14)            | 14.32%  | 13.97%       | 13.08%    | 11.90%    | 10.80%     | 9.80%      | 8.88%      | 8.04%      |  |  |
| Disability (5-64)        | 14.32%  | 13.97%       | 13.08%    | 11.90%    | 10.80%     | 9.80%      | 8.88%      | 8.04%      |  |  |
| Old Age (64+)            | 19.09%  | 18.63%       | 17.44%    | 15.86%    | 14.40%     | 13.06%     | 11.84%     | 10.71%     |  |  |

Table 32: Sierra Leone's Costing Results: Overall Cost in in SLL, Percentage of GDP, and Percentage of Government Expenditure

|                                      | 2016    | 2018    | 2020    | 2022    | 2024   | 2026   | 2028   | 2030   |
|--------------------------------------|---------|---------|---------|---------|--------|--------|--------|--------|
| Expenditure (SLL in billions)        | 503     | 718     | 920     | 1,101   | 1,308  | 1,555  | 1,852  | 2,202  |
| Pregnancy                            | 11      | 16      | 21      | 25      | 28     | 33     | 39     | 45     |
| Child Under 5                        | 127     | 188     | 243     | 286     | 333    | 388    | 452    | 527    |
| Education (12-15)                    | 41      | 85      | 125     | 149     | 175    | 206    | 243    | 287    |
| Orphan (5-14)                        | 57      | 70      | 83      | 98      | 116    | 136    | 160    | 188    |
| Disability (5-64)                    | 175     | 218     | 264     | 319     | 384    | 463    | 556    | 667    |
| Old Age (64+)                        | 92      | 140     | 184     | 224     | 271    | 330    | 402    | 488    |
| Expediture as a Percentage of GDP    | 2.025%  | 2.274%  | 2.257%  | 2.042%  | 1.840% | 1.653% | 1.489% | 1.339% |
| Pregnancy                            | 0.044%  | 0.052%  | 0.052%  | 0.046%  | 0.043% | 0.035% | 0.031% | 0.027% |
| Child Under 5                        | 0.511%  | 0.596%  | 0.596%  | 0.531%  | 0.468% | 0.412% | 0.364% | 0.321% |
| Education (12-15)                    | 0.165%  | 0.271%  | 0.306%  | 0.276%  | 0.246% | 0.219% | 0.195% | 0.175% |
| Orphan (5-14)                        | 0.230%  | 0.222%  | 0.204%  | 0.182%  | 0.163% | 0.145% | 0.129% | 0.114% |
| Disability (5-64)                    | 0.705%  | 0.690%  | 0.649%  | 0.592%  | 0.540% | 0.492% | 0.447% | 0.406% |
| Old Age (64+)                        | 0.370%  | 0.443%  | 0.450%  | 0.415%  | 0.380% | 0.350% | 0.323% | 0.296% |
| Expenditure as a Percentage of Total |         |         |         |         |        |        |        |        |
| Government Expenditure               | 10.898% | 11.991% | 11.470% | 10.384% | 9.386% | 8.402% | 7.570% | 6.812% |
| Pregnancy                            | 0.237%  | 0.275%  | 0.265%  | 0.233%  | 0.203% | 0.179% | 0.158% | 0.139% |
| Child Under 5                        | 2.754%  | 3.141%  | 3.030%  | 2.700%  | 2.376% | 2.095% | 1.848% | 1.630% |
| Education (12-15)                    | 0.890%  | 1.428%  | 1.554%  | 1.404%  | 1.252% | 1.112% | 0.993% | 0.889% |
| Orphan (5-14)                        | 1.237%  | 1.171%  | 1.038%  | 0.927%  | 0.875% | 0.736% | 0.655% | 0.582% |
| Disability (5-64)                    | 3.789%  | 3.639%  | 3.296%  | 3.006%  | 2.744% | 2.499% | 2.272% | 2.064% |
| Old Age (64+)                        | 1.991%  | 2.337%  | 2.287%  | 2.114%  | 1.936% | 1.781% | 1.644% | 1.508% |

#### 3.2.5. Tanzania

|                    |        |        |        | Thous          | ands           |        |        |        |
|--------------------|--------|--------|--------|----------------|----------------|--------|--------|--------|
|                    | 2016   | 2018   | 2020   | 2022           | 2024           | 2026   | 2028   | 2030   |
| General Population | 55,155 | 58,637 | 62,267 | 66,050         | 69,994         | 74,118 | 78,428 | 82,927 |
| Pregnancy Number   | 2,050  | 2,108  | 2,179  | 2,272          | 2,377          | 2,483  | 2,589  | 2,696  |
| Children under 5   | 9,646  | 9,860  | 10,234 | 10,813         | 11,257         | 11,730 | 12,220 | 12,727 |
| Children 12-15     | 5,284  | 5,664  | 6,050  | 6,452          | 6,876          | 7,294  | 7,655  | 7,981  |
| 15-64              | 28,487 | 30,449 | 32,573 | 34,849         | 37,281         | 39,903 | 42,706 | 45,658 |
| Old age 65+        | 1,769  | 1,883  | 2,008  | 2,150          | 2,304          | 2,469  | 2,645  | 2,843  |
|                    |        | -      | Per    | centage of Tot | tal Populaiton | -      |        | -      |
| Pregnancy Number   | 3.72%  | 3.60%  | 3.50%  | 3.44%          | 3.40%          | 3.35%  | 3.30%  | 3.25%  |
| Children under 5   | 17.49% | 16.82% | 16.44% | 16.37%         | 16.08%         | 15.83% | 15.58% | 15.35% |
| Children 12-15     | 9.58%  | 9.66%  | 9.72%  | 9.77%          | 9.82%          | 9.84%  | 9.76%  | 9.62%  |
| 15-64              | 51.65% | 51.93% | 52.31% | 52.76%         | 53.26%         | 53.84% | 54.45% | 55.06% |
| Old age 65+        | 3.21%  | 3.21%  | 3.22%  | 3.26%          | 3.29%          | 3.33%  | 3.37%  | 3.43%  |

Table 33: Tanzania's Population Projection (Medium Variant) Main Characteristics, 2016 - 2030

Source: Study's calculation based on data from (UN, 2016).

Figure 39: Tanzania's Population Growth Rates by Major Age Groups, 2015-2030



Source: Study's calculation based on data from (UN, 2016).

Figure 40: Tanzania's Macroeconomic Model's Assumptions- GDP Growth Rate and CPI Rate



Source: Based on data from IMF (2014).

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# Table 34: Tanzania's Costing Results: Beneficiaries

|                                 | 2016  | 2018  | 2020  | 2022  | 2024  | 2026  | 2028  | 2030  |
|---------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Male Covered Population (000)   |       |       |       |       |       |       |       |       |
| Universal Child Benefit         | 2,923 | 3,724 | 4,221 | 4,379 | 4,558 | 4,750 | 4,949 | 5,154 |
| Education Stipend               | 524   | 939   | 1,214 | 1,301 | 1,389 | 1,473 | 1,546 | 1,613 |
| Orphan Benefit                  | 383   | 409   | 435   | 461   | 484   | 506   | 527   | 549   |
| Disability Benefit              | 1,086 | 1,161 | 1,240 | 1,322 | 1,406 | 1,494 | 1,585 | 1,680 |
| 65+                             | 492   | 634   | 734   | 788   | 847   | 911   | 979   | 1,056 |
| Female Covered Population (000) |       |       |       |       |       |       |       |       |
| Pregnancy Benefit               | 1,230 | 1,546 | 1,743 | 1,818 | 1,902 | 1,986 | 2,071 | 2,157 |
| Universal Child Benefit         | 2,865 | 3,646 | 4,122 | 4,271 | 4,448 | 4,634 | 4,827 | 5,028 |
| Education Stipend               | 533   | 949   | 1,206 | 1,279 | 1,362 | 1,445 | 1,515 | 1,579 |
| Orphan Benefit                  | 380   | 404   | 427   | 451   | 474   | 495   | 516   | 536   |
| Disability Benefit              | 1,101 | 1,174 | 1,252 | 1,333 | 1,416 | 1,502 | 1,593 | 1,687 |
| 65+                             | 570   | 747   | 872   | 933   | 996   | 1,064 | 1,137 | 1,218 |

## Table 35: Tanzania's Costing Results: Benefit Level in TZS and as a Percent of GDP per Capita

| Monthly Amount of Benefit per | 2016      | 2018      | 2020      | 2022      | 2024      | 2026      | 2028      | 2030      |
|-------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Beneficiary (TZS)             |           |           |           |           |           |           |           |           |
| Pregnancy Benefit             | 7,500.00  | 8,281.04  | 9,143.42  | 10,095.60 | 11,146.94 | 12,307.77 | 13,589.48 | 15,004.67 |
| Universal Child Benefit       | 7,500.00  | 8,281.04  | 9,143.42  | 10,095.60 | 11,146.94 | 12,307.77 | 13,589.48 | 15,004.67 |
| Education Stipend             | 15,000.00 | 16,562.08 | 18,286.83 | 20,191.20 | 22,293.88 | 24,615.53 | 27,178.96 | 30,009.34 |
| Orphan Benefit                | 22,500.00 | 24,843.12 | 27,430.25 | 30,286.79 | 33,440.82 | 36,923.30 | 40,768.44 | 45,014.01 |
| Disability Benefit            | 22,500.00 | 24,843.12 | 27,430.25 | 30,286.79 | 33,440.82 | 36,923.30 | 40,768.44 | 45,014.01 |
| 65+                           | 30,000.00 | 33,124.16 | 36,573.66 | 40,382.39 | 44,587.76 | 49,231.07 | 54,357.92 | 60,018.68 |
| Amount of Benefit as a        |           |           |           |           |           |           |           |           |
| Percentage of per capita GDP  |           |           |           |           |           |           |           |           |
| Pregnancy Benefit             | 4.929     | 4.625     | 4.330     | 4.042     | 3.770     | 3.514     | 3.273     | 3.046     |
| Universal Child Benefit       | 4.929     | 4.625     | 4.330     | 4.042     | 3.770     | 3.514     | 3.273     | 3.046     |
| Education Stipend             | 9.858     | 9.251     | 8.659     | 8.085     | 7.541     | 7.029     | 6.546     | 6.092     |
| Orphan Benefit                | 14.787    | 13.876    | 12.989    | 12.127    | 11.311    | 10.543    | 9.819     | 9.139     |
| Disability Benefit            | 14.787    | 13.876    | 12.989    | 12.127    | 11.311    | 10.543    | 9.819     | 9.139     |
| 65+                           | 19.716    | 18.502    | 17.318    | 16.169    | 15.082    | 14.057    | 13.092    | 12.185    |

Table 36: Tanzania's Costing Results: Overall Cost in in TZS, Percentage of GDP, and Percentage of Government Expenditure

|                                      | 2016   | 2018   | 2020   | 2022   | 2024   | 2026   | 2028  | 2030  |
|--------------------------------------|--------|--------|--------|--------|--------|--------|-------|-------|
| Expenditure (TZS billions)           | 2,266  | 3,078  | 3,843  | 4,486  | 5,238  | 6,111  | 7,115 | 8,281 |
| Pregnancy Benefit                    | 55     | 77     | 96     | 110    | 127    | 147    | 169   | 194   |
| Universal Child Benefit              | 625    | 879    | 1,098  | 1,258  | 1,446  | 1,663  | 1,913 | 2,200 |
| Education Stipend                    | 171    | 338    | 478    | 563    | 662    | 776    | 899   | 1,035 |
| Orphan Benefit                       | 247    | 291    | 341    | 398    | 461    | 532    | 612   | 703   |
| Disability Benefit                   | 709    | 835    | 984    | 1,158  | 1,359  | 1,593  | 1,866 | 2,183 |
| Old-age                              | 459    | 659    | 846    | 1,000  | 1,183  | 1,400  | 1,657 | 1,966 |
| Emenditure as a Persontage of CDP    |        |        |        |        |        |        |       |       |
| Expenditure as a recentage of GDr    | 2.250  | 2.443  | 2.435  | 2.266  | 2.110  | 1.962  | 1.821 | 1.689 |
| Pregnancy Benefit                    | 0.055  | 0.061  | 0.061  | 0.056  | 0.051  | 0.047  | 0.043 | 0.040 |
| Universal Child Benefit              | 0.621  | 0.698  | 0.696  | 0.635  | 0.582  | 0.534  | 0.490 | 0.449 |
| Education Stipend                    | 0.170  | 0.268  | 0.303  | 0.284  | 0.267  | 0.249  | 0.230 | 0.211 |
| Orphan Benefit                       | 0.245  | 0.231  | 0.216  | 0.201  | 0.186  | 0.171  | 0.157 | 0.143 |
| Disability Benefit                   | 0.704  | 0.663  | 0.624  | 0.585  | 0.547  | 0.511  | 0.477 | 0.445 |
| Old-age                              | 0.455  | 0.523  | 0.536  | 0.505  | 0.477  | 0.450  | 0.424 | 0.401 |
| Expenditure as a Percentage of Total |        |        |        |        |        |        |       |       |
| Government Expenditure               | 11.475 | 12.685 | 12.552 | 11.681 | 10.873 | 10.112 | 9.386 | 8.708 |
| Pregnancy Benefit                    | 0.280  | 0.317  | 0.312  | 0.287  | 0.264  | 0.243  | 0.223 | 0.204 |
| Universal Child Benefit              | 3.165  | 3.622  | 3.588  | 3.274  | 3.001  | 2.752  | 2.524 | 2.313 |
| Education Stipend                    | 0.867  | 1.392  | 1.561  | 1.465  | 1.375  | 1.284  | 1.186 | 1.088 |
| Orphan Benefit                       | 1.251  | 1.198  | 1.113  | 1.036  | 0.957  | 0.881  | 0.808 | 0.740 |
| Disability Benefit                   | 3.588  | 3.443  | 3.215  | 3.014  | 2.820  | 2.636  | 2.461 | 2.296 |
| Old-age                              | 2.322  | 2.714  | 2.763  | 2.605  | 2.456  | 2.317  | 2.185 | 2.067 |

## 3.2.6. <u>Yemen</u>

Table 37: Yemen's Population Projection (Medium Variant) Main Characteristics, 2016 - 2030

| Thousands             |        |         |             |             |        |        |        |        |  |  |  |  |
|-----------------------|--------|---------|-------------|-------------|--------|--------|--------|--------|--|--|--|--|
|                       | 2016   | 2018    | 2020        | 2022        | 2024   | 2026   | 2028   | 2030   |  |  |  |  |
| Population            | 27,478 | 28,758  | 30,030      | 31,292      | 32,551 | 33,814 | 35,081 | 36,335 |  |  |  |  |
| Number of pregnancies | 815    | 831     | 839         | 836         | 830    | 830    | 834    | 836    |  |  |  |  |
| Children Under 5      | 3963   | 4042    | 4102        | 4140        | 4140   | 4137   | 4140   | 4142   |  |  |  |  |
| Children 12-15        | 2538   | 2620    | 2723        | 2831        | 2921   | 3001   | 3076   | 3145   |  |  |  |  |
| Population Aged 15-64 | 15726  | 16611   | 17531       | 18485       | 19501  | 20558  | 21656  | 22790  |  |  |  |  |
| Old Age 65+           | 788    | 869     | 950         | 1030        | 1106   | 1174   | 1236   | 1293   |  |  |  |  |
|                       |        | Percent | age of Tota | l Populatio | on     |        |        |        |  |  |  |  |
| Number of pregnancies | 2.97%  | 2.89%   | 2.79%       | 2.67%       | 2.55%  | 2.45%  | 2.38%  | 2.30%  |  |  |  |  |
| Children Under 5      | 14.42% | 14.06%  | 13.66%      | 13.23%      | 12.72% | 12.23% | 11.80% | 11.40% |  |  |  |  |
| Children 12-15        | 9.24%  | 9.11%   | 9.07%       | 9.05%       | 8.97%  | 8.88%  | 8.77%  | 8.66%  |  |  |  |  |
| Population Aged 15-64 | 57.23% | 57.76%  | 58.38%      | 59.07%      | 59.91% | 60.80% | 61.73% | 62.72% |  |  |  |  |
| Old Age 65+           | 2.87%  | 3.02%   | 3.16%       | 3.29%       | 3.40%  | 3.47%  | 3.52%  | 3.56%  |  |  |  |  |

Source: Study's calculation based on data from (UN, 2016).



Figure 41: Yemen's Population Growth Rates by Major Age Groups, 2013-2030

Source: Study's calculation based on data from (UN, 2016).





Source: Based on data from IMF (2016).

| Table 38 | : Yemen <sup>2</sup> | 's | Costing | Results: | Benefic | iaries |
|----------|----------------------|----|---------|----------|---------|--------|
|----------|----------------------|----|---------|----------|---------|--------|

| Male Covered Population (000) | 2016 | 2018 | 2020 | 2022 | 2024 | 2026 | 2028 | 2030 |
|-------------------------------|------|------|------|------|------|------|------|------|
| Old-Age Pension (65+)         | 225  | 299  | 352  | 378  | 401  | 419  | 434  | 447  |
|                               | 1,21 | 1,51 | 1,67 | 1,69 | 1,69 | 1,68 | 1,69 | 1,69 |
| Child Benefit                 | 4    | 3    | 5    | 0    | 0    | 9    | 0    | 1    |
| Disability Benefit            | 574  | 602  | 631  | 660  | 690  | 720  | 751  | 782  |
| Orphan Benefit                | 179  | 185  | 190  | 195  | 199  | 203  | 205  | 207  |
| Education Benefit             | 259  | 445  | 555  | 577  | 595  | 612  | 627  | 641  |
| Female Covered Population     |      |      |      |      |      |      |      |      |
| (000)                         |      |      |      |      |      |      |      |      |
| Old-Age Pension (65+)         | 248  | 339  | 409  | 446  | 484  | 520  | 555  | 588  |
|                               | 1,16 | 1,45 | 1,60 | 1,62 | 1,62 | 1,62 | 1,62 | 1,62 |
| Child Benefit                 | 4    | 1    | 6    | 2    | 2    | 1    | 2    | 3    |
| Disability Benefit            | 562  | 590  | 618  | 646  | 675  | 705  | 734  | 763  |
| Orphan Benefit                | 172  | 177  | 182  | 187  | 191  | 195  | 197  | 199  |
| Education Benefit             | 249  | 428  | 534  | 555  | 573  | 589  | 603  | 617  |
| Pregnancy Benefit             | 489  | 610  | 671  | 669  | 664  | 664  | 667  | 669  |

| Monthly Amount of Benefit    | 2016  | 2018  | 2020   | 2022   | 2024   | 2026   | 2028   | 2030   |
|------------------------------|-------|-------|--------|--------|--------|--------|--------|--------|
| per Beneficiary (YER)        |       |       |        |        |        |        |        |        |
| Old-Age Pension              | 6,000 | 8,710 | 10,832 | 12,933 | 15,158 | 17,438 | 19,688 | 21,809 |
| Child U5 Benefit             | 1,500 | 2,178 | 2,708  | 3,233  | 3,789  | 4,360  | 4,922  | 5,452  |
| Disability Benefit           | 4,500 | 6,533 | 8,124  | 9,699  | 11,368 | 13,079 | 14,766 | 16,357 |
| Orphan Benefit               | 4,500 | 6,533 | 8,124  | 9,699  | 11,368 | 13,079 | 14,766 | 16,357 |
| Education Benefit            | 3,000 | 4,355 | 5,416  | 6,466  | 7,579  | 8,719  | 9,844  | 10,905 |
| Pregnancy Benefit            | 1,500 | 2,178 | 2,708  | 3,233  | 3,789  | 4,360  | 4,922  | 5,452  |
| Amount of Benefit as a       |       |       |        |        |        |        |        |        |
| Percentage of per capita GDP |       |       |        |        |        |        |        |        |
| Old-Age Pension              | 19.74 | 17.35 | 16.66  | 16.15  | 15.64  | 15.11  | 14.59  | 14.06  |
| Child Benefit                | 4.93  | 4.34  | 4.17   | 4.04   | 3.91   | 3.78   | 3.65   | 3.52   |
| Disability Benefit           | 14.8  | 13.02 | 12.5   | 12.12  | 11.73  | 11.34  | 10.94  | 10.55  |
| Orphan Benefit               | 14.8  | 13.02 | 12.5   | 12.12  | 11.73  | 11.34  | 10.94  | 10.55  |
| Education Benefit            | 9.87  | 8.68  | 8.33   | 8.08   | 7.82   | 7.56   | 7.3    | 7.03   |
| Pregnancy Benefit            | 4.93  | 4.34  | 4.17   | 4.04   | 3.91   | 3.78   | 3.65   | 3.52   |

Table 39: Yemen's Costing Results: Benefit Level in YER and as a Percent of GDP per Capita

Table 40: Yemen's Costing Results: Overall Cost in in YER, Percentage of GDP, and Percentage of Government Expenditure

|                                      | 2016  | 2018  | 2020  | 2022  | 2024  | 2026  | 2028  | 2030  |
|--------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Expenditure (YER, billion)           | 209   | 368   | 512   | 635   | 772   | 917   | 1068  | 1215  |
| Universal Pension                    | 41    | 80    | 119   | 154   | 193   | 236   | 280   | 325   |
| Universal Child Benefit              | 51    | 93    | 128   | 154   | 181   | 208   | 235   | 260   |
| Universal Disability Benefit         | 74    | 112   | 146   | 182   | 223   | 268   | 316   | 364   |
| Orphan Benefit                       | 23    | 34    | 44    | 53    | 64    | 75    | 86    | 96    |
| Education Stipend                    | 16    | 41    | 64    | 79    | 96    | 113   | 131   | 148   |
| Pregnancy Benefit                    | 4     | 8     | 11    | 13    | 15    | 17    | 20    | 22    |
| Expenditure as a Percentage of GDP   | 2.09  | 2.13  | 2.18  | 2.11  | 2.04  | 1.96  | 1.88  | 1.80  |
| Universal Pension                    | 0.408 | 0.462 | 0.506 | 0.511 | 0.51  | 0.504 | 0.493 | 0.48  |
| Universal Child Benefit              | 0.512 | 0.537 | 0.546 | 0.513 | 0.477 | 0.444 | 0.413 | 0.385 |
| Universal Disability Benefit         | 0.735 | 0.648 | 0.624 | 0.607 | 0.59  | 0.573 | 0.556 | 0.538 |
| Orphan Benefit                       | 0.226 | 0.196 | 0.186 | 0.177 | 0.169 | 0.16  | 0.151 | 0.141 |
| Education Stipend                    | 0.164 | 0.237 | 0.272 | 0.263 | 0.253 | 0.241 | 0.23  | 0.219 |
| Pregnancy Benefit                    | 0.044 | 0.046 | 0.047 | 0.043 | 0.04  | 0.037 | 0.035 | 0.032 |
| Expenditure as a Percentage of Total |       |       |       |       |       |       |       |       |
| Government Expenditure               | 8.83  | 8.89  | 9.3   | 8.99  | 8.68  | 8.34  | 8     | 7.65  |
| Universal Pension                    | 1.72  | 1.93  | 2.16  | 2.17  | 2.17  | 2.14  | 2.1   | 2.05  |
| Universal Child Benefit              | 2.17  | 2.25  | 2.33  | 2.18  | 2.03  | 1.89  | 1.76  | 1.64  |
| Universal Disability Benefit         | 3.1   | 2.71  | 2.66  | 2.58  | 2.51  | 2.44  | 2.37  | 2.29  |
| Orphan Benefit                       | 0.96  | 0.82  | 0.79  | 0.76  | 0.72  | 0.68  | 0.64  | 0.6   |
| Education Stipend                    | 0.69  | 0.99  | 1.16  | 1.12  | 1.08  | 1.03  | 0.98  | 0.93  |
| Pregnancy Benefit                    | 0.19  | 0.19  | 0.2   | 0.18  | 0.17  | 0.16  | 0.15  | 0.14  |

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