Implication of Changing Demographics and Effects on Social Protection in Bangladesh

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Implication of Changing Demographics and Effects on Social Protection in Bangladesh
(This study is a part of a group of studies published as *A Compendium of Social Protection Research*)

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TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

LIST OF BOXES

LIST OF ACRONYMS

ADB	Asian Development Bank
AIDS	Acquired Immune Deficiency Syndrome
APS	Average Propensities to Spend
ATM	Automated Teller Machine
AWDDW	Allowances for the Widow, Deserted and Destitute women
BAU	Business as Usual
BBS	Bangladesh Bureau of Statistics
BCR	Benefit Cost Ratio
BDT	Bangladeshi Taka
BFP	Bolsa Familia Programme
BFPA	Bangladesh Family Planning Association
BIDS	Bangladesh Institute of Development Studies
BIHS	Bangladesh Integrated Household Survey
BMET	Bureau of Manpower, Employment and Training
BMI	Body Mass Index
BRDB	Bangladesh Rural Development Board
BSA	Bangladesh Shishu Academy
CBM	Christian Blind Mission
CBO	Community Based Organization
CBRMP	Community Based Resource Management Project
CBT	Community Based Testing
CCRIIP	Costal Climate Resilient Infrastructure Improvement Programme
CCT	Conditional Cash Transfer
CCTP	Conditional Cash Transfer Programmes
CDC	Child Development Centres
CDD	Centre for Disability in Development
CFPR	Challenging the Frontier of Poverty Reduction
CFS	Child Friendly Spaces
CGAP	Consultative Group to Assist the Poor
CHT	Chittagong Hill Tracts
CLP	Chars Livelihoods Programme
CM	Commodities
CODI	Core Diagnostic Instrument
Cont.	Control
CPD	Centre for Policy Dialogue
CPP	Cyclone Preparedness Programme
CSO	Civil society organizations
CSSB	Child Sensitive Social Protection in Bangladesh
CTP	Co-responsibility Transfer Programmes
CVS	Compliance Verification System
DA	Data Entry
DC	Deputy Commissioner
DFAT	Department of Foreign Affairs and Trade
DFID	Department for International Development
DGFP	Directorate General of Family Planning

DGHS	Directorate General of Health Services
DIC	Drop-in-Centres
DID	Difference in Differences
DiDRR	Disability Inclusive Disaster Risk Reduction
Diff	Difference
DPO	Development Partner Organization
DSF	Diagnostic Study of Demand Side Financing
DSS	Department of Social Services
DSWD	Department of Social Welfare and Development
DT	Demographic Targeting
DWA	Department of Women Affairs
ECCD	Early Childhood Care and Development
EGPP	Employment Generation Programme for the Poorest
ENS	Emergency Night Shelters
EP	Extreme poor
etc.	Etcetera
EU	European Union
FEP	Food for Education Programme
FFA	Food for Asset-creation
FFE	Food for Education
FFW	Food for Work
FGD	Focus Group Discussion
FIES	Family Income and Expenditure Survey
FLS	Food and Livelihood Security
FP	Factors of Production
FSVGD	Food Security Vulnerable Group Development
FTF	Feed the Future
FY	Fiscal Year
FYP	Five Year Plan
GDP	Gross Domestic Products
GED	General Economics Division
GMI	Guaranteed minimum income
GNI	Gross National Income
GoB	Government of Bangladesh
GR	Gratuitous Relief
GRS	Grievance Redress System
GSS	Ghana Statistical Service
GT	Geographical Targeting
HAIL	Haor Area Infrastructure and Livelihood
HDRC	Human Development Resource Center
HFIAS	Household Food Insecurity Access Scale
HH-IO	Households and Other Institutions
HI	Handicap International
HIES	Household Income and Expenditure Survey
HSC	Higher Secondary School Certificate
HSNP	Hunger Safety Net Programme
ICDDRB	International Centre for Diarrheal Disease Research, Bangladesh

ICF	International Classification of Functioning, Disability and Health
ICRPD	International Convention on the Rights of Persons with Disabilities ICRPD
ICT	Information and Communications Technology
IDRA	Insurance Development & Regulatory Authority
IFAD	International Fund for Agricultural Development
IFPRI	International Food Policy Research Institute
IFS	Integrated Food Security
IGA	Income Generating Activities
IGVGD	Income Generation Vulnerable Group Development
ILO	International Labour Organization
IMCI	Integrated Management of Childhood Nutrition
Intv.	Intervention
ISPA	Inter-Agency Social Protection Assessments
JJS	Jagrata Juba Sangha
JMS	Jatiya Mohila Samity
JPUF	Jatiya Protibondhi Unnoyon Foundation
KHH-OI	Capital Account Households and Other Institutions
KII	Key Informant Interviews
LBP	Land Bank of the Philippines
LCA	Life Cycle Approach
LDC	Least Developed Countries
LEAP	Livelihood Empowerment against Poverty
LFS	Labour Force Survey
LGD	Local Government Division
MDG	Millennium Development Goal
MDGs	Millennium Development Goals
MEFWD	Medical Education and Family Welfare Division
MHVS	Maternal Health Voucher Scheme
MIS	Management information system
MIS	Management Information System
MLE	Maximum likelihood estimation
MNCAH	Maternal Neonatal Child and Adolescent Health
MoCHTA	Ministry of Chittagong Hill Tracts Area
MoDMR	Ministry of Disaster Management and Relief
MoE	Ministry of Education
MoF	Ministry of Food
MoH	Ministry of Health and Family Welfare
MoLE	Ministry of Labour and Employment
MoLGRDC	Ministry of Local Government, Rural Development and Co-operatives
MoLibWarAff	Ministry of Liberation War Affairs
MoP	Ministry of Planning
MoPME	Ministry of Primary and Mass Education
MoSW	Ministry of Social Welfare
MoWCA	Ministry of Women and Children Affairs
MoY&S	Ministry of Youth and Sports
MP	Member of Parliament
MPCDF	Marginal Propensity to Consume Food

MPI	Multidimensional Poverty Index
MS	Micro-simulation
MSM	Micro Simulation Model
MT	Means Testing
MTIR	Mid Term Implementation Review
MTRI	Mid-Term Review Implementation
NC	Not covered
NDD	Neurodevelopmental disability
NDDPT	Neuro-Developmental Disability Protection Trust
NE	Not-eligible
NEET	Not in education, employment or training
NFOWD	National Forum of Organizations Working with the Disabled
NGO	Non-governmental Organization
NGOs	Non-Government Organizations
NHD	National Household Database
NHTS-PR	National Household Targeting System for Poverty Reduction
NID	National Identity Documents
NIPORT	National Institute of Population Research and Training
NJLIP	Notun Jibon Livelihood Improvement Programme
NNHP	National New-born Health Programme
NNS	National Nutrition Services
No.	Number
NSIS	National Social Insurance Scheme
NSP	National Service Programme
NSSF	National Social Security Fund
NSSS	National Social Security Strategy
OAA	Old Age Allowance
OAS	Open Air Street
OECD	The Organization for Economic Co-Operation and Development
OMS	Open Market Sales
OPHI	Oxford Policy and Human Development Initiative
OTUP	The Other Targeted Ultra Poor
OVCs	Orphans and Vulnerable Children
Oxfam	Oxford Committee for Famine Relief
PA	Production Activities
PATH	The Programme for Advancement Through Health and Education
PERC	The Property and Environment Research Center
PESP	Primary Education Stipend Programme
PIO	Project Implementation Officer
PKSF	Palli Karma-Sahayak Foundation
PMO	Prime Minister's Office
PMT	Proxy means test
PMT	Proxy means test
PND	Persons with neurodevelopmental disabilities
PO	Partner organisation
PPP	Purchasing Power Parity
PPRC	Power and Participation Research Centre

PRI	Policy Research Institute
PRSP	Poverty Reduction Strategy Paper
PRSSP	Policy Research and Strategy Support Program
PSM	Propensity Score Matching
PSS	Primary School stipend
PSU	Primary selection units
PTP	Private Training Provider
PVP	Private Voluntary Pension
PWD	Person with Disabilities
PWDs	Persons with Disabilities
RAPID	Research and Policy Integration for Development
RDCD	Rural Development and Co-operatives Division
REOPA	Rural Employment Opportunities for Public Assets
RID	Rural Infrastructure Development
RMG	Ready Made Garment
RMGs	Ready-Made Garments
RMP	Rural Maintenance Programme
ROSC	Reaching Out of School Children
ROW	Rest of the World
SAE	Small Area Estimates
SAM	Social Accounting Matrix
SANEM	South Asian Network on Economic Modelling
SAR	Specific Absorption Rate
SDC	Swiss Agency for Development and Cooperation
SDG	Sustainable Development Goal
SDG-F	Sustainable Development Goals Fund
SDGs	Sustainable Development Goals
SEIP	Skill for Employment Investment Programme
SEPB	Skills and Employment Programme Bangladesh
SEP-B	Skills and Employment Programme Bangladesh
SEQAEP	Secondary Education Quality and Access Enhancement Project
SES	Secondary education stipend
SHIREE	Stimulating Household Improvements Resulting in Economic Empowerment
SID	Statistics and Informatics Division
SIMPLA	Sustainable Integrated Multi-sector PLAnning
SISP	Strategic Information Systems Planning
SME	Small and Medium Enterprise
SNP	Safety Net Programme
SP	Social Protection
SPP	Social protection programmes
SPST	Sharirik Protibondhi Suroksha Trust
Sq	Square
SSC	Secondary School Certificate
SSN	Social Safety Net
SSNP	Social Safety Net Programme
SSP	Social security programme
SSPS	Social Security Protection Support

SSPSS	School Stipend for Primary and Secondary Students
SSSP	Social Security Support Programme
SEQuAS	Specialist Evaluation and Quality Assurance Services
SWAPNO	Strengthening Women's Ability for Productive New Opportunities
SWD	Students with Disabilities
TDD	Total Domestic Demand
TFP	Total Factor Productivity
TFR	Total Fertility Rate
Tk.	Taka
TMRI	Transfer Modality Research Initiative
ToR	Terms of reference
TR	Test Relief
TSS	Total Supply Side
TTC	Technical Training Centre
TUP	Targeting the Ultra Poor Programme
TVET	Technical and vocational Education and Training
UCG	Universal Child Grant
UN	United Nations
UN DESA	United Nations Department of Economic and Social Affairs
UNDP	United Nations Development Programmes
UNFPA	United Nations Population Fund
UNICEF	United Nations International Children's Emergency Fund
UP	Union Parisad
USD	United States Dollar
VfM	Value for Money
VGD	Vulnerable Group Development
VGF	Vulnerable Group Feeding
VWB	Vulnerable Women's Benefit
WB	World Bank
WEAI	Women's Empowerment in Agricultural Index
WF	Workfare
WFM	Work for Money
WFP	World Food Programme
WHO	World Health Organization
ZOI	Zones of Influence

EXECUTIVE SUMMARY

Bangladesh is currently at the third stage of her demographic transition. Bangladesh has been experiencing a rapid change in her population structure due to successes of social policy interventions which have driven down child mortality and high fertility rates and extended life expectancy. Changing population structures likely to have implications on the economy and society mainly via three channels – (i) labour supply and labour market; (ii) internal migration and urbanization; and (iii) demand for goods and services – especially for public services including social protection system. The demographic dynamic suggests that the older population (those aged 60 and over) outnumber children (0-5) in less than a decade. The above circumstances indicate the need for social protection systems that adapt to demographic changes. In this context this study attempts to explore the implications of changing demographic dynamics and effects on social protection in Bangladesh. Following five age-specific groups – children (age 0-4); school age (age 5-14); youth (age 15-29); working age (age 30-59); and old age (age 60 and above) have been considered in this study.

The study has used various methods and diverse data sets. *Frist,* a through ***desk review*** of the changing population structure and their socio-economic implications has been conducted using demographic dynamic and other relevant social and economic data sets. *Second*, an ***analytical framework*** invoking the demand side and supply side of the age-based social protection system has been used to assess adequacy and gap. Demand side assessment is based on the demographic dynamics and HIES 2010 and 2016 data sets. Social protection budget data produced by Ministry of Finance have been employed to derive the supply side. *Third*, a ***costing module*** based on the demographic dynamic (i.e. between 2020 and 2050) and key macro-economic indicators is employed to project costs of the age-based social protection schemes.

Key Findings

A. Demand and Supply Side Assessment: Demand and supply side assessment for 2010 and 2016 pointed out some key findings. These include (i) coverage gap; (ii) resource gap; and (iii) transfer amounts.

Large Coverage Gap: estimated coverage gap in 2010 as percent of estimated total beneficiaries (i.e. 45.4 million) from demand side is 75 percent. Coverage gaps have been found for four of the age-specific groups. The highest coverage gap has been reported for Youth (i.e. 12 million) and followed by school age population (i.e. 9.9 million). Contrary to this pattern, there is no coverage gap for old age group – in fact, there is a surplus for this group. Opposing developments (i.e. population expansion of about 12 million and poverty reduction by 6.1 million), have driven the demand side for 2106. The estimated beneficiary coverage gap has fallen significant in 2016 to 19.2 million. But this is still a sizeable amount. Coverage gap in 2016 as percent of estimated total beneficiaries (i.e. 39.3 million) from demand side has dropped to 49 percent from 75 percent in 2010. Again, coverage gaps have been found for four of the age-specific groups. The highest coverage gap has been again reported for Youth (i.e. 7.6 million) and followed by working age population (i.e. 6.3 million). Similar to the pattern observed in 2010, there is no coverage gap for old age group – there is a surplus for this group. The size of surplus has increased from 0.5 million to 2.3 million.

Large Resource Gap: Large beneficiary coverage gaps led to large resource gaps. Total resource gap in 2010 is 272,605 million BDT suggesting that resource gap in 2010 as percent of estimated total resource requirements (i.e.380,395 million BDT) from demand side is about 72 percent. Resource gaps have been found for four of the age-specific groups. The highest coverage gap has been reported for Youth followed by working age population. There is no coverage gap for old age group – there is a surplus for this group. Significant improvement in resource gap situation has been noted for 2016 as it dropped to 29 percent – almost by 3 times. Although there are differences in transfer amounts – the fall in resource gap – mainly to due to fall in population in 2016 in each of these age-specific groups.

No Systematic Pattern in Transfer Payment: Average monthly transfer payments of 2010 and 2016 have also been compared to assess growth and patterns in transfer payment. Overall growth rate of 40 percent has been found for all schemes between 2010 and 2016 implying annual growth rate of 8 percent. Growth rate of the age-specific schemes (i.e. 6.4%) is higher than the growth rate of the non-schemes (i.e. 4.2%). The growth patterns however are diverse with high growths for children and Old age (i.e. 24% annualized growth). Growth rate for the working age is also positive at 4.4 percent. Youth schemes have experienced large reduction in transfer payment – by about 11 percent. Reductions are also found for school age children and disabled schemes. Reductions in transfer amounts (i.e. valued in nominal terms) are disturbing developments which may have been avoided.

Overall: When the key patterns and trends of the analytical framework are assessed against the 'elements of good social protection system' (please refer to Box 1 below) it appears that the current social protection system is ***inadequate*** due to low coverage and transfer amounts. Widespread variations in number of schemes; beneficiary coverage and transfer amounts tend to suggest that the ***equity aspects are not ensured***. Moreover, due to large numbers of schemes and lack of internal balances between them envisaged that the current social protection system is ***inappropriate***. However, some ***dynamism*** is found with adoption of more schemes for youth and children.

B. Population Dynamic and Future Cost Implication: Cost estimates of a social protection scheme mainly depend on two factors: the number of beneficiaries and the value of the transfer amount per beneficiary. A long-term costing module for Bangladesh covering period from 2016 to 2051 has been developed to project or simulate costs of the above mentioned five age-based schemes for each year under various combination of coverage and transfer amounts. The module is flexible to project and simulate costs by varying different combination of coverage and transfer amount. The numbers of potential beneficiaries for these five age-based schemes are derived from the age cohort population projection data obtained from the report "Population Projection of Bangladesh: Dynamics and Trends 2011-2061" published by Bangladesh Bureau of Statistics (2015). The range of age cohort is from 0 (zero) to 80 and coverage of the projections ranged from 2011 to 2061. The relevant years for cost estimation are 2017 to 2051. Two social protection packages have been considered.

Package one composed of universal coverage for two age-based schemes – children and old age. The coverage for the school age and youth has been set at 35 percent of their population sizes. Only 15 percent coverage has been set for the working age population since a significant portion of them would be covered by their employers as well as through the employment insurance scheme. According to these criteria total numbers of beneficiaries which have been estimated at 65.5 million persons in year 2020 increase to 92.5 million persons by 2050. The beneficiary coverage as percent total population increase from 38.7 percent in 2020 to 42.9 percent in 2050.

Size of transfer amount has always been inadequate in Bangladesh compared to the need of the beneficiaries due to fiscal constraint. However, with progress towards upper middle-income country by 2031 and high-income country by 2041, citizen's expectation for adequate coverage would grow. In package one, monthly transfer amount has been set only at 0.07 percent of the annual per capita income. A uniform transfer amount has also been assumed for all 5 types of age-based schemes.

Total cost may vary from 3.3 percent of GDP in 2020 to 3.6 percent of GDP in 2050. Total costs thus suggest a stable pattern over the 30 years period. Two contrasting trends have been found – (i) rising trends for the schemes supporting the old age and working age population; and (ii) falling trends for the other three schemes – children, school age and youth

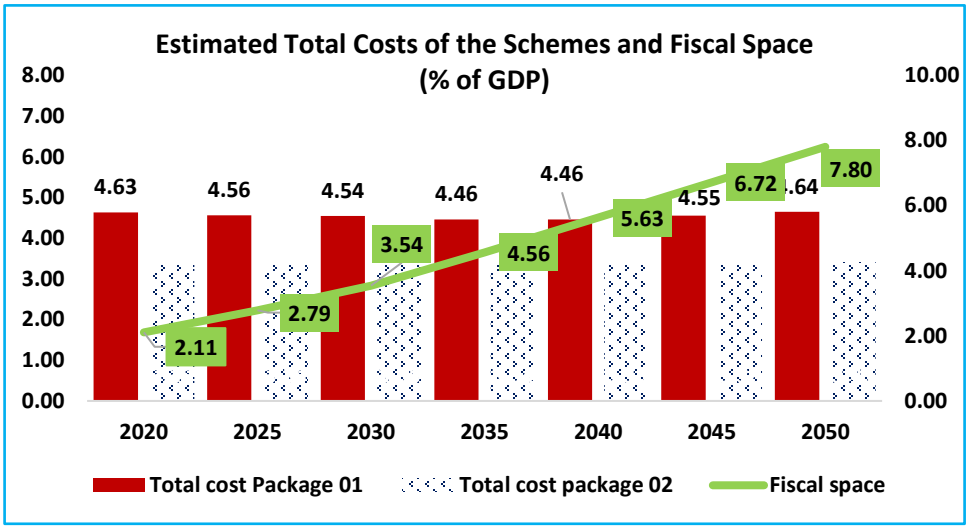
Package two consists of targeted coverage for all schemes. The coverage for the children and old age has been set at 35 percent of their population sizes. The coverage is 25 percent for the school age and youth. A smaller coverage of 20 percent has been set for the working age population. Total numbers of beneficiaries which have been estimated at 41.6 million persons in year 2020 increase to 54.7 million persons by 2050. The beneficiary coverage as percent total population may range between 24.6 percent in 2020 to 25.4 percent in 2050.

Slightly higher monthly transfer amount of 1 percent of per capita income has been set in package two. Again, a uniform transfer amount has also been assumed for all 5 types of age-based schemes.

Estimated costs by each of the five age-based social protection schemes under package two are provided in figure below. Despite setting higher transfer amount, due to smaller coverage total cost has declined in this package compared to package one. Under this package, total cost may vary from 2.995 percent of GDP in 2020 to 3.048 percent of GDP in 2050. Three contrasting trends have been found – (i) rising trends for the schemes supporting the old age; (ii) rising (till 2035) and stable trends (for the rest 15 years) have been found for the working age scheme; and (ii) falling trends for the other three schemes – children, school age and youth.

Fiscal Space: A fiscal framework has been developed to assess the fiscal space for financing of the resource needed for package 1 and package 2. It is consistent with the long term macro-economic framework used in the 'Perspective Plan' and 'Delta Plan'. Mobilization of total resources and their sources are derived from tax bases – GDP; personal income and imports. Although total expenditure projections are consistent with the resources, the allocation patterns between revenue and development budget reveals the underlying targets and goals set out in the long-term plan. In particular, development expenditures are aligned with the productive physical and human capital needs over the long-term period which must be implemented by the public sector. Projected development expenditures are deducted from total expenditures to determine available resources for carrying out revenue or current expenditures. Most of the budget items under the revenue or current expenditures are resource inelastic suggesting that expenditures on these items must need to be carried out even if there were a resource crunch. In other words, room for manipulation with items under the current budget component is very limited and fiscal space for social protection has been calculated as a residual item – fulfilling the resource needs of the other items. Projected fiscal space for the social protection has found to expand with the higher revenue efforts (i.e. revenue to GDP ratio) and expenditure to GDP ratio. Ceteris paribus, fiscal space for social protection has been projected to expend from 2.1 percent of GDP in 2020 to 7.8 percent of GDP in 2030.

The projected fiscal space for social protection system has been contrasted against the two packages – package 1 and package 2 in a single framework to assess their fiscal feasibility and sustainability. It also includes 0.36 percent cost associated with universal disability scheme. The outcomes are summarised in figure below. Bangladesh will find it extremely difficult to finance two packages in the early years of the projected period. Package 2 will only be feasible and sustainable onward 2030. The estimated resource gaps between fiscal space and package 1 costs are 1.24 percentage points



in 2020 and 0.56 percentage points in 2025. The options for Bangladesh are either to cut cost even further under package 2 through lower coverage; or benefit; or combination of both in line with fiscal space or resort to higher deficit financing (i.e. over the 5 % level used in the fiscal framework) for initial years with the understanding that the gains in fiscal space in the later years would be used to pay interest payment and debt amortization. Alternatively, Bangladesh may choose to restrict the social protection budget to fiscal space in the early years but gradually expand it with higher coverage and transfer amounts. A restricted package 2 in the initial years may be converted into package 1 from 2035.

C. Recommendation: Policy recommendations highlighted the importance of exploring options for universal child grant and pension based on experiences of other countries in promoting system anchoring on tax-financed and contributory schemes. A package consisting of skill development along with provision of credit and stipend may be the right scheme to address the needs of the youth population. Insurance coverage and enabling facilities may be the requirement for the working age groups.

Bangladesh must start consolidating the social protection schemes into six core clusters. The recent trends in the expansion of the schemes under the social protection budget must be arrested and schemes should be consolidated into the recommended six core clusters based on the life cycle approach or age-specific schemes. Periodic in-depth review of the system is also needed to raise enhance effectiveness of the system and the value for money. Following recommendations of the experts, the comprehensive review may be undertaken every five year in line with the preparation of the five-year plan.

Chapter 1. IMPLICATION OF CHANGING DEMOGRAPHICS AND EFFECTS ON SOCIAL PROTECTION IN BANGLADESH[1]

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1. Introduction and Background

Population plays a vital role in economic growth and development. Changing demographic scenarios have various social and economic consequences. The interconnections between population and economic growth and the importance of demographic transition has become a major concern in recent years. Changes in the age distribution of the population may have important economic effects. Demographic change affects society and the economy through age structure and dependency ratio, labour market and dividends internal migration and urbanization, demand for public services and policies including social policies education, health, social protection. In order to ensure a certain living standard and address transient poverty, majority of the countries throughout the world operate numerous social protection programmes tailored to the needs of the people who need it. In developing countries social protection systems play a vital role in boosting human capital and productivity and assists in realizing the human right.

Moreover, Changes in the population age structure creates opportunities along with challenges. Bangladesh has witnessed a rapid change in its population structure due to successes of social policy interventions which have driven down child mortality and high fertility rates and extended life expectancy. In 1975, life expectancy at birth was estimated to be 44.9 years and this has risen to 58.1 in the year 2000 and the UN predicts a growth to 70.5 years in 2025. This will result in a large pool of youth along with an ageing population. In order to reap the benefits of demographic dividend the domestic job sector needs to be strengthened and youth need to be empowered through provision of vocational and technical training. In addition, social protection schemes need to be designed to address the needs of the elderly.

Bangladesh intends to reduce vulnerability to poverty and deprivation. Social protection is an important pillar in her fight against poverty. To increase the efficiency and effectiveness of the social protection programmes, the Government has drafted a National Social Security Strategy (NSSS) to create a social protection system that is more inclusive, focused and that will help take a coordinated approach to poverty reduction. In this context this report aims to determine if the current portfolio of social protection programmes is adequate to meet the needs of the changing demographic structure in Bangladesh and also measures the impact of existing Social protection programmes on headcount poverty reduction. The study maps the demand side and supply side of social protection systems. The findings from the mapping exercise were contrasted with population by Life cycle (i.e. children, youth, old age etc.) – by percent (share). A section has been devoted to assessing patterns of demographic changes and challenges for Bangladesh. The report also attempts poverty and vulnerability mapping by life cycle between 2010 and 2016 to highlight changing patterns. Furthermore, the study employs a costing module to forecast costs of the age-based social protection schemes. Finally, the report concludes with policy recommendations.

2. Methodology

Various types of methods utilizing diverse data sets have been used in this study. A through ***desk review*** of the changing population structure and their socio-economic implications has been conducted using demographic dynamic and other relevant social and economic data sets. An ***analytical framework*** invoking the demand side and supply side of the age-based social protection system has been used to assess adequacy and gap. Demand side assessment is based on the demographic dynamics and HIES 2010 and 2016 data sets. Social protection budget data produced by Ministry of Finance have been employed to derive the supply side. A ***costing module*** based on the demographic dynamic (i.e. between 2020 and 2050) and key macro-economic indicators is employed to project costs of the age-based social protection schemes.

Desk Review

A comprehensive desk review has been conducted to examine long term trends in population structure in Bangladesh. More specifically, population structure data from 1901 to 2011 has been used to assess trends; patterns and age distribution of Bangladesh population over the 110-years period. BBS adopted three variants (i.e. associated with population growth rates) to project population dynamic from 2011 to 2061. Demographic dynamics are combined with the Labour force survey data; education and health statistics; and statistics on migration and urbanisation to assess the impacts on labour market and demographic dividends, urbanization rate and demand for public services – especially social sector services.

Analytical Framework

The analytical framework composed of a demand side component and a supply side component. On the basis of the availability of HIES 2010 and HIES 2016, the analytical framework has been numerically specified for 2010 and 2016. Following five age groups[1] have been considered:

(i) Children (age 0 to 4);
(ii) School age children (age 5 to 14);
(iii) Youth (age 15 to 29);
(iv) Working age (age 30-59); and
(v) old age (age 60 and over).

Demand side: the starting information sets of the demand side are the age-specific population sizes. If a universal coverage is adopted to design the system, then we only need the transfer amounts to determine the costs of these schemes. However, in Bangladesh beneficiaries are selected using targeting methods mainly focusing on the poverty profile. Thus, information on poverty or vulnerability rates by the age-specific groups are required to determine the beneficiary sizes by each of these age groups. Poverty and vulnerability rates for 2010 and 2016 are derived from the HIES 2010 and 2016. Monthly transfer rates derived from the budget data are used to calculated resource (cost) needed for the age-based social protection schemes for 2010 and 2016. Demand side specifications are defined by the following equations:

1. Population sizes (PS) are defined as: PS_a^t …… (i); Where, t denoted years 2010 and 2016; and a refers to six age specific social protection schemes.

[1] A sixth category to cover disabled persons has also been considered in the study. Thus, there are six groups considered in this study.

2. Beneficiaries are selected from population sizes (PS) and poverty rates (P) derived using HIES 2010 and 2016. Beneficiaries (B) are selected as: $B_a^t = PS_a^t * P_a^t$ …… (ii).

3. Monthly transfer (T) amounts are used along with the beneficiary sizes to estimate costs of age-based schemes. Costs (C) are determined as: $C_a^t = B_a^t * C_a^t$ …… (iii).

Supply side: budget data for 2010 and 2016 are used to estimate supply side of the age-based schemes. According to the classification adopted by MOF, there are 74 funded social protection schemes in 2010. The number of funded social protection schemes increased to 135 in 2016. A mapping scheme linking the social protection schemes and six age-specific groups have been used to estimate the supply side of the age-based social protection schemes. Schemes which do not adhere to the mapping arrangement are included into another category labelled as 'non-age scheme'. The mapping exercise provides supply side information on beneficiary coverage; total allocation and derived monthly transfer amounts by each of the five age-based schemes; by disability and as well by the non-age scheme.

Comparative assessment: once the demand for social protection for according to age-based schemes and the supply side of social protection schemes are determined for 2010 and 2016, comparative assessments have been conducted. More specifically, these two components are compared against each other for the assessment. It may be schematically shown as:

Demand Side		Comparison Criterion	Supply Side	
Age-groups	**Age-schemes**	**Coverage**	**Age-schemes**	**MOF Budget**
0-4	Children	**Allocation**	Children	
5-14	School age	**Transfer amount**	School age	
15-29	Youth	**Equity**	Youth	
30-59	Working class		Working class	
60+	Old age		Old age	
	Disabled		Disabled	
			Non-age scheme	

Two important criteria for comparison are beneficiary coverage and resource allocation. In addition to these indicators/criteria, other criteria may need to be used to have more comprehensive comparative assessment. In a study for the World Bank, Grosh et al (2008) has identified seven indicators/features as elements of a 'good social protection system'. This study intends follow these indicators (where feasible) for the comparative assessment. Box below listed these indicators or features.

Box 1.1: Elements of a good social protection system

Features	Description
Appropriate	Each scheme should be tailored to best fit the conditions. That is, the number of schemes adopted and their internal balance and association with the other components of the public policy should respond to the intended needs of the country. Each program should be customized for best fit with the circumstances.
Adequate	Each scheme of the system should provide full coverage and meaningful transfer amounts to the beneficiary of a subset of the population they are intended to assist such as chronic poor; transient poor and disabled population.
Equitable	All beneficiaries should be treated in a fair and equitable way such that horizontal and vertical equity is ensured. More specifically, the goal of the system should to provide the same benefits to individuals or households with similar attributes in all important respects

Box 1.1: Elements of a good social protection system

Features	Description
	(horizontal equity) and may also provide more generous benefits to the poorest beneficiaries (vertical equity).
Cost effective	The system must be cost-effective though economizing the administrative costs needed for programme implementation in two ways. First, avoid fragmentation and the subsequent need to develop administrative systems without realizing economies of scale. Second, operating efficiently with the minimum but sufficient resources to carry out programmes well and to attain the desired impact.
Incentive compatible	Social protection system may influence individual behaviour in a positive or negative manner. Thus, system should be designed in such way that promotes positive changes to an individual. This can be achieved by keeping the role of the social protection to the minimum consistent with adequacy. Furthermore, social protection schemes should be linked with other elements of the public policy to increase individual's income and welfare.
Sustainable	Prudent social protection systems are financially and politically sustainable, such that they are pursued in a balanced manner with other aspects of government expenditure and in line with the fiscal space. In low-income countries, schemes started with development partner support are gradually incorporated into the public sector budget.
Dynamic	A good social protection system will evolve over time with demographic dynamics, changing economic structure and flexibility to address sudden shocks. Moreover, the authority of specific scheme should also evolve as problems are solved and new standards set.

Source: Grosh et al (2008)

Costing Module

A costing model has been used to project the cost of age-based social protection schemes under alternative beneficiary coverage as well as for different transfer amounts. The costing model is described in the box below.

Box 1.2: Costing Module

Cost essentially depends on beneficiary coverage and transfer amounts (value of benefit) as well as whether we like to index them to inflation rate or other price indices. The specification of the costing model is provided in equation below.

$C_i = BC_i \times VB_i \times CPI$; *where* $i = 1 \ldots n$ *(number of age-based schemes)*

Where, C refers to cost; BC denotes beneficiary coverage; VB suggests monthly value of benefit; and CPI is the consumer price index.

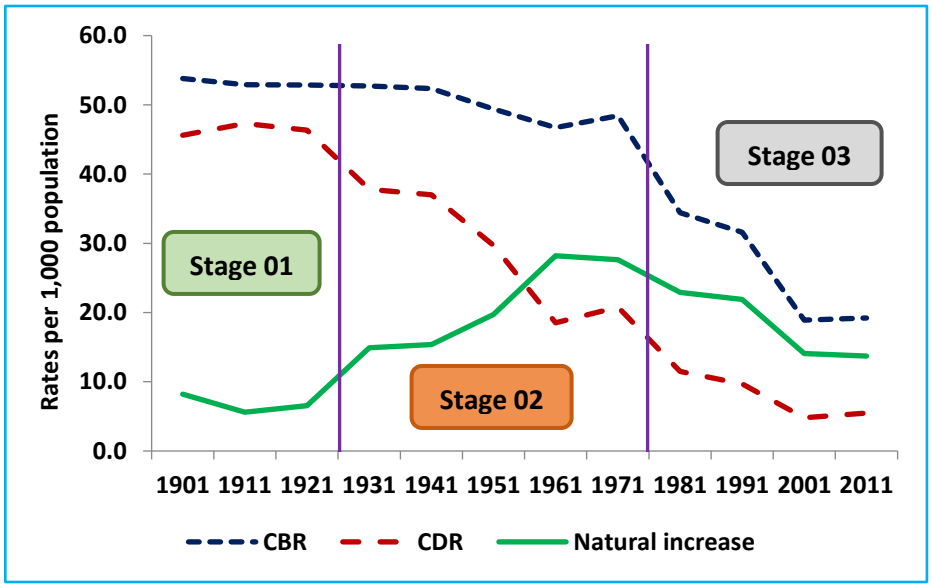
3. Demographic Transition and Socio-Economic Impacts

3.1. Changing Population Structure in Bangladesh

A long-term time horizon spanning over the last 110 years has been considered to examine the changing population structure in Bangladesh. In doing so, the well-known demographic transition model has been invoked. Moreover, an analysis of changing population structure has also been attempted considering three broad age groups – children, working age and old age.

Demographic transition: the demographic transition in Bangladesh during the 11 decades (i.e. 1901 to 2011) may be characterized with the aid of the classic demographic transition model. It composed of four stages based on the birth and death rates as well as the underlying population growth rates. On the basis of these three features, it is argued that Bangladesh's transition remain incomplete as the population growth rate remains higher than 1 percent threshold till 2011. Demographic transition is stated to complete when population growth rate is less than 1 or it enter the stage 4.

Figure 1.1: Evolution of rates of birth, death and natural increase, 1901-2011



Source: BBS, Reports of the Bangladesh Population Census, 1974-2011

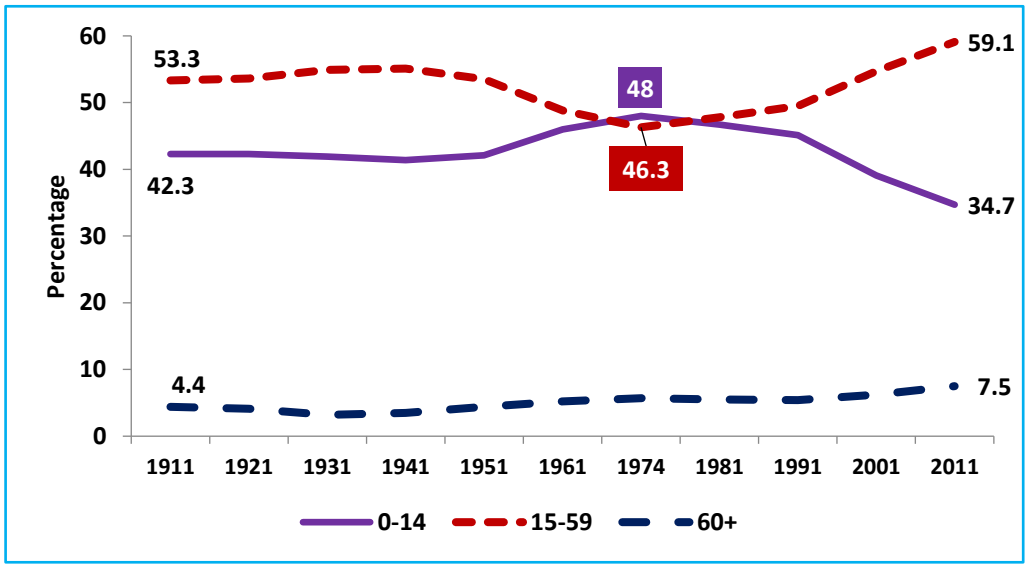
Stage 01: it lasted over the 1901 to 1921 period or for about 20 years. The main features of this stage are high birth as well as high death rate. The population growth remained less than 1 (i.e. between 0.5 and 0.9).

Stage 02: it commenced in 1921 as the death declined but birth rate remained high till 1971. Thus stage 2 lasted over 50 years between 1921 and 1971. Apart from declining death rate and high birth rate, the stage is characterized as population explosion period with population growth recorded as high as 2.6 percent.

Stage 03: the country entered stage 3 sometime after 1971 as birth began to decline along with the death rate. But decline in population growth was less than the fall in birth rate as death rate continued to fall as well. As a result, population growth rate was above 2 percent until early 1990s. Although population growth rate continued to decline but it still remains around 1.4 percent between 2001 and 2011. Bangladesh thus still remains in stage 03 and her demographic transition is incomplete as it completes in stage 04 where population growth rate is again less than 1 percent rate.

Age composition: demographic transition is associated with varying age structure in its journey – from commencement to completion (i.e. in other words during these four stages between stage 01 and Stage 04). The figure below captures changing population structures by three broad age groups – children (age 0 -14); working age (age 15-59); and old age (age 60 and above). The share of children in total population rose to the peak of 48 percent in 1974 before starting to decline. In 2011, children share has fell to 34.7 percent. On the other hand, share of working age population experienced a bumpy ride – it increased till 1941, fell between 1941 to 1974 and then increased thereafter. Working age group lowest point is at around 1974 with 46.3 percent. The share increased to 59.1 percent in 2011. Contrary to these two groups, the share of old age population has increased steadily over the transition period, rising from 4.4 percent in 1911 to 7.5 percent in 2011.

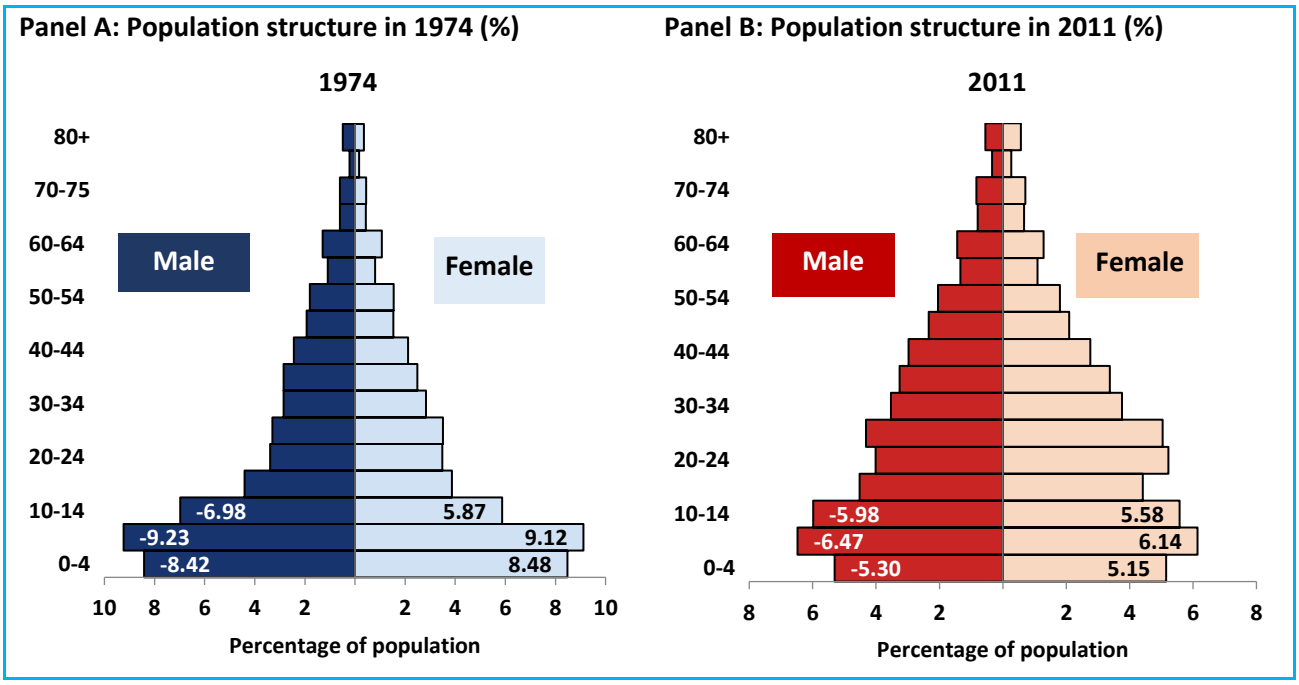
Figure 1.2: Population dynamics in Bangladesh – 1911 to 2011 (%)



Source: 1911-1921 Rahim, M.A. (1969); BBS, Reports of the Bangladesh Population Census, 1974; 1981-2011

Figure below captures the age-sex distribution in 1974 and 2011. The 1974 distribution reveals the effects of high fertility in the 1965-70 period which resulted in the 5-9 age group comprising over 18 percent of the population. UNPFA (2015) further argued that 'although the 2011 age structure is much more "mature" than in 1974, it is still the case that the 5-9 age group is the largest age group in the population, comprising a little over 12 percent of the total'. The UNPFA report further noted that, 'it would take several decades for this cohort to work its way through the age structure and as it does it will contribute to the "momentum" factor that ensures that population growth will continue even though fertility has declined to a historically low level'.

Figure 1.3: Changing population structure in Bangladesh – 1974 and 2011 (%)



Source: BBS Census Reports – 1974 and 2011

Box 1.3: Salient features of demographic dynamics

Demographic transition in Bangladesh has followed the general trends predicted by the "demographic transition model" but with some special features. The mortality transition which started in 1901 are still on-going; Infant, child and maternal mortality rates have declined consistently over several decades.

The fertility transition commenced 50 years later and has been very uneven. Fertility decline "stalled" in the 1990s, resulting in larger birth cohorts which translated into a rapidly-growing labour force in the 2000s. A weakening of government family planning programmes may have contributed to the stalled fertility transition. The current TFR of 2.3 is the lowest of any country with similar levels of poverty. Regional variations in fertility are also evident. The causes of fertility decline are not completely clear, but socioeconomic development has played a major role along with family planning programmes.

The demographic transition has been accompanied by changes in age structure with the 0-14 age group declining as a proportion of the total and other age groups expanding. The urban population growth rate is approximately double the national rate, but the urban population is still under 30 percent of the total population.

Source: UNFPA (2015)

3.2. Future Projection of Bangladesh Population

BBS and UNFPA projections have been used to analyse the trends of future population in Bangladesh in terms of selected age groups – such as children (age 0-4); school age (age 5-14); youth (age 15-29); working age (age 30-59); and old age (age 60 and above). BBS provided projections from 2011 to 2061 while UNFPA presented projections from 2011 and 2061. In both cases, three variants (i.e. high, medium and low) based on population growth rates have been adopted for the projections.

Box 1.4: Descriptions of the three variants

The most important element for any population projection is the assumption regarding the pattern of future age-specific fertility. Age-specific fertility is generally obtained from the summary fertility measures like total fertility rate (TFR) and proportionate age-specific fertility (proportion of births by females of different age groups). The population projection is based on the assumptions on both TFR and proportionate age-specific fertility for entire projection period. The values of these two parameters (i.e. TFR and proportionate age-specific fertility values) have been based on series of discussion and consultations involving the renowned demographers and policy makers in Bangladesh, organized under the aegis of BBS. Accordingly, three variants – high, medium and low have been considered for the future population projections in Bangladesh.

High: The high variant assumes the TFR would remain constant at the present level 2.3 (BDHS 2011, 2014) over the projection period.

Medium: A steady decline of TFR employs in the medium variant fertility level. Initiating from 2.3 in 2011, it is assumed decline to 2.1 in 2021, from 2026 TFR declined further to 1.9 and continued thereafter.

Low: A sharp decline of TFR is assumed in the low variant scenario, beginning with TFR 2.3 in 2011, 2.1 in 2021, 1.9 (below replacement level) in 2026 and after two decades from 2011 it is assumed to be 1.6 and remains constant till 2061.

High variant assumes the highest fertility level, whereas the low variant possesses the lowest fertility level. It is to be recommended that the medium variant is more feasible, whereas low could be preferred for policy implication. The population projections are delineated for the period 2016 to 2061 based on the adjusted census population 2011.

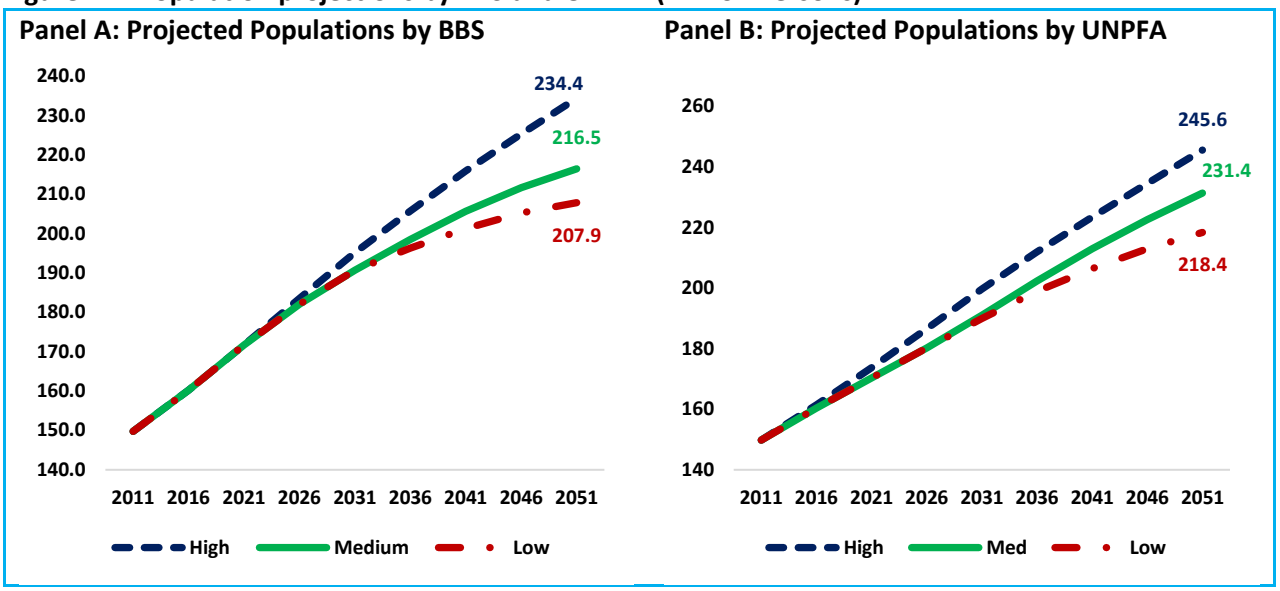
Source: BBS (2015)

Total Population

Population projections by BBS and UNFPA shows significant variations due to the use of different methods in their projections. Due to these variations, projected total populations in 2051 under the three variants by UNFPA[2] are significantly higher than the population projections of BBS.

[2] UNFPA fertility assumptions are different than the BBS assumptions – resulting in variation in population sizes under the two projections.

Figure 1.4: Population projections by BBS and UNFPA (Million Persons)

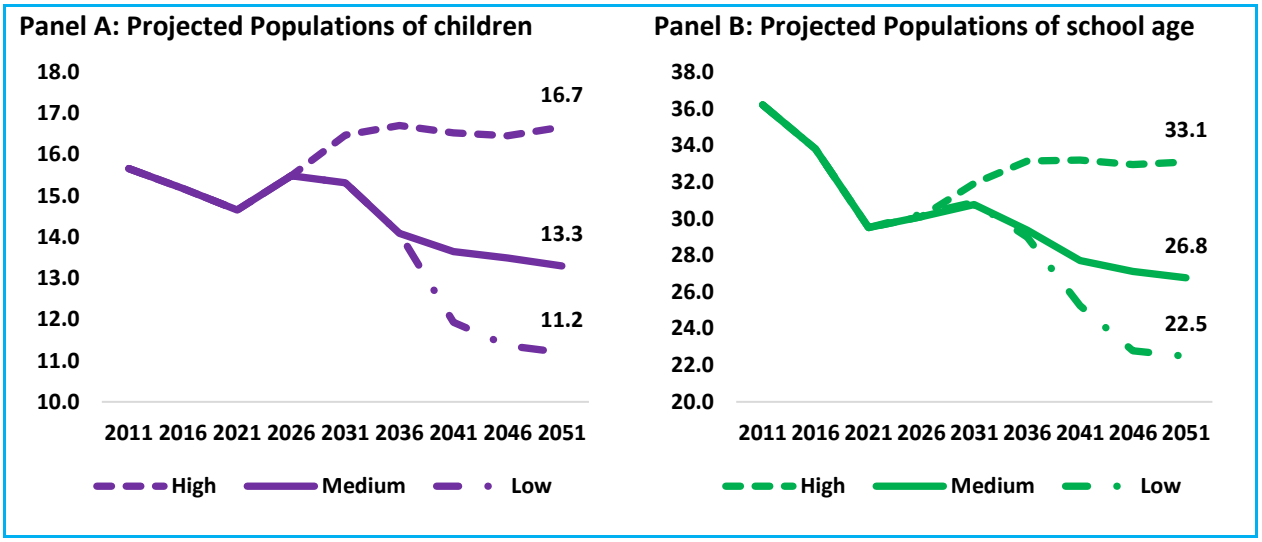


Source: BBS (2015) and UNFPA (2015)

Age Specific Population

Population projections by BBS have mainly been used to assess the projections of the age specific populations. The population projections have been presented for 2011-2051 period and for five age groups. Figure below captures projections for children and the school age. Significant differences have been found for the three variants for both of these two groups. However, the sizes of the school age are almost double that of the children group.

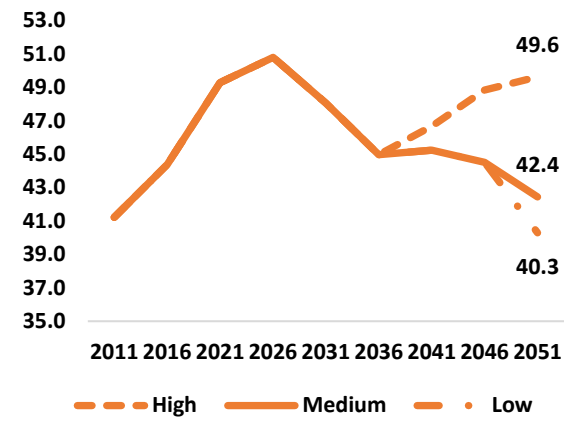
Figure 1.5: Population projections of age group – children and school age (Million Persons)



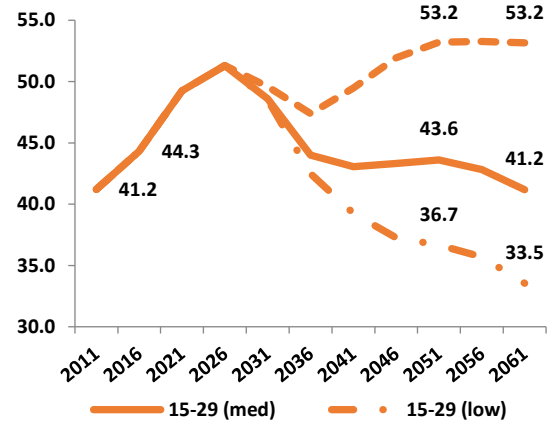
Source: BBS (2105)

Figure below which captures the projections for youth shows significant variations between these three variants. Projections of youth by UNFPA produced substantially different numbers than the numbers projected by BBS.

Figure 1.6: Projections of Youth Population (Million Persons)



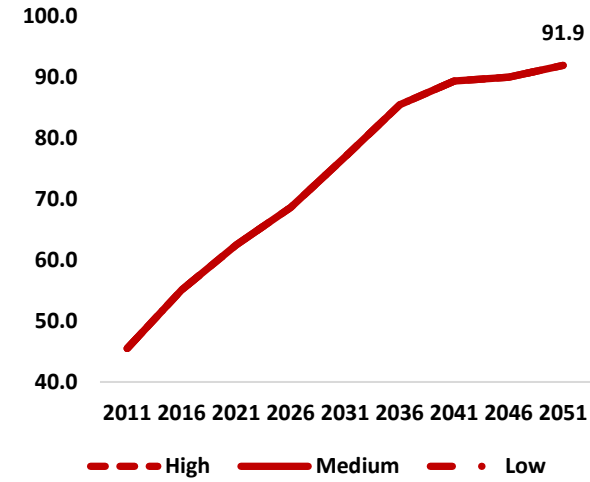
Source: BBS (2015)

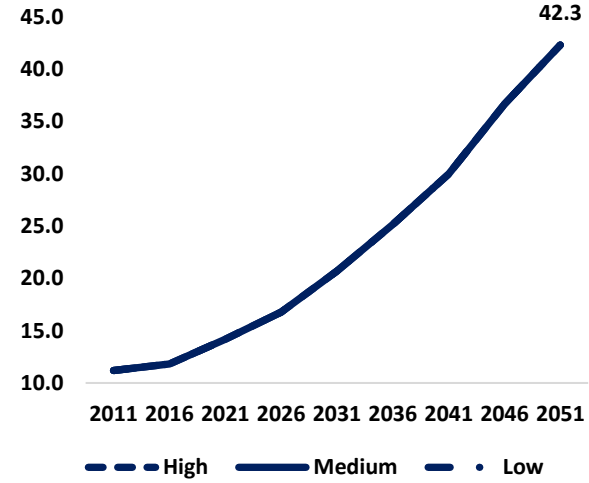


Source: The Impact of the Demographic Transition on Socioeconomic Development in Bangladesh: Future Prospects and Implications for Public Policy, UNFPA (2015)

Population projections of the other two groups – working age and old age are shown in figure below. Working age population shows an increasing trend till 2041 before it enters into the stabilization period. Old age population on the other hand, would continue to increase over these four decades. More specifically, old age population increases by over 4 times from 10 million to over 42 million over these four decades.

Figure 1.7: Projections of working age and old age Population (Million Persons)

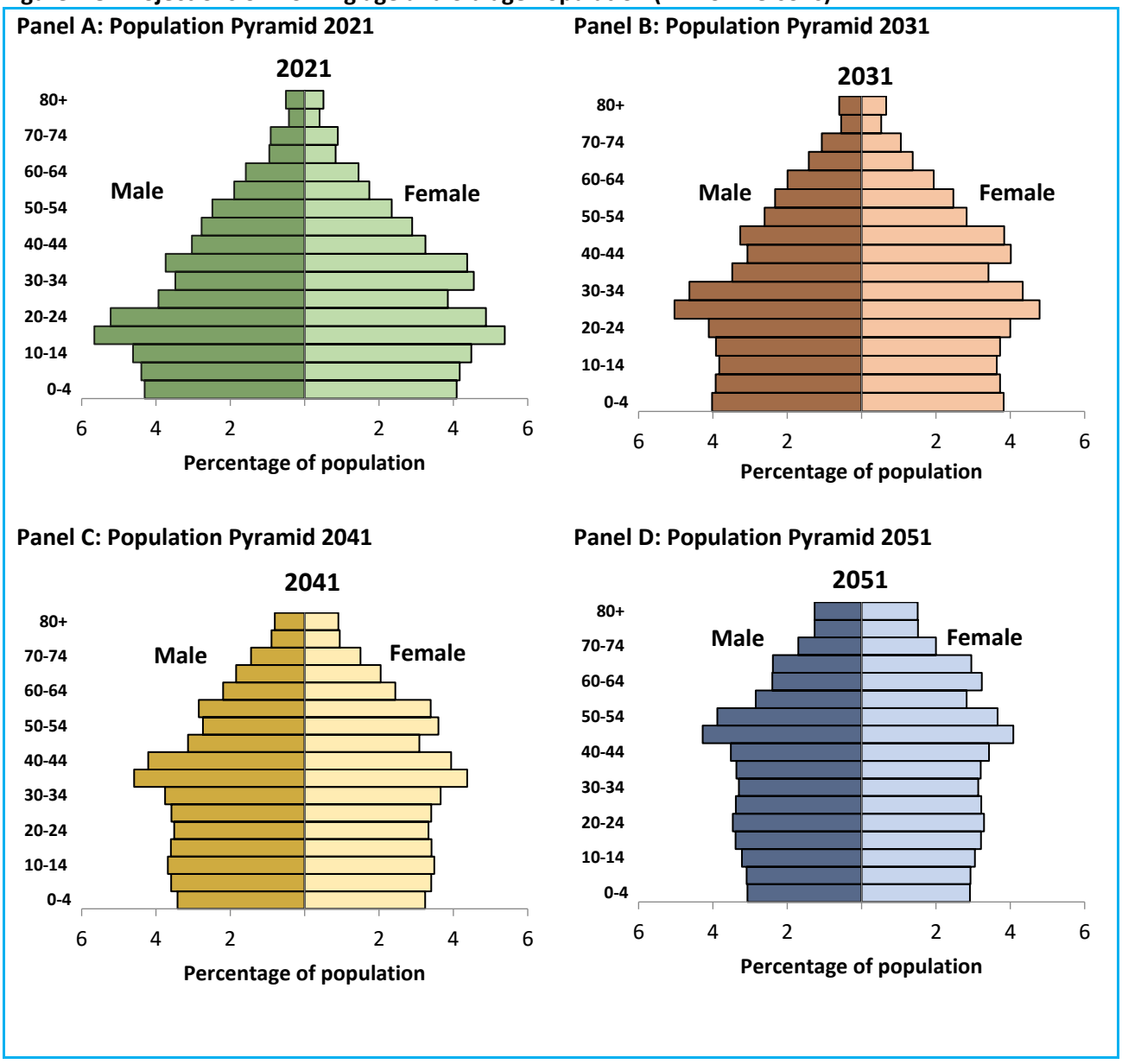




Source: BBS (2105)

Changing age structure at the end of each decade between 2021 and 2051 clearly reveal the impact of population dynamics and transitions. With the passage of time age structures by gender become more rectangular with implication on ageing, working population and hence on higher dependency ratio.

Figure 1.8: Projections of working age and old age Population (Million Persons)



Source: BBS (2105)

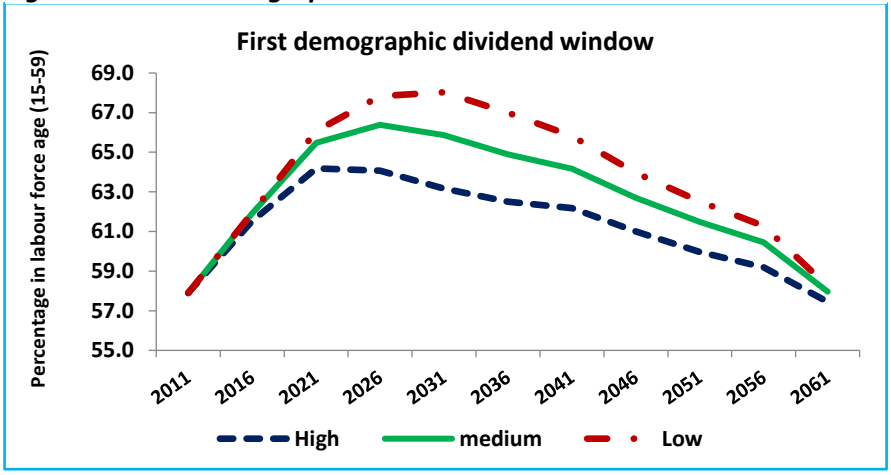
3.3. Impacts of Changing Population Structure

Changing population structures likely to have implications of the economy and society mainly two channels – (i) through labour supply and labour market; (ii) internal migration and urbanization; and (ii) demand for goods and services – especially for public services.

Labour Supply: The most important channel though which demographic dynamic impacts economy and society is though influencing the labour market. Structure of working age population (15 years and over) directly influence the size and composition of the labour force. In the case of Bangladesh, the working age population increased by around 2.1 million persons per year over the last decade (i.e. 2000 to 2010). It implies an average rate of growth of 2.5 percent per year – significantly higher than population growth rate of 1.4 percent. On the other hand, the rate of growth of economically active population was even higher at 3.3 percent per year – mainly due to the rapid increase in the participation of female workforce. During this period female labour force

expanded by 8.6 million while the expansion for male has been by 7.3 million. Male labour force participation rate more or less remained stable around 83 to 84 percent, female labour force participation increased from 2.9 percent in 2002 to 36.0 percent in 2010.

Figure 1.9: First demographic dividend window



A positive driver associated with the age composition is first demographic dividend. The first demographic dividend occurs when proportion of the population in the labour force increases relative to other age groups (as reflected in a declining dependency ratio). It is a transitory event – provides a one-time "window of opportunity", for investing heavily in human resource development to accelerate economic growth and social development. With population ageing, the dependency ratio increases again, the "window" gradually closes, and the dividend is no longer available. Bangladesh has entered into this window of opportunity in 1990s, and three variants of population measurement suggest three-time frame for the closure of the dividend. It appears that Bangladesh would benefit from a demographic dividend until sometime between 2021 and 2031.

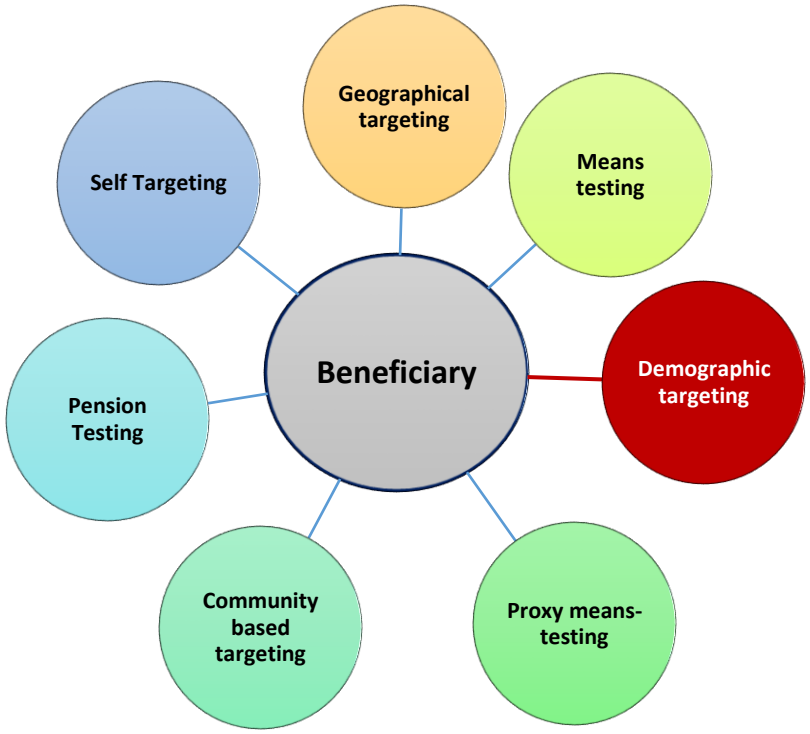
Internal Migration and Urbanization: Internal migration between rural and urban locations as well as across regions is due to pull and pish factors. Structural changes of the economy, climate changes, and declining fam-based activities in rural locations are some of the main factors for internal migration and rapid urbanization in Bangladesh. Urbanization is thus closely related to the demographic transition and a key driver. According census 2011, urban population comprised 28 percent of the total population.

The pace of urbanization may well increase, and according to United Nations projections, all population increase is likely to be in urban areas from now on. Dhaka will continue to dominate Bangladesh's urban hierarchy. It is already one of the world's major megacities, and its population could reach 27 million by 2030 an increase of 86 percent over the population in 2010.

Demand for Public Services: Population growth, size and structures are the key drivers of public services such as education, health, housing and sanitation. Demand for education services increases with the growth of children and young population. Health services may need to adjust with the underlying population dynamics with health services for an ageing nation may likely to be quite different from the health service need of a relatively young nation. On the other hand, demographic dynamic has direct association with the design of a life cycle based social protection system.

Changing population may have implications for the design of the various social protection schemes. It is also directly used to select beneficiaries if a targeting approach is considered. Coady et al (2004) and Kidd et al (2019) has identified seven different targeting approaches for selecting the beneficiaries (please see figure below). One of the targeting approaches is based the age structure and thus has directly implications on the nature, size and feasibility of social protection schemes.

Figure 1.10: Targeting approaches



Source: Based on Coady et al (2004); and Kidd and Diola (2019)

Box 1.5: Demographic Targeting

Demographic targeting – by age or gender is a common form of targeting and has been adopted in different countries. The basic idea of demographic targeting is simply to select groups defined by easily observed characteristics such as the old, the young, or female-headed households to make them eligible for some sort of benefit. Beneficiary coverage may range from universal to categorical.

Two important appeals of demographic targeting are: (i) administrative cost associated with running the schemes based on demographic targeting is relatively lesser than the cost associated with other types of targeting methods (see adjacent chart); and (ii) demographically targeted schemes often have high political acceptability. Schemes for both children and older persons are very popular on several grounds such as the argument for building human capital; recognizing the contribution of the older population groups; and since they are not part of the workforce – work efforts are not affected.

Source: Based on Coady et al (2004)

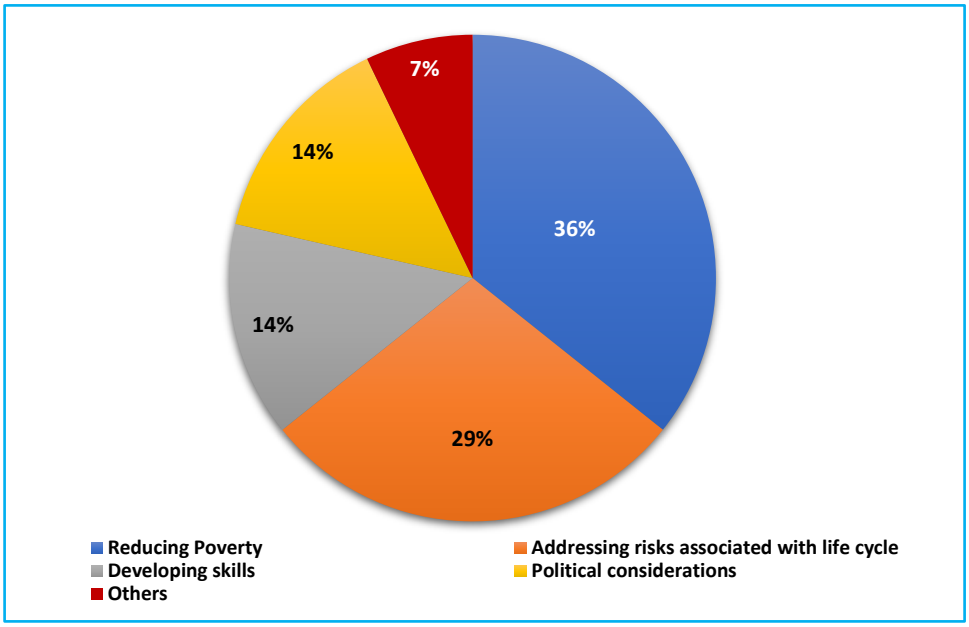
4. Responses of the Key Informant Interviews

Interviews have been conducted with selected key experts. They are drawn from the public sector, civil society organizations, academician, and development partners. A structured questionnaire has been used to gather their responses. It consists of seven questions. The responses of the experts are summarised below.

Response to Q 1: main considerations in designing Social Security schemes

Figure below illustrates the summary responses of experts on the main considerations in designing social protection schemes. Majority of the respondents mentioned that reducing poverty is a major aim followed by addressing risks associated with the lifecycle stages. On the other hand, 14 percent of the respondents stated developing skills and political considerations are the main focus.

Figure 1.11: KII response – main considerations in designing social protection schemes

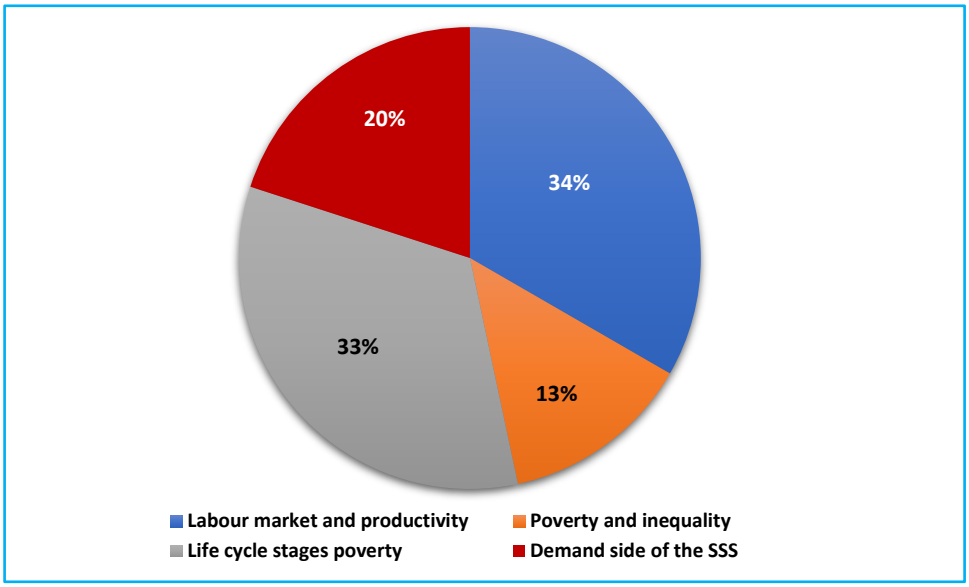


Source: KII (2019)

Response to Q 2: factors are affected by the changing population structure in Bangladesh

Figure below captures the responses on question 2. According to 34 percent of the respondents, labour market and poverty have been affected by Bangladesh's rapidly changing population structure whereas, 33 percent mentioned impact on the poverty situation of life cycle stages. About 20 percent of the respondents argued that demand side of the social protection system has been affected by the changing population structures in Bangladesh. Impact on income inequality has been pointed out by 13 percent of the respondents.

Figure 1.12: KII response – main impacts of changing population structure



Source: KII (2019)

Response to Q 3: demographic dynamics and design of social protection schemes in Bangladesh

It is important to consider demographic changes in designing and determining the size of the social security schemes. We enquired if demographic changes are of importance in designing and determining the size of social security systems in case of Bangladesh. Majority of the respondents mentioned that they are taken into consideration in designing and determining the size of social security systems in Bangladesh.

Response to Q 4: factors are affected by the changing population structure in Bangladesh

Bangladesh National Social Security (NSSS) has adopted life cycle approach in place of previously pursued poor relief approach. We asked respondents the importance of incorporating demographic changes in designing the life cycle social security system. All experts envisaged the importance of demographic transition and agreed that the demographic changes must be incorporated in designing social security schemes. They highlighted the fact that if life cycle approach can be operated systematically it will make the social security system in Bangladesh more sustainable.

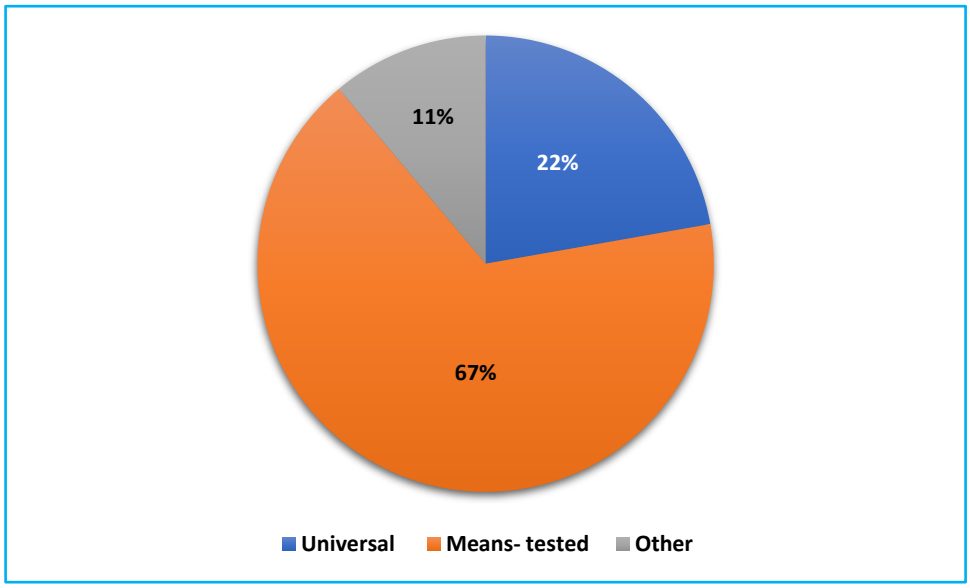
Response to Q 5: best suited approach for beneficiary selection in Bangladesh

Respondents have also been enquired about the best suited approach for Bangladesh – that is "universal" or "targeting". Figure below presents the responses of the respondents on the better suited approach for Bangladesh.

Majority of them (67 %) are in favour of adopting 'targeting' approach for the selection on beneficiaries in Bangladesh. Most of them suggested means testing because according to them it is a better approach for handling the demographic changes fruitfully. Universal approach is favoured by 22 percent of the respondents – mainly for the children and old age schemes. When suggesting universal approach, they highlighted that it is better suited for Bangladesh because universal scheme for children would be a good approach for cognitive development for our future generation. While 11 percent of the respondents opined that a mixed approach is a better suited approach for Bangladesh where in universal approach for some selected schemes and different types of means testing for other schemes. On the other hand, one of the interviewees mentioned that none of

the above options match their thinking. Selection criteria should be linked to the available fiscal space and accordingly an approach combining PMT and community testing may be the best suited approach for Bangladesh.

Figure 1.13: KII response – Best Suited Approach for Beneficiary Selection



Source: KII (2019)

Response to Q 6: schemes for the Youth

A major problem in Bangladesh is that a significant portion of the youth population (15-29) are not in education, employment and training (known as NEET). Respondents have been asked about the types of social protection schemes that should be considered for the youth population in NEET. Majority of the respondents agreed to providing skill development opportunities with time bound stipend and credit. According to them, they should be considered for skill development training whereas some need-based skill trainings along with promotional credit facilities should also be provided. They insisted for skill development training since it will promote entrepreneurship among the young generation. Some mentioned providing demand-based skills by engaging the private sector who are potential employers of the youth.

Response to Q 7: time frame for full review of social protection system

Respondents have been asked on a suitable interval for a full review of the demand and supply sides of the NSSS or social protection system. Almost all the respondents agreed to the point that a full review of supply and demand sides of NSSS should be done every five years in line with the medium-term plans of Bangladesh so that the proposed reforms align with the government's medium-term budget and action plans to ensure higher chances of implementation.

5. Analytical Framework

5.1. Demand Side

As discussed in the methodology section above, the demand side starts with the population structures. Since the analytical framework considers two selected years for the analysis – 2010 and 2016, the population structure of these two years has been obtained from BBS. More specifically, the population structures of the five age-groups have been used. If the entire populations of these five age groups are covered for the social protection schemes, then second information set needed to calculate the resources requirement are the transfer amounts of these age-specific schemes. However, in reality due to budget constraints a sub-set of these age-specific population groups are targeted for the social protection schemes. Targets are based on the level of poverty; vulnerability and age-specific risks. Thus, the demand side calculation composed of three components – (i) population structures by five age groups for 2010 and 2016; (ii) age-specific risks assessment including poverty and vulnerability by the five age groups for 2010 and 2016; and (iii) third set of information are the transfer amounts to calculate the resource requirements.

Population and Structure – 2010 and 2016

The population structures of 2010 and 2016 are presented in the table below. Total population in 2010 was 147.7 million. The distribution between the age-specific groups suggest that working age group is the largest group with 30.4 percent of the total population. It is followed closely by Youth with 27.5 percent share and school age group with 24.2 percent of the total population. The share of children is 10.5 percent. As expected, the lowest share has been reported for the elderly with 7.5 percent. Total population in 2016 has increased to 160.2 million. The shares for the working age population and youth have increased over the 6-years period. The share of working age population increased to 34.4 percent in 2016 from 30.4 percent in 2010. The shares of children and school age population experienced decline in 2016 compared to 2010. The share of old age population remained same at around 7.5 percent.

Table 1.1: Population Structure – 2010 and 2016

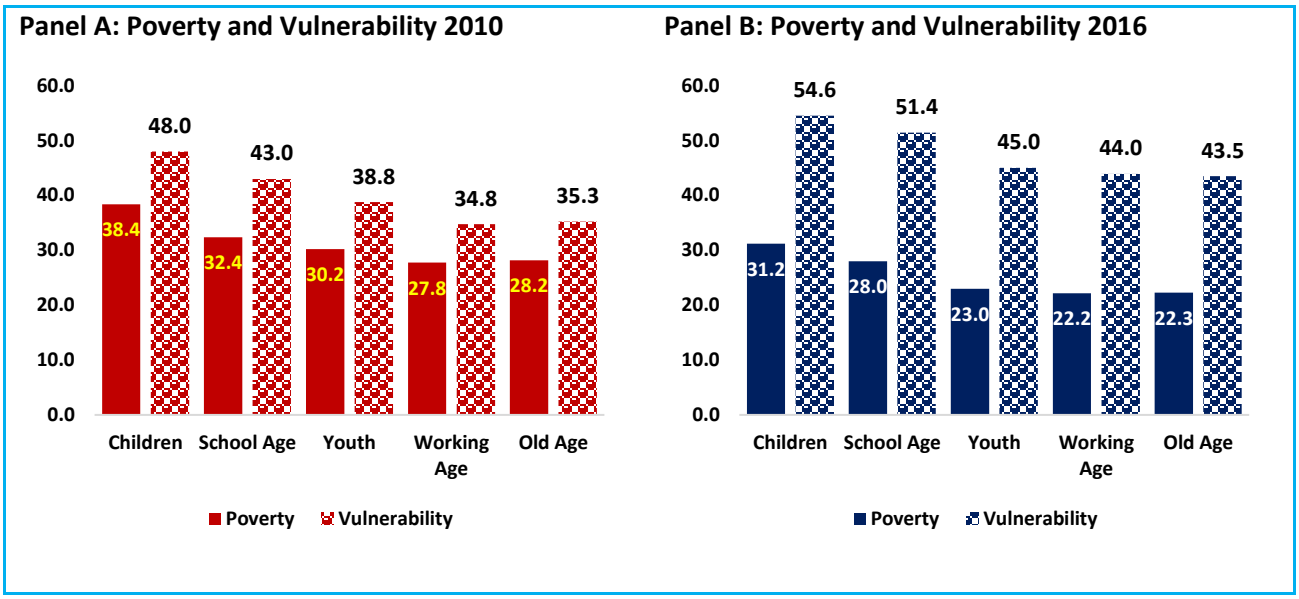
Age groups	2010		2016	
	Population (Mil Persons)	Share (%)	Population (Mil Persons)	Share (%)
Children	15.4	*10.5*	15.2	*9.5*
School Age	35.7	*24.2*	33.8	*21.1*
Youth	40.7	*27.5*	44.4	*27.7*
Working Age	44.9	*30.4*	55.0	*34.4*
Old Age	11.0	*7.5*	11.8	*7.4*
Total	**147.7**	***100.0***	**160.2**	***100.0***

Source: BBS (2015)

Age Specific Poverty and Vulnerability

HIES 2010 and 2016 data has been used to estimate poverty and vulnerability rates by five age-specific population groups. Poverty rates here refer to the upper poverty lines. Following the definition of NSSS (2015) the upper poverty lines of 2010 and 2016 have been adjusted upward by 25 percent to assess vulnerability rates. The estimated poverty and vulnerability rates are provided below.

Figure 1.14: Poverty and Vulnerability Rates (%)



Source: HIES 2010 and 2016

Head country poverty rate in 2010 was 31.5 percent. Poverty rates among Children and School age populations (i.e. 38.4 % and 32.9 % respectively) were higher than the national poverty rates. As expected, poverty rates among the working age group was lowest at 27.8 percent – 3.7 percentage points lower than the national poverty rate. Old age poverty rate was also lower than the national poverty rate but slightly higher than the working age poverty rate. Poverty among Youth has been found lower than the national rates as well as the school age children due to their participation in the job market; but higher than the working age population perhaps due to their engagement mostly in lower paid jobs compared to more experienced working age group. Vulnerability rates among them have been found high between 35 percent and 48 percent.

Sustained economic growth led to significant drop in poverty rate in Bangladesh in 2016. National head count poverty rate declined to 24.3 percent in 2016 compared to 2010 – implying a 7.2 percentage points reduction over the 6-years period. In line with the pattern observed for 2010, highest poverty rate has been found for the Children group with 31.2 percent – 6.9 percentage point higher than the national rate. School age poverty rate of 28 percent was about 4 percentage points higher compared to the national poverty rate. However, poverty rates among other three age groups have been found less than the national poverty rate.

***Key observations*:**

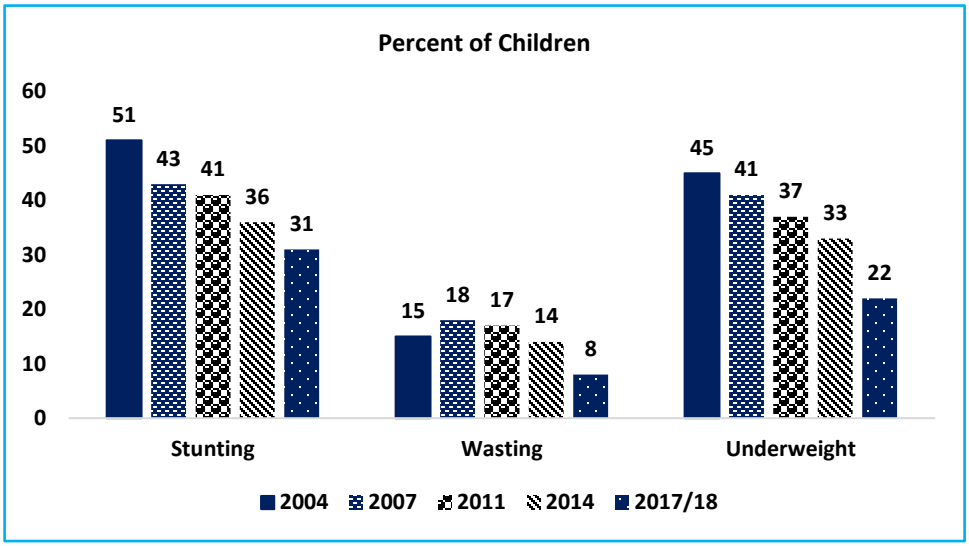
- In the case of Bangladesh, poverty rates declined with age. Vulnerability rates even though higher than the poverty rates – depicts similar pattern of the poverty rates movement with respect to the association between poverty, vulnerability and age.
- Poverty rate has fallen significantly in 2016 compared to 2010 across all the five age groups. However, vulnerability has increased in 2016 in comparison to 2010 – perhaps suggesting constellation of more population near the poverty line in 2016 than in 2010.

Children and School Age

Poverty and vulnerability among children and school age groups have been found higher compared to other three age groups due to various factors – one of them is the lack of inability of the mothers to participate in the job market due to lack of low-cost childcare provision. In addition to poverty, another challenge faced by children

is under nutrition. A high proportion of young children suffer from under nutrition, which impacts on their cognitive development, affecting them throughout their whole lives.

Figure 1.15: Status of Under Nutrition in Bangladesh (2004-18)



Source: NIPORT (2016)

Figure above captures the progress made in this area. In spite of an impressive progress, the extent of under nutrition is still high. Although, the causes of stunting are complex, but experiences of the past 20 years, appears to have suggest a strong correlation between poverty reduction and improved nutrition, suggesting that higher incomes are helping reduce undernutrition. This is further underlined by the fact that the highest rates of stunting are among poor families[3] (NIPRT et al. 2016).

Inability to continue to attend school is a major concern for school age children. The Bangladesh Population and Housing Census 2011 data show that approximately 4 million children aged 6-10 years are out of school. Of those 4 million, about 2 million had never been to school, some 1.9 million started school late, and about 400,000 dropped out of school. Although there may be range of reasons for children being out of school, it is likely that poverty is a significant cause. The majority of child labourers are from poorer households (Ali 2006). The main reduction in child labourers since the mid-1990s has been among girls, which may reflect the impact of the introduction of the Female Secondary Stipend programme and suggests that poverty is a cause of child labour. In recent years, school enrolment has increased. The increase in enrolment has been an encouraging trend but it is evident that much still needs to be done, in particular in upper primary and secondary schools.

Youth and Working Age

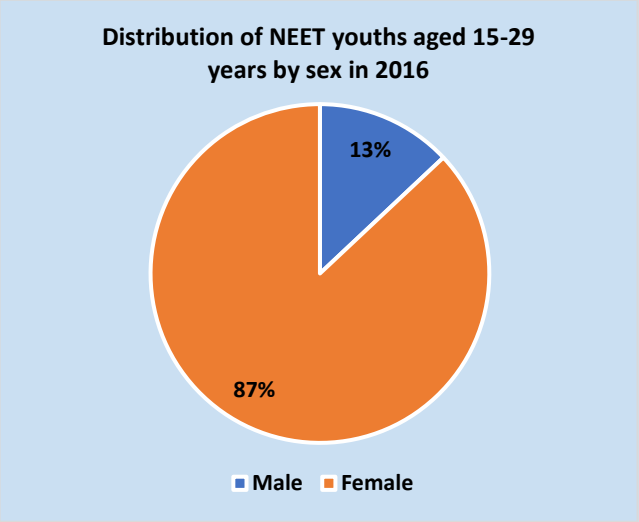
In addition to high incidence of poverty and vulnerability – a significant portion of Youth populations are deprived of opportunity to develop their capabilities. One of the main challenges faced by young people is lack of skills. Many do not gain sufficient secondary education and there is not enough vocational training available to compensate. However, a balanced approach based on provision of vocational education and an adequate

[3] The Demographic and Health Survey of 2014 indicates that the stunting rate in the poorest quintile is 49 per cent and 19 per cent in the richest quintile (NIPRT et al. 2016). However, wealth in the DHS is measured using an asset index, which will have a relatively weak correlation with income and expenditure. Therefore, it is not possible to know the actual stunting rate among expenditure (income) quintiles, and it is possible that stunting rates among the better off are lower than those found in the BDHS.

secondary education for children to help prepare them for the labour market may be the way forward. Box below highlights this aspect.

Box 1.6: NEET

NEET (not in Education, Employment or Training) represents the share of youth who are not in employment, education or training, as a percentage of the total number of youths in the corresponding age group, by gender. Youth in education comprise of individuals attending part-time or full-time education but exclude those in non-formal education and in educational activities of very short duration. Employment covers all individuals who have been in paid work for at least one hour in the reference week of the survey or were temporarily absent from such work. Therefore, young people classified as NEET can be either unemployed or inactive and not involved in education or training. Youth not engaged in neither employment nor in education or training stand a high risk of becoming socially excluded – individuals having an income below the poverty-line do not have the skills necessary to improve their economic situation.



NEET is a better measure of the potential youth labour market entrants compared to the youth inactivity rate. A high NEET rate and a low youth unemployment rate may indicate significant discouragement of youth. Overall, 29.8 percent of the working age population aged 15-29 were not in education, employment or training (NEET) in 2016. Among the NEET youths, 13 percent of them were male and the rest 87 percent female. A high NEET rate for young females indicates their involvement in household activities and the existence of institutional barriers restrict female labour market participation.

Source: BBS – LFS (2016)

In spite of relatively lower poverty rates, the working age population encounters diverse challenges. Most important is paucity of decent jobs. More than 80 percent adult workforce compelled to work in low paid low productive informal sector (World Bank 2008 and LFS, 2016). Without assistance from social protection, these families will be unable to break out of the intergenerational cycle of poverty.

Female workforce faces particular disadvantages due to gender discrimination. Female labour force participation is low – at 31 percent – compared to 83 percent for men (LFS 2016). This may reflect traditional attitudes to women and their weak bargaining power within households. Women with similar qualification earn significantly less than their male counterparts for similar jobs (according to Wold Bank 2008 – they can earn up to 60 percent less than men for the same work). Moreover, lack of access to childcare facilities constrained the ability of young mothers to enter and remain in the labour force – which may help explain the high levels of poverty among families with young children. Khondker (2015) argued that '*an inadequate social protection system means that families with children also have to provide care and support to those elderly people and people with disabilities who need assistance. In effect, this is an informal tax on working families that limits their ability to invest in productive activities while reducing the support they can give to their own children*'.

Old Age

Poor health, higher prevalence of disability and income insecurity are some of the main challenges faced by the elderly population in Bangladesh. In the absence of an effective and comprehensive old age pension system – many older people in Bangladesh continue to work, but often with insecure and vulnerable livelihoods. Older people can face discrimination in the labour market. Table below clearly shows falling participation of aged-workers in the wage and salaried works which are considered relatively better than self-employment – mostly low paid and low productive.

Table 1.2: Employment by Status Across the Life Course (%)

Age group	Men			Women		
	Wage and salaried workers	Self-employed	Total	Wage and salaried workers	Self-employed	Total
15-19 years	56.23	43.77	100.00	49.99	50.01	100.00
20-24 years	49.98	50.02	100.00	36.63	63.37	100.00
25-29 years	48.73	51.27	100.00	37.83	62.17	100.00
30-34 years	46.65	53.35	100.00	44.78	55.22	100.00
35-39 years	43.51	56.49	100.00	32.26	67.74	100.00
40-44 years	39.24	60.76	100.00	33.48	66.52	100.00
45-49 years	35.44	64.56	100.00	33.77	66.23	100.00
50-54 years	34.52	65.48	100.00	34.94	65.06	100.00
55-59 years	32.08	67.92	100.00	31.40	68.60	100.00
60-64 years	25.72	74.28	100.00	31.05	68.95	100.00
65-69 years	22.47	77.53	100.00	28.58	71.42	100.00
70-74 years	20.85	79.15	100.00	30.13	69.87	100.00
75 + years	17.29	82.71	100.00	8.09	91.91	100.00

Source: Based on LFS 2013

Self-employment has also been constrained due to limited access to micro-credit. A survey by HelpAge International (2008) found that only 19 percent of older people were able to access credit, compared to an average adult participation rate among Bangladesh's poor of 45 percent.

Estimated Resource Requirement

Resource requirements for 2010 and 2016 using the demand side specifications are presented in table below. The population sizes (i.e. column A) by age-groups are the first set of information for the resource requirement calculation. Since in Bangladesh beneficiary selection follows targeting approach – beneficiaries by age groups should ideally be covered all poor persons under each of these five age groups. The head count rates (i.e. column B) across these five age groups have been used to determine the age-specific number of beneficiaries (i.e. column C). The age-specific beneficiary sizes vary due to variations in age-specific population sizes and poverty rates. Two sets of monthly transfer amounts per person in BDT have been used to calculate the annual resource requirement. *First*, average monthly transfer amounts by the five age-groups obtained from the supply side (i.e. derived from MOF budget data – explained below) have been retained (in column D) to calculate annual resource requirements (in column E). *Second*, following the use of BDT 300 as transfers for some of the schemes in 2010, a uniform monthly transfer amounts for the five age-groups has been set at BDT 300 per person (in column F) to calculate annual resource requirements (in column G). However, for 2016, period (i.e. between 2011 and 2016) inflation rate of 46 percent has been used to adjust 2010 monthly transfer amount to derive inflation indexed monthly transfer amount for 2016. The monthly transfer amount is BDT 438 for 2016.

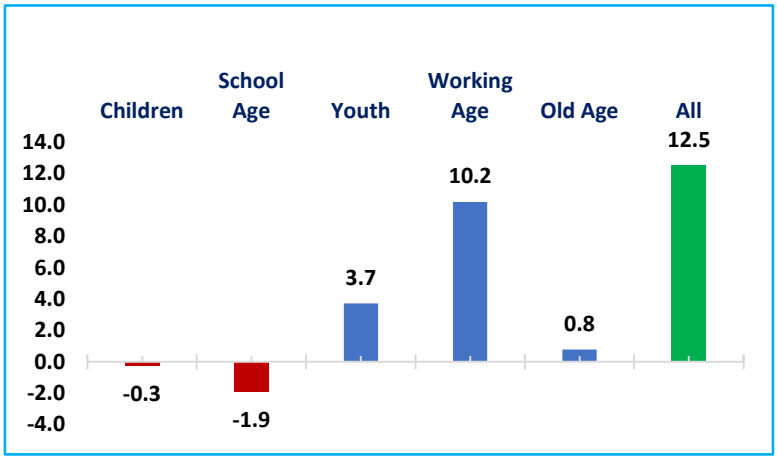
Table 1.3: Demand Side Resource Requirements

	Population (Million Person)	P_0 Rate	Beneficiary (Million Person)	Transfer Amount (BDT/Month)	Annual Resource (Mill BDT)	Transfer Amount (BDT/Month)	Annual Resource (Mill BDT)
	A	B	C = A x B	D	E = (C x D) x 12	F	G = (C x F) x 12
2010							
Children	15.4	0.384	5.9	486	34,585	300	21,349
School Age	35.7	0.324	11.6	333	46,233	300	41,651
Youth	40.7	0.302	12.3	1055	155,431	300	44,198
Working Age	44.9	0.278	12.5	678	101,468	300	44,897
Old Age	11.0	0.282	3.1	1143	42,678	300	11,202
Total	**147.7**		**45.4**		**380,395**		**163,298**
As % of Pop			***30.7***				
As % of GDP					***5.52***		***2.38***
2016							
Children	15.2	0.31	4.73	1,072	60,906	438	24,885
School Age	33.8	0.28	9.47	295	33,526	438	49,778
Youth	44.4	0.23	10.20	463	56,672	438	53,612
Working Age	55.0	0.22	12.22	828	121,427	438	64,233
Old Age	11.8	0.22	2.64	2,559	80,921	438	13,851
Total	**160.2**		**39.3**		**353,453**		**206,359**
As % of Pop			***24.5***				
As % of GDP					***2.06***		***1.20***

Source: Author's calculation based on demand side specification

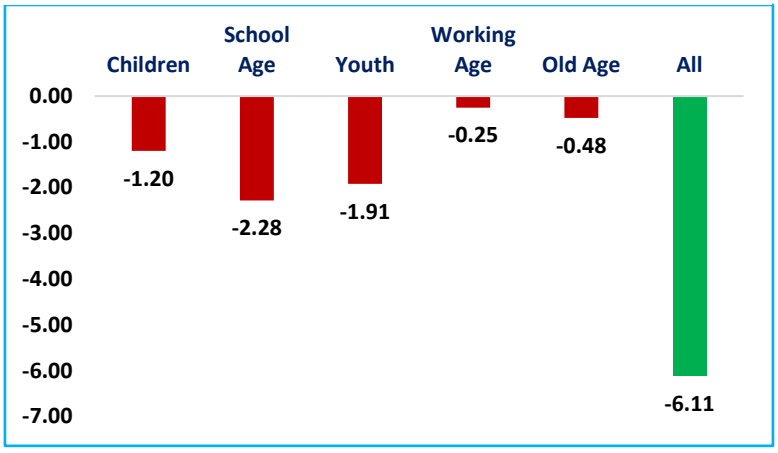
Main observations of the demand side analyses are:

Figure 1.16: Changing population between 2010 and 2016 (Mil Persons)



Population sizes are the critical element for designing social protection schemes – especially the design of life cycle approach; age-specific schemes; and demographic targeting. Between 2010 and 2106, additional population has been estimated at 10.6 million. However, the distribution of this additional 10.6 million persons has been diverse across the five age groups. Relatively older age groups have gained at the expense of children and school age group. The largest gain of 10.2 million persons between 2010 and 2016 has been found for the working age group.

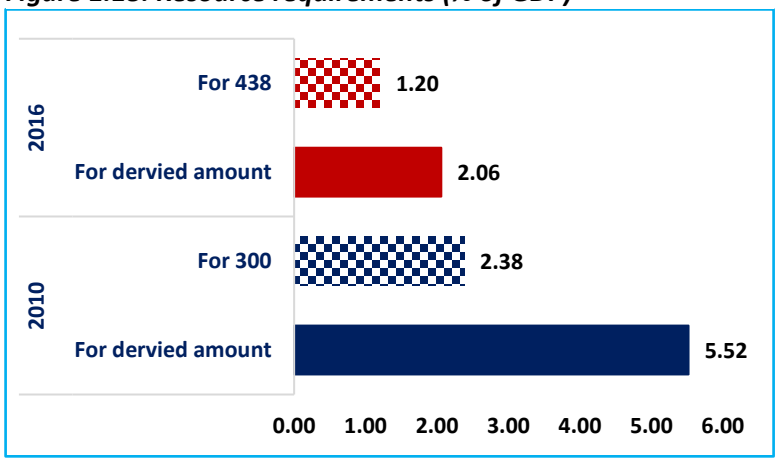
Figure 1.17: Decline in beneficiaries between 2010 and 2016 (Mil Persons)



When targeting is adopted for beneficiary selection, age specific poverty rates are important for designing social protection schemes. Age-specific poverty rates are used to determine beneficiaries for 2010 and 2016. Due to decline in poverty rates across all age groups, total number of beneficiaries decline by 6.1 million between 2010 and 2106. Again, reductions are different for these five age groups. Due to decline in populations, higher decline in beneficiaries has been found for younger population groups such as children, school age and youth. Beneficiary decline is largest for the school age group with 2.28 million persons followed by youth (i.e. 1.91 million) and children (i.e. 1.20 million).

Importance of transfer amounts is revealed when alternative sets of transfers have been used in the resource requirement calculation. For instance, resource requirement in 2010 is 5.52 percent of GDP when average monthly transfer amounts by the five age-groups obtained from the MOF (in column D for 2010) is used to calculate resource requirements (in column E for 2010). But it dropped to 2.38 percent of GDP when a uniform monthly transfer of BDT 300 (in column F for 2010) is used to calculate annual resource requirements (in column G for 2010). The corresponding resource requirements in 2016 are respectively 2.06 percent and 1.2 percent of GDP. However, in both years significant variations in resource requirements have been found across the age groups.

Figure 1.18: Resource requirements (% of GDP)



5.2.Supply Side

Supply of Social Protection schemes is generally found from the comprehensive official compilation prepared by the Ministry of Finance (Safety Net Programmes, Ministry of Finance). According to the comprehensive official compilation prepared by the Ministry of Finance (Safety Net Programmes, Ministry of Finance), social safety net programmes have been presented under two budget heads: non-development and development components. The MOF budget information has been used to determine supply of age-based social protection schemes for FY 2010 and FY 2016. One problematic aspect of beneficiary data is the use of 'lac man month' for a number of food-based schemes and community health schemes (mainly under the development budget component). But number of beneficiaries is usually counted as million persons (as in the case of most of the cash transfer schemes). Thus, it is needed to convert the 'lac-man-month' data to million persons. It is assumed that food-based schemes are supported for 6 months in a year (hence a conversion of 6 is used) while community health schemes are supported for 100 days in a year (hence a conversion of 100 is used) to arrive at beneficiaries according to million persons unit. Furthermore, a 'mapping scheme' has been developed to convert the MOF

information according to the six age-based schemes (please see Annex 1 for the mapping scheme). Any scheme which does not adhere to the age-based mapping has been classified as non-age scheme.

Key features of the social protection schemes according to the age and non-age schemes for FY 2010 have been presented in the following table.

Table 1.4: Social Protection Supply Side by Aged Based Schemes for FY 2010

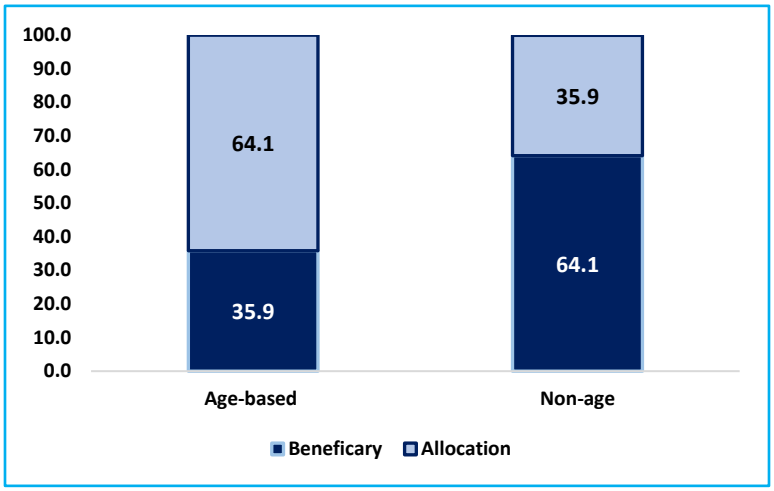
	Schemes		Beneficiaries		Allocation		Monthly Transfer
	Number	%	Million Persons	%	Million BDT	%	BDT
1. Children	9	*29.0*	0.67	*5.6*	3,923	*3.5*	486
2. School Age	6	*19.4*	1.66	*13.8*	6,648	*6.0*	333
3. Youth	1	*3.2*	0.42	*3.5*	5,277	*4.7*	1,055
4. Working age	5	*16.1*	5.16	*43.0*	41,960	*37.8*	678
5. Old age	5	*16.1*	3.65	*30.4*	49,983	*45.0*	1,143
6. Disability	5	*16.1*	0.45	*3.7*	3,322	*3.0*	619
Age based Schemes	**31**	*41.9*	**12.00**	*35.9*	**111,112**	*64.1*	**772**
Non-age Schemes	**43**	*58.1*	**21.44**	*64.1*	**62,161**	*35.9*	**242**
All Schemes	**74**	*100.0*	**33.44**	*100.0*	**173,273**	*100.0*	**432**
Coverage (% of Pop)			***22.49***				
% of GDP					***2.5***		
Memorandum Items							
Population			147.7				
GDP (Nominal)					6,867,300		

Source: Author's calculation based on MOF data.

According to MOF classification and definition, in FY 2010, there are 74 schemes for which allocations are provided in the budget. Out of the 74 schemes, 43 (or 58%) schemes have been classified as non-age schemes. Thus, there are 31 schemes (or 42%) which are classified as age-based schemes. Among the age- based schemes, the highest numbers of schemes have been found for the children – 9 or 29 percent of all age-based schemes. Schemes for school aged children are 6 (or 19.4%). There is only one scheme for youth in FY 2010. There are 5 (or 16%) schemes for each of the other two aged-base groups such as working age and old age. Number of schemes for disabled group is also 5 in FY 2010.

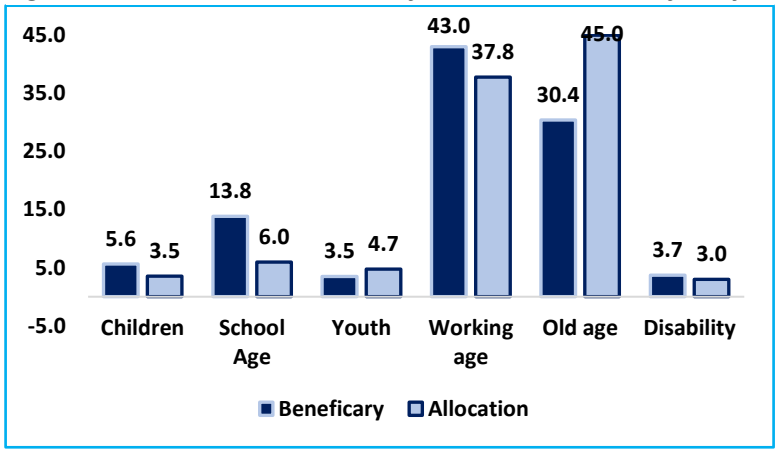
Total number of beneficiaries covered in FY 2010 are 33.4 million persons envisaging social protection coverage of 22.6 percent of 2010 total population (i.e. 147.7 million). Number of beneficiaries under the non-age schemes has been estimated at 21.4 million persons – implying 64 percent of total beneficiaries. As many as 12 million beneficiaries (i.e. 36% of total beneficiaries) fall underage-based scheme. Numbers of schemes when contrasted with the number of beneficiaries envisaged imbalance between them. For instance, 8.8 million beneficiaries who belong to working age and old age schemes representing 73.4 percent of total age-based beneficiaries (i.e. 12 million) have been covered by 10 schemes (or by 32.2 % of 31 age-based schemes). On the other hand, there are 15 schemes (or 48.4% of all age-based schemes) for 2.33 million children or 19.4 % of total aged-based beneficiaries.

Figure 1.19: Beneficiary-Resource Allocation Structure



Total allocation for all the 74 schemes is BDT 173,273 million. This implies allocation of 2.5 percent of FY 2010 GDP. Major part of SP budget amounting to BDT 111,112 or (i.e. 64% of total allocation) million has been allocated for age-based schemes. Allocation for non-age scheme are thus 36% of total allocation for FY 2010. Allocation structure is completely reverse of the beneficiary structure in FY 2010. This imbalance results in large differences between average monthly transfer amounts between these two schemes. Average monthly transfer of BDT 772 for the age-based schemes is 3.2 times higher than the average monthly transfer of BDT 242 for the non-age schemes.

Figure 1.20: FY 2010: Structures of Allocation and Beneficiary



Some noticeable imbalances between the structures of allocation and beneficiary for the six age-based schemes have also been revealed when they are presented together. The adjacent chart highlights this inconsistency between the structures of allocation and beneficiary in FY 2010. The allocation inconsistencies are largest for schemes for the school age children and the old age. In the case of school age scheme 6 percent of allocation is spent for almost 14 percent of the beneficiary – implying a very small amount transfer under the scheme. While in the case of old age 45 percent of the allocation is used to cover 30 percent of the total beneficiary. Higher allocation for the old age scheme is due to the inclusion of the pension scheme of the government employees and freedom fighters' scheme. Parity in structures of allocation and beneficiary has been found for youth and disability schemes.

Number of social protection schemes almost doubled to 135 in FY 2016 from 74 schemes in FY 2010. The increase in schemes is also accompanied with changes in beneficiary coverage and budget allocation. Key features of the social protection schemes according to the age and non-age schemes for FY 2016 have been presented in the following table.

Table 1.5: Social Protection Supply Side by Aged Based Schemes for FY 2016

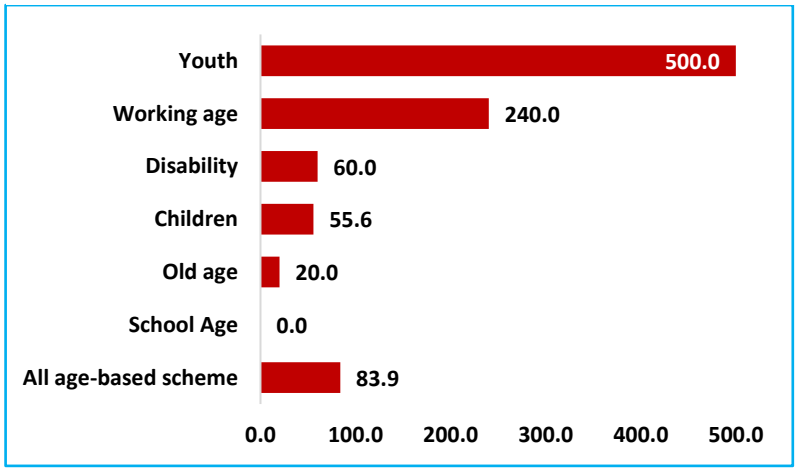
	Schemes		Beneficiaries		Allocation		Monthly Transfer
	Number	%	Million Person	%	Million BDT	%	BDT
1. Children	14	*24.6*	0.49	*2.3*	6,355	*2.4*	1,072
2. School Age	6	*10.5*	6.19	*29.0*	21,899	*8.4*	295
3. Youth	6	*10.5*	2.58	*12.0*	14,299	*5.5*	463
4. Working age	17	*29.8*	5.9	*27.6*	58,584	*22.4*	828
5. Old age	6	*10.5*	4.91	*23.0*	150,793	*57.8*	2,559
6. Disability	8	*14.0*	1.31	*6.1*	9,090	*3.5*	578

Age based Schemes	**57**	*42.2*	**21.37**	*43.2*	**261,019**	*72.6*	**1,018**
Non-age Schemes	**78**	*57.8*	**28.09**	*56.8*	**98,731**	*27.4*	**293**
All Schemes	**135**	*100*	**49.47**	*100.0*	**359,751**	*100.0*	**606**
Coverage (% of Pop)			***30.35***				
% of GDP					***2.1***		
Memorandum Items							
Population			163				
GDP (Nominal)					17,167,000		

Source: Author's calculation based on MOF data.

In line with overall growth of the numbers of schemes between FY 2016 and FY 2010, age-based schemes experience a growth rate almost 84 percent between these two years. However, the growth is far from uniform rather it reveals some interesting, important yet large variations. The growth pattern is captured in the adjacent chart. Youth scheme has experienced the highest growth of 500% between FY 2016 and FY 2010 as number of schemes increase from 1 in FY 2010 to 6 in FY 2016. Number of schemes for working age which was 5 in FY 2010 increased to 17 in FY 2016 – resulted in a growth rate of 240 percent. Schemes for disabled; old age and school age children have also witnessed growth respectively by 60 percent; 57 percent and 20 percent.

Figure 1.21: Growth in age-based schemes (%)



Total number beneficiaries covered in total FY 2016 are 49.5 million persons suggesting a growth in beneficiary coverage by about 48 percent over FY 2010. In FY 2106, the social protection coverage is 30.4 percent of 2016 total population (i.e. 160.2 million). Number of beneficiaries under the non-age scheme has been estimated at 28.1 million persons – implying almost 57 percent of total beneficiaries. On the other hand, 21.4 million beneficiaries (i.e. 43 % of total beneficiaries) have been covered by the age-based scheme. Although, there are marked changes between FY 2016 and FY 2010, beneficiary coverage by non-age schemes is still higher than coverage of the age-bases schemes in FY 2016.

Again, when numbers of schemes are contrasted with the number of beneficiaries envisaged smaller imbalance between them. For example, structure of schemes between age and non-age schemes (i.e. 42:58) fares quite well with the beneficiary structure between age and non-age schemes (i.e. 43:57). However, imbalance has increased in the children scheme. In FY 2016, 25 percent of the total age-based scheme has covered only 2.3 percent of the total beneficiaries (in FY 2010 the paired ratios are – 29:5.6).

Total allocation for all the 135 schemes is BDT 359,751 million in FY 2016 implying a growth rate of 108 percent. But in terms of FY 2016 GDP share it is 2.1 percent suggesting a deterioration in SP allocation growth in comparison to GDP expansion. Significant part of the SP budget amounting to BDT 261,019 or (i.e. 72.6 % of total allocation) million has been allocated for age-based schemes. This implies a staggering growth of 135 percent in age-based allocation in FY 2016 over FY 2010. Allocation for non-age scheme are thus 27.4 percent. Allocation structure which favours the age-based schemes compared to beneficiary structure – result in large differences between average monthly transfer amounts between these two schemes. Average monthly transfer of BDT 1,018 for the age-based scheme is 3.5 times higher than the average monthly transfer of BDT 293 for the non-age scheme.

Figure 1.22: Beneficiary-allocation structure in FY 2016

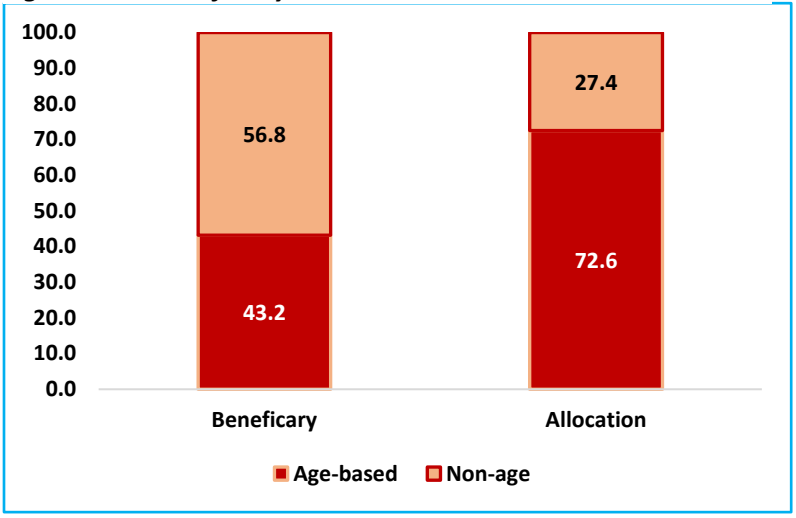
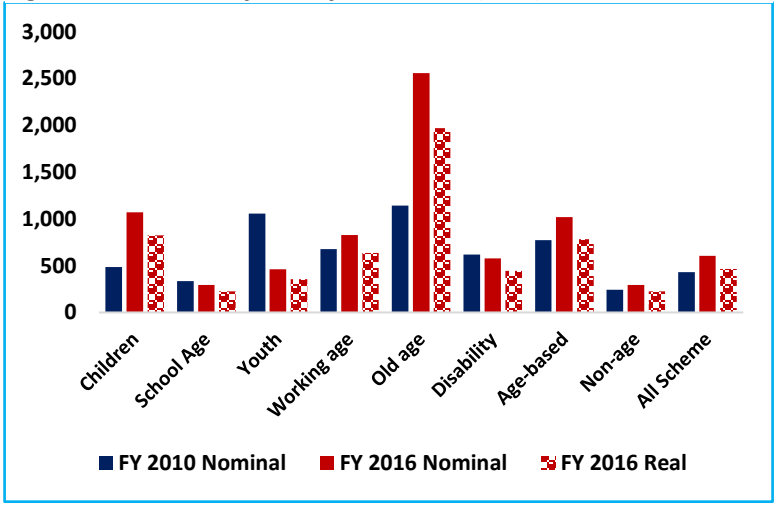


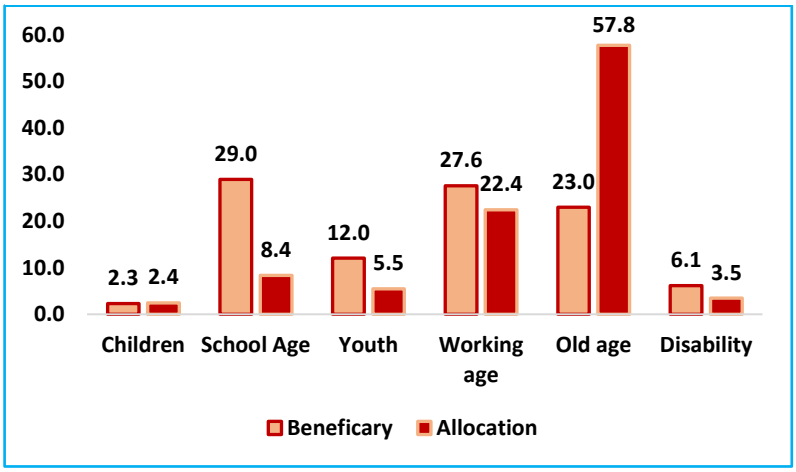
Figure 1.23: Monthly Transfer Amount (BDT)



Estimated monthly transfer amounts by age-based schemes are provided in the adjacent chart. FY 2016 transfer amounts include both nominal and real values. Except for school age, youth and disability schemes nominal transfer amounts have increased for other three age-based schemes in FY 2016 compared to FY 2010. For working age, although nominal transfer amount in FY 2016 (i.e. BDT 828) is higher than the FY 2010 amount (i.e. BDT 678), the real value in FY 2016 (i.e. BDT 637) is however lower than the FY 2010. But in the case of old age and children, both nominal and real transfer amounts are higher in FY 2016 compared to FY 2010. For all age-based schemes, both nominal (i.e. BDT 1,018) and real (i.e. BDT 783) transfer amounts are higher in FY 2016 compared to FY 2010 transfer value (i.e. BDT 772). In the case of non-age scheme, although nominal transfer amount (i.e. BDT 293) increased in FY 2016, its real value (i.e. BDT 225) has declined compared to 2010 transfer amount (i.e. BDT 242)

Some noticeable imbalances between the structures of allocation and beneficiary for the six age-based schemes which have also been revealed in FY 2010 deteriorated further in FY 2016. The adjacent chart highlights this inconsistency between the structures of allocation and beneficiary in FY 2016. Again, the allocation inconsistencies are largest for schemes for the school age children and the old age. In the case of school age scheme only 8 percent of allocation is spent for 29 percent of the beneficiary – implying a very small amount transfer under the scheme. While in the case of old age 58 percent (which is 45% in FY 2010) of the allocation is used to cover 23 percent of the total beneficiary. Two schemes (i.e. Youth and Disabled) which have parity in beneficiary-allocation structure in FY 2010 experienced disparity in beneficiary-allocation structure in FY 2016. Parity in structures of allocation and beneficiary has been found for children scheme.

Figure 1.24: FY 2016: Structures of allocation and beneficiary



5.3. Comparative Assessment

Large Coverage Gap: comparative assessment starts with analysing the beneficiary coverage for 2010 and 2016. Estimated total beneficiaries for 2010 using age-specific populations and poverty rates is 45.4 million. Total number of beneficiaries covered in 2010 is only 11.6 million implying a coverage gap of 33.8 million. Coverage gap in 2010 as percent of estimated total beneficiaries from demand side (i.e. 45.4 million) is 75 percent. Coverage gaps have been found for four of the age-specific groups. The highest coverage gap has been reported for Youth (i.e. 12 million) and followed by school age population (i.e. 9.9 million). Contrary to this pattern, there is no coverage gap for old age group – in fact, there is a surplus for this group.

Table 1.6: Demand and Supply Comparison of Beneficiary Coverage (Million Persons)

	2010			2016		
	Demand side	**Supply side**	**Gap**	**Demand side**	**Supply side**	**Gap**
Children	5.9	0.7	(5.3)	4.7	0.5	(4.2)
School Age	11.6	1.7	(9.9)	9.5	6.2	(3.3)
Youth	12.3	0.4	(11.9)	10.2	2.6	(7.6)
Working Age	12.5	5.2	(7.3)	12.2	5.9	(6.3)
Old Age	3.1	3.6	0.5	2.6	4.9	2.3
All	**45.4**	**11.6**	**(33.8)**	**39.3**	**20.1**	**(19.2)**
Gap as % of demand side total beneficiaries			***- 74.5***			***-48.9***

Source: Analytical Framework

Even though population has increased by about 12 million between 2010 and 2016, estimated total beneficiaries using age-specific populations and poverty rates for 2016 is 39.3 million – 6.1 million less. This decline in beneficiary number in 2016 is due to decline in poverty rate of 7.2 percentage points between these two years. Supply side of 2016 reveals increase in beneficiary coverage to 20.1 million from 11.6 million in 2010 – an increase of over 8.5 million between 2016 and 2010. This implies a growth of over 73 percent in beneficiary coverage between these two years. Despite these opposing developments, the estimated beneficiary coverage gap has fallen significant in 2016 to 19.2 million – still a sizeable amount. Coverage gap in 2016 as percent of

estimated total beneficiaries from demand side (i.e. 39.3 million) has dropped to 49 percent from 75 percent in 2010. Again, coverage gaps have been found for four of the age-specific groups. The highest coverage gap has been again reported for Youth (i.e. 7.6 million) and followed by working age population (i.e. 6.3 million). Similar to the pattern observed in 2010, there is no coverage gap for old age group – there is a surplus for this group. The size of surplus has increased from 0.5 million to 2.3 million.

Large Resource Gap: large beneficiary coverage gaps led to large resource gaps. Total resource gap in 2010 is 272,605 million BDT suggesting that resource gap in 2010 as percent of estimated total resource requirements from demand side (i.e.380,395 million BDT) is about 72 percent. Resource gaps have been found for four of the age-specific groups. The highest coverage gap has been reported for Youth followed by working age population. There is no coverage gap for old age group – there is a surplus for this group. Significant improvement in resource gap situation has been noted for 2016 as it dropped to 29 percent – almost by 3 times. Although there are differences in transfer amounts – the fall in resource gap – mainly to due to fall in population in each of these age-specific groups in 2016.

Table 1.7: Demand and Supply Comparison of Beneficiary Coverage (Million BDT)

	2010			2016		
	Demand side	**Supply side**	**Gap**	**Demand side**	**Supply side**	**Gap**
	Calculation based on derived average transfers					
Children	34,585	3,923	(30,662)	60,906	6,355	(54,551)
School Age	46,233	6,648	(39,585)	33,526	21,899	(11,628)
Youth	155,431	5,277	(150,154)	56,672	14,299	(42,374)
Working Age	101,468	41,960	(59,508)	121,427	58,584	(62,843)
Old Age	42,678	49,983	7,305	80,921	150,793	69,871
All	**380,395**	**107,790**	**(272,605)**	**353,453**	**251,929**	**(101,524)**
Gap as % of demand side total resource			***-71.7***			***-28.7***
	Calculation based on uniform transfer BDT 300 (2010) and BDT 438 (2016)					
Children	21,349	3,923	(17,426)	24,885	6,355	(18,530)
School Age	41,651	6,648	(35,003)	49,778	21,899	(27,880)
Youth	44,198	5,277	(38,921)	53,612	14,299	(39,314)
Working Age	44,897	41,960	(2,938)	64,233	58,584	(5,649)
Old Age	11,202	49,983	38,781	13,851	150,793	136,942
All	**163,298**	**107,790**	**(55,507)**	**206,359**	**251,929**	**45,570**
Gap as % of demand side total resource			***- 34.0***			***22.1***

Source: Analytical Framework

Use of uniform transfer amount of BDT 300 resulted in large drop in resource gaps in 2010. More specifically, it dropped by about 38 percentage points (i.e. from 72% to 34%). Resource gaps for the four age-specific groups has also declined in this case. While the surplus for the old age group has increased. The deficit in resources found for the above three cases turn positive when uniform transfer amount of BDT 438 is used in place of derived average transfer size. The estimated surplus in this case is 22 percent. This is driven by large surplus on account of the old age group.

Age Groups	2010	2016	Change over 2010 (%)	Annualized Changed (%)
Children	486	1,072	121	24.1
School Age	333	295	-12	-2.3
Youth	1,055	463	-56	-11.2

Working age	678	828	22	4.4
Old age	1,143	2,559	124	24.8
Disability	619	578	-7	-1.3
Aged based Schemes	***772***	***1,018***	***32***	***6.4***
Non-aged Schemes	***242***	***293***	***21***	***4.2***
All Schemes	***432***	***606***	***40***	***8.1***

No Systematic Pattern in Transfer Payment: average monthly transfer payments of 2010 and 2016 have been compared in the following table to assess growth and patterns in transfer payment. Overall growth rate of 40 percent has been found for all schemes between 2010 and 2016 implying annual growth rate of 8 percent. Growth rate of the age-specific schemes (i.e. 6.4%) is higher than the growth rate of the non-schemes (i.e. 4.2%). The growth patterns however are diverse with high growths for children and Old age (i.e. 24% annualized growth). Growth rate for the working age is also positive at 4.4 percent. Youth schemes have experienced large reduction in transfer payment – by about 11 percent. Reductions are also found for school age children and disabled schemes. Reductions in transfer amounts (i.e. valued in nominal terms) are disturbing developments which may have been avoided.

When we assess some of the key patterns and trends against the 'elements of good social protection system' (please refer to Box 3.1) it appears that the current social protection system is ***inadequate*** due to low coverage and transfer amounts. Widespread variations in number of schemes; beneficiary coverage and transfer amounts tend to suggest that the ***equity aspects are not ensured***. Moreover, due to large numbers of schemes and lack of internal balances between them envisaged that the current social protection system is ***inappropriate***. However, some ***dynamism*** is found with adoption of more schemes for youth and children.

6. Costs of Age-based Schemes over 2020 to 2050

Cost estimates of a social protection scheme mainly depend on two factors: the number of beneficiaries and the value of the transfer amount per beneficiary. A long-term costing module for Bangladesh covering period from 2016 to 2051 has been developed to project or simulate costs of the above mentioned five age-based schemes for each year under various combination of coverage and transfer amounts. The module is flexible to project and simulate costs by varying different combination of coverage and transfer amount.

The numbers of potential beneficiaries for these five age-based schemes are derived from the age cohort population projection data obtained from the report "Population Projection of Bangladesh: Dynamics and Trends 2011-2061" published by Bangladesh Bureau of Statistics (2015). The range of age cohort is from 0 (zero) to 80 and coverage of the projections ranged from 2011 to 2061. The relevant years for cost estimation are 2017 to 2051.

According to the latest information of the monthly transfer of the major life cycle schemes is around BDT 800 which is about 0.07 percent of per capita income. Since most of the Bangladesh population may likely to graduate out poverty by 2030, setting monthly transfer amount equivalent to poverty line may not be tenable. Moreover, social protection schemes may no longer be focusing on poverty rather age-specific risks, we may need to look into other measures to set the long-term transfer amount. It may also be argued that the long-term transfer amount should aligned to the future prosperity of the country. Considering these issues, in this exercise, the monthly transfer amount has been set at 0.07 percent of per capita income. A uniform transfer amount has also been assumed for all these five schemes. The costing module is flexible such that alternative as well as differentiated transfer amounts may also be used in place of the transfer amount linked to growth of the per capita income.

All monthly transfer amounts incur certain overhead or administrative costs. Evidence suggests that universal programmes are usually less costly than targeted programmes to administer. Considering this, we assume 5% overhead costs for the universal programmes, and 7% overhead costs for the targeted programmes.

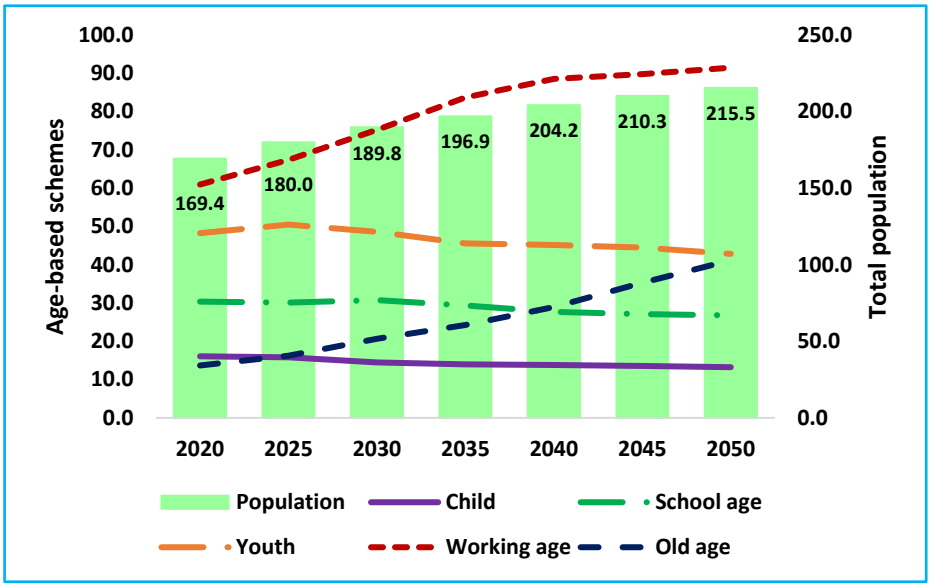
GDP and per capita GDP values for the entire period between 2016 to 2051 have been obtained from the projections used in the Bangladesh Delta Plan (BDP 2100).

6.1. Population Projection

Figure below shows the sizes of projected population of Bangladesh and five age-based schemes for selected years[4]. These projections refer to the medium variant discussed in previous section 3.2 and Box 3.4. Bangladesh population is projected to increase to 169.4 million in 2020 to 215.5 million in 2050. Thus, over the 30-years period, 46.1 million people would be added to the stock of Bangladesh population. In other words, between 2020 and 2050, more than 1.5 million people would be added to the yearly stock of population.
Significant variations have been found for the projected population by these five age-specific population groups. Two largest age-specific groups are the working age and the youth. Their share which is projected at 65 percent in 2020 may decline slightly to 62 percent in 2050. Together their share would remain stable at around 63 or 64 percent for the entire 30-years period. However, within them, the working age population would continue to expand while youth population may experience continuous fall from 2030.

[4] The entire projected from age 0 to 80 is available with the authors.

Figure 1.25: Projected population (million persons)



As mentioned, Bangladesh has been aging fast. The population size over age 60 and over will continue to expand over the 30-years period. By 2050 the size of elderly population will be tripled to 41.2 (or 19 % of total population) million from 13.7 million (or 8.1 % of total population) in 2020. Both children and school age population groups would experience large decline in their stocks. Between 2050 and 2020, Bangladesh would have 8.9 million less children in the age bracket of 0 and 14.

The projected changes in population structure may have implications for demand for public services – especially education; training; health and social security. Based on the projected population structures, two social protection packages have been explored.

6.2. Long-term Cost of Age-based Scheme – Package One

Package one composed of universal coverage for two age-based schemes – children and old age. The coverage for the school age and youth has been set at 35 percent of their population sizes. Only 15 percent coverage has been set for the working age population since a significant portion of them would be covered by their employers as well as through the employment insurance scheme. According to these criteria total numbers of beneficiaries which have been estimated at 65.5 million persons in year 2020 increase to 92.5 million persons by 2050. The beneficiary coverage as percent total population increase from 38.7 percent in 2020 to 42.9 percent in 2050.
Size of transfer amount has always been inadequate in Bangladesh compared to the need of the beneficiaries due to fiscal constraint. However, with progress towards upper middle-income country by 2031 and high-income country by 2041, citizen's expectation for adequate coverage would grow. This expectation may be accommodated over medium and longer terms with higher resource mobilization and widening of fiscal space for social sector investment including social protection. In package one, monthly transfer amount has been set only at 0.07 percent of the annual per capita income. A uniform transfer amount has also been assumed for all 5 types of age-based schemes. Beneficiary sizes and transfer amounts by the selected years are given below.

Table 1.8: Package one: Beneficiary size and transfer amounts

Aga-based Schemes	2020	2025	2030	2035	2040	2045	2050
Children (universal)	16.1	15.8	14.5	14.0	13.8	13.6	13.2

School age (35% of all school age population)	9.7	10.5	10.8	10.3	9.7	9.5	9.4
Youth (35% of all school age Youth)	16.9	17.7	17.0	16.0	15.8	15.6	15.0
Working age (15% of all working age population)	9.1	10.1	11.3	12.6	13.3	13.5	13.7
Old age (universal)	13.7	16.2	20.7	24.3	29.0	35.3	41.2
Total Beneficiary	**65.5**	**70.4**	**74.3**	**77.1**	**81.6**	**87.4**	**92.5**
Coverage as share of Population (%)	**38.7**	**39.1**	**39.1**	**39.1**	**39.9**	**41.6**	**42.9**
Transfer (BDT/Month/Person)	**1,200**	**2,157**	**3,951**	**7,344**	**13,977**	**24,546**	**44,165**

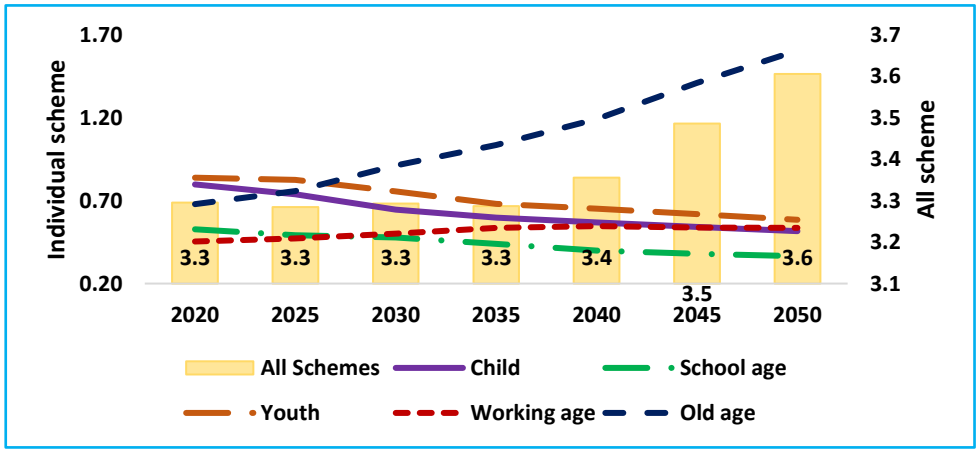
Source: Costing module

Estimated costs by each of the five age-based social protection schemes are provided in figure below. It also captures the total cost of the age-based social protection schemes. Total cost may vary from 3.3 percent of GDP in 2020 to 3.6 percent of GDP in 2050. Total costs thus suggest a stable pattern over the 30 years period. Two contrasting trends have been found – (i) rising trends for the schemes supporting the old age and working age population; and (ii) falling trends for the other three schemes – children, school age and youth

Cost escalating is highest for the old age scheme, due to rapid increase in their size from only 13.7 million persons in 2020 to 41 million persons in 2050. This suggests more than 200 percent growth (i.e. annual average growth rate of around 7 %) in old age population over the 30-year period. Under the universal coverage, the cost of supporting old age population in Bangladesh may increase from 0.68 percent of GDP in 2020 to 1.60 percent of GDP in 2050. Single largest group is the working age population. Only 15% of them are covered under package one. Working age beneficiary coverage increases from 9.1 million persons in 2020 to over 13 million persons in 2050. As a result, cost of covering them may register smaller rise in cost from 0.45 percent of GDP in 2020 to 0.53 percent in 2050.

All three schemes related to the younger age population register a declining trend in cost. Despite having a universal coverage for the children, the cost of covering them may decline from 0.8 percent of GDP in 2020 to 0.52 percent in 2050 due to falling population of the age group. Numbers of children between age zero and four, have been projected to decline to 13.2 million in 2050 from 16.1 million in 2020. Costs of covering youth and school age also register decline. More specifically, cost of school age scheme may decline from 0.53 percent of GDP in 2020 to about 0.37 percent of GDP in 2050. Cost of Youth scheme may fall from 0.84 percent of GDP in 2020 to about 0.58 percent of GDP in 2050.

Figure 1.26: Cost as percent of GDP under Package one (%)



Source: Calculation based on the costing module.

6.3. Long-term Cost of Age-based Scheme – Package Two

Package two consists of targeted coverage for all schemes. The coverage for the children and old age has been set at 35 percent of their population sizes. The coverage is 25 percent for the school age and youth. A smaller coverage of 20 percent has been set for the working age population since it is again assumed that, a significant portion of them would be covered by their employers as well as through the employment insurance scheme. As a result of the smaller coverage for most of these schemes, beneficiary number has dropped substantially in this package compared to package one. Total numbers of beneficiaries which have been estimated at 41.6 million persons in year 2020 increase to 54.7 million persons by 2050. The beneficiary coverage as percent total population may range between 24.6 percent in 2020 to 25.4 percent in 2050.

Slightly higher monthly transfer amount of 1 percent of per capita income has been set in package two. Again, a uniform transfer amount has also been assumed for all 5 types of age-based schemes. Beneficiary sizes and transfer amounts by the selected years are given below.

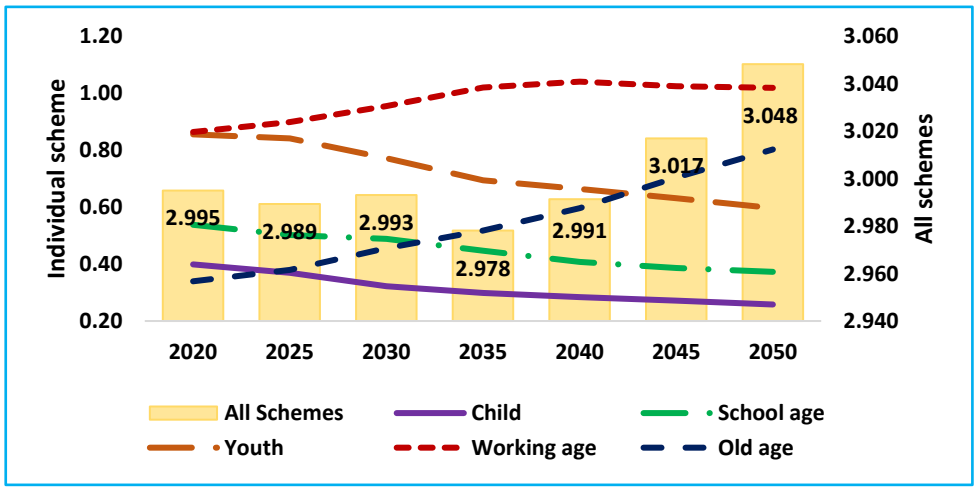
Table 1.9: Package one: Beneficiary size and transfer amounts

	2020	2025	2030	2035	2040	2045	2050
Children (35% of all children)	5.6	5.5	5.1	4.9	4.8	4.8	4.6
School age (25% of all school age population)	6.9	7.5	7.7	7.3	6.9	6.8	6.7
Youth (25% of all school age Youth)	12.1	12.6	12.2	11.4	11.3	11.1	10.7
Working age (20 % of all working age population)	12.2	13.5	15.0	16.7	17.7	18.0	18.3
Old age (35% of all old age population)	4.8	5.7	7.2	8.5	10.1	12.4	14.4
Total Beneficiary	**41.6**	**44.8**	**47.2**	**48.9**	**50.9**	**53.0**	**54.7**
Coverage as share of Population (%)	**24.6**	**24.9**	**24.9**	**24.8**	**24.9**	**25.2**	**25.4**
Transfer (BDT/Month/Person)	**1,714**	**3,082**	**5,644**	**10,491**	**19,968**	**35,066**	**63,093**

Source: Costing module

Estimated costs by each of the five age-based social protection schemes under package two are provided in figure below. Despite setting higher transfer amount, due to smaller coverage total cost has declined in this package compared to package one. Under this package, total cost may vary from 2.995 percent of GDP in 2020 to 3.048 percent of GDP in 2050. Three contrasting trends have been found – (i) rising trends for the schemes supporting the old age; (ii) rising (till 2035) and stable trends (for the rest 15 years) have been found for the working age scheme; and (ii) falling trends for the other three schemes – children, school age and youth.

Figure 1.27: Cost as percent of GDP under Package two (%)



Source: Calculation based on the costing module.

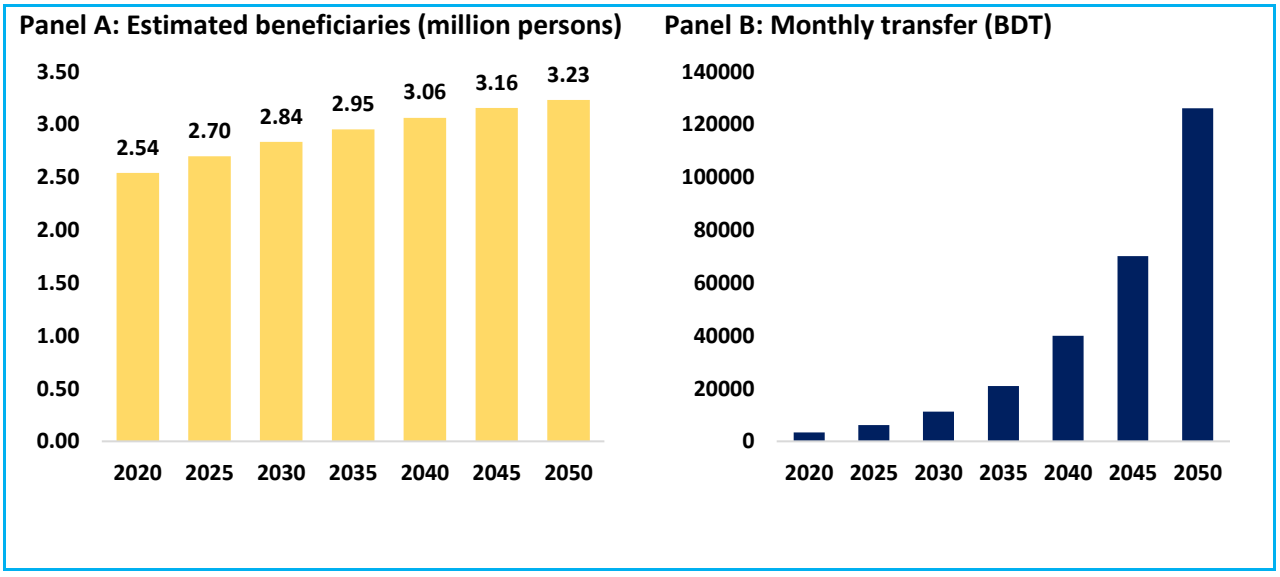
Cost escalating is again highest for the old age scheme, due to rapid increase in their size from only 13.7 million persons in 2020 to 41 million persons in 2050. Cost of supporting old age population in Bangladesh may increase from 0.34 percent of GDP in 2020 to 0.8 percent of GDP in 2050. Single largest group is the working age population. A slightly higher coverage of 20 % all working age population is set under package two. Working age beneficiary coverage increases from 12.2 million persons in 2020 to over 18 million persons in 2050. As a result, cost of covering them may register rise from 0.86 percent of GDP in 2020 to 1.02 percent in 2050.

All three schemes related to the younger age population register a declining trend in cost. Due a smaller coverage of 35%, cost of covering children may decline significantly under this package compared to package one. But a declining trend would continue. The cost of covering them may decline from 0.4 percent of GDP in 2020 to 0.26 percent in 2050 due to falling population of the age group. Numbers of children between age zero and four, have been projected to decline to 13.2 million in 2050 from 16.1 million in 2020. Costs of covering youth and school age also register decline. More specifically, cost of school age scheme may fall from 0.54 percent of GDP in 2020 to about 0.37 percent of GDP in 2050. Cost of Youth scheme may fall from 0.86 percent of GDP in 2020 to about 0.60 percent of GDP in 2050.

6.4. Long-term Cost of Disability Scheme

Long term costs of disability scheme again depend on two factors: the number of beneficiaries and the value of the transfer amount per beneficiary. On the basis of HIES 2016 data as well as expert perception, disability prevalence rate is set at 1.5 percent of total population for each year of the 30-years period. Allowances for the disabled persons are usually higher than the able-bodied person. In line this observation, the disability allowance has been at 2% of the yearly per capita income. The estimated beneficiaries and monthly transfer amounts are shown below.

Figure 1.28: Beneficiary and transfer amount for disability scheme

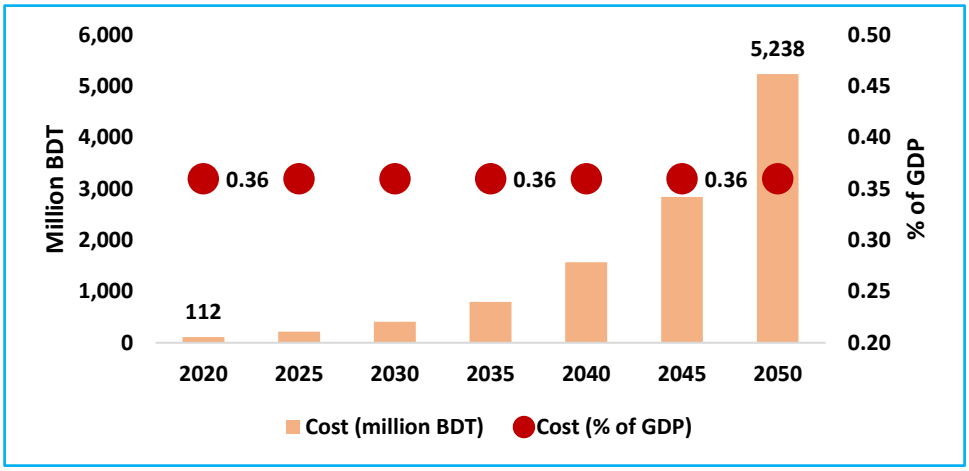


Source: Costing Module

Estimated costs of the disability scheme are provided in figure below. It shows total cost of the disability schemes in million BDT and as percent of GDP. Since increase in number of beneficiaries is small, the main cost driver is the monthly transfer amount. As a result, cost of disability scheme increases from BDT 214 million in 2020 to BDT 5,233 million in 2050. However, since transfer amount is linked to the growth of the per capita income, cost

of disability scheme as percent of GDP remain at 0.36 percent over the entire 30-years period. Cost of disability scheme is shown below.

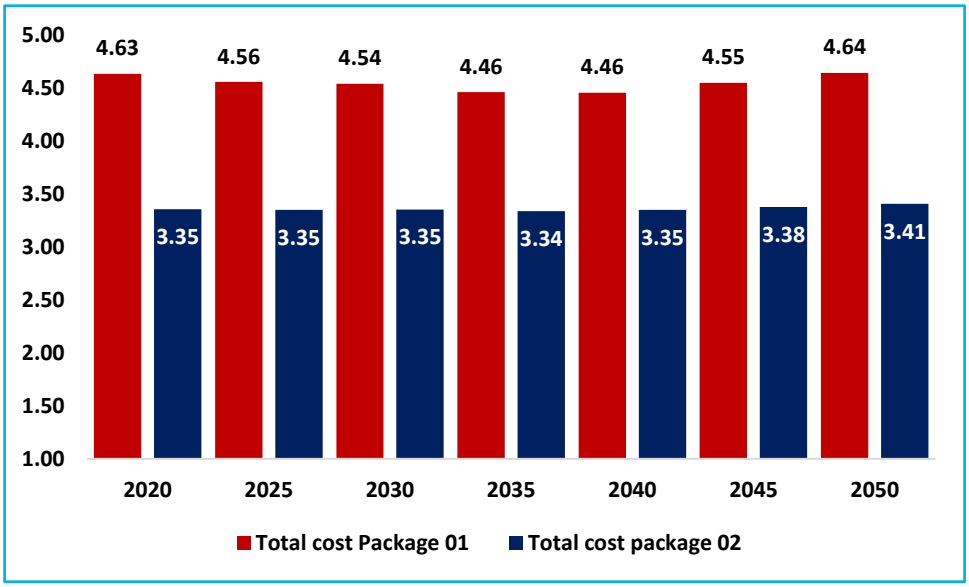
Figure 1.29: Estimated long term cost of the disability scheme



6.5. Long-term Costs

Cost of disability schemes are added to the costs of age-based schemes to arrive at the total costs of the six schemes. The estimated total costs are presented below. It includes total costs under package one and two for the entire 30-years period.

Figure 1.30: Estimated total costs of the schemes (% of GDP)



Due to higher coverage of beneficiaries, estimated total costs are slightly higher under package one compared to package two. Moreover, costs of the six schemes reveal an increasing-trend under package one. Total costs which is estimated at 3.66 percent of GDP in 2020 increased to 3.97 percent of GDP in 2050 implying a 0.31 percentage points increase over 30-years period. It includes total costs under package one and two for the entire 30-years period.

Total costs remain more or less stable at around 3.35 percent of GDP under package two. Total costs which is estimated at 3.35 percent of GDP in 2020 increase to 3.41 percent of GDP in 2050 implying a 0.05 percentage points increase over 30-years period.

As mentioned earlier, total costs may vary significantly with the increase in beneficiary coverage as well as monthly transfer amounts. For instance, in package one, total cots jump by about 7 percentage points when monthly transfer amounts are set 2% of per capita income in place of 0.7 percent of per capita income. On other hand, ceteris paribus universal coverage of the school age children results in 1 and 0.7 percentage points increase in total cost in 2020 and 2050 respectively compared to total costs reported in package one. Another important point to note that, since Bangladesh economy projected to expand fast in later years – especially after 2030, scope of expansion of coverage and enhancement of transfer amount would be relatively easier in later years compared to the initial years (i.e. before 2030) of the estimation period.

6.6. Resource Requirement and Fiscal Space

A fiscal framework covering 2020 and 2050 has been developed to determine the fiscal space for social protection system in Bangladesh. The fiscal framework is consistent with the macro-economic settings of the long term 'Perspective' Plan and 'Delta' plan. Fiscal projections are provided below.

Table 1.10: Estimated Fiscal Space for Social Protection System (as % of GDP)

Budget Lines	2020	2025	2030	2035	2040	2045	2050
A. Total Resources	**17.9**	**20.0**	**22.0**	**23.9**	**25.6**	**27.6**	**29.7**
Of Which:							
Revenue and Grants	12.9	15.2	17.1	19.2	21.1	23.1	25.0
Fiscal Financing	5.0	4.8	4.9	4.7	4.5	4.6	4.6
B. Total Expenditure	**17.9**	**20.3**	**22.0**	**23.9**	**24.8**	**27.6**	**29.7**
B1. Development Expenditure	*7.1*	*7.4*	*7.7*	*7.7*	*7.7*	*8.0*	*8.3*
B2. Non-Development Expenditure	*10.8*	*12.9*	*14.3*	*16.1*	*17.1*	*19.6*	*21.4*
B2.1. Capital Expenditure	*0.6*	*0.7*	*0.8*	*0.8*	*0.8*	*0.8*	*0.8*
B2.2. Revenue Expenditure	**10.2**	**12.2**	**13.5**	**15.3**	**16.3**	**18.8**	**20.6**
B2.2.1. Wages and allowances	3.5	3.8	4	4.3	4.5	4.8	5.00
B2.2.2. Goods and services	1.6	2.1	2.6	3.1	3.6	4.1	4.60
B2.2.3. Interest payments	2.3	2.5	2.52	2.5	2.34	2.2	2.14
B2.2.4. Subsidy and net transfers	0.6	0.7	0.8	0.9	0.9	1.0	1.0
B2.2.5. Block allocations	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Fiscal space social protection (B2.2 – B.2.2.1 + ..+ B2.2.5)	***2.1***	***3.1***	***3.5***	***4.6***	***4.8***	***6.7***	***7.8***
C. Total	**10.2**	**12.2**	**13.5**	**15.3**	**16.3**	**18.8**	**20.6**
Check Zero = B2.2 – C => 0	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

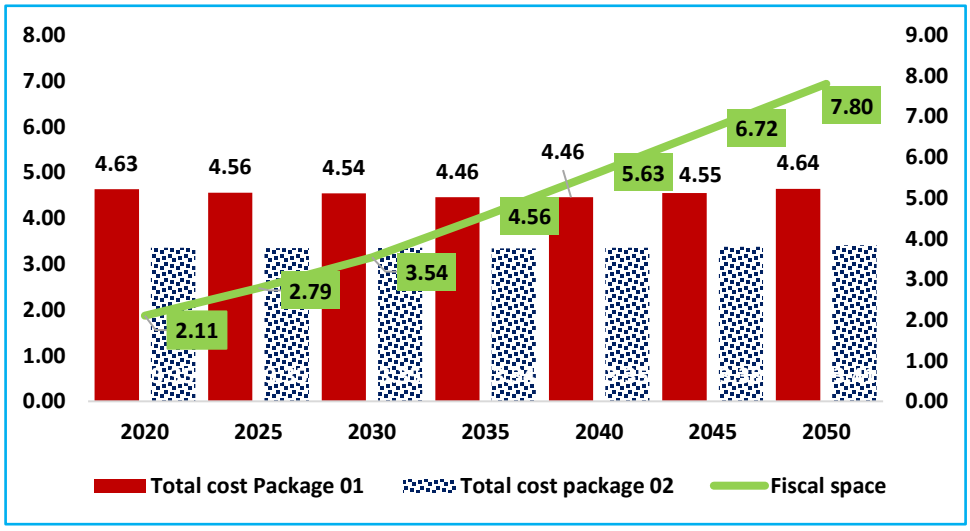
Source: Author's Estimation based on Bangladesh Delta Plan

The fiscal framework developed to assess the fiscal space for financing of the resource needed for package 1 and package 2 is consistent with the long term macro-economic framework used in the 'Perspective Plan' and 'Delta Plan'. Mobilization of total resources and their sources are presented in block A. Although total expenditure projections are consistent with the resources, the allocation patterns between revenue and development budget reveals the underlying targets and goals set out in the long-term plan. In particular, development expenditures are aligned with the productive physical and human capital needs over the long-term period which must be implemented by the public sector. Projected development expenditures (i.e. B1) are deducted from total expenditures (i.e. B2) to determine available resources for carrying out revenue or current

expenditures (i.e. B.2.2). Most of the budget items under the revenue or current expenditures are resource inelastic suggesting that expenditures on these items must need to be carried out even if there were a resource crunch. In other words, room for manipulation with items under the current budget component is very limited and fiscal space for social protection has been calculated as a residual item – fulfilling the resource needs of the other items. Projected fiscal space for the social protection has found to expand with the higher revenue efforts (i.e. revenue to GDP ratio) and expenditure to GDP ratio. Ceteris paribus, fiscal space for social protection has been projected to expend from 2.1 percent of GDP in 2020 to 7.8 percent of GDP in 2030.

The projected fiscal space for social protection system has been contrasted against the two packages – package 1 and package 2 in a single framework to assess their fiscal feasibility and sustainability. The outcomes are summarised in figure below. Bangladesh will find it extremely difficult to finance two packages in the early years of the projected period. Package 2 will only be feasible and sustainable onward 2030. The estimated resource gaps between fiscal space and package 1 costs are 1.24 percentage points in 2020 and 0.56 percentage points in 2025. The options for Bangladesh are either to cut cost even further under package 2 through lower coverage; or benefit; or combination of both in line with fiscal space or resort to higher deficit financing (i.e. over the 5 % level used in the fiscal framework) for initial years with the understanding that the gains in fiscal space in the later years would be used to pay interest payment and debt amortization. Alternatively, Bangladesh may choose to restrict the social protection budget to fiscal space in the early years but gradually expand it with higher coverage and transfer amounts. A restricted package 2 in the initial years may be converted into package 1 from 2035.

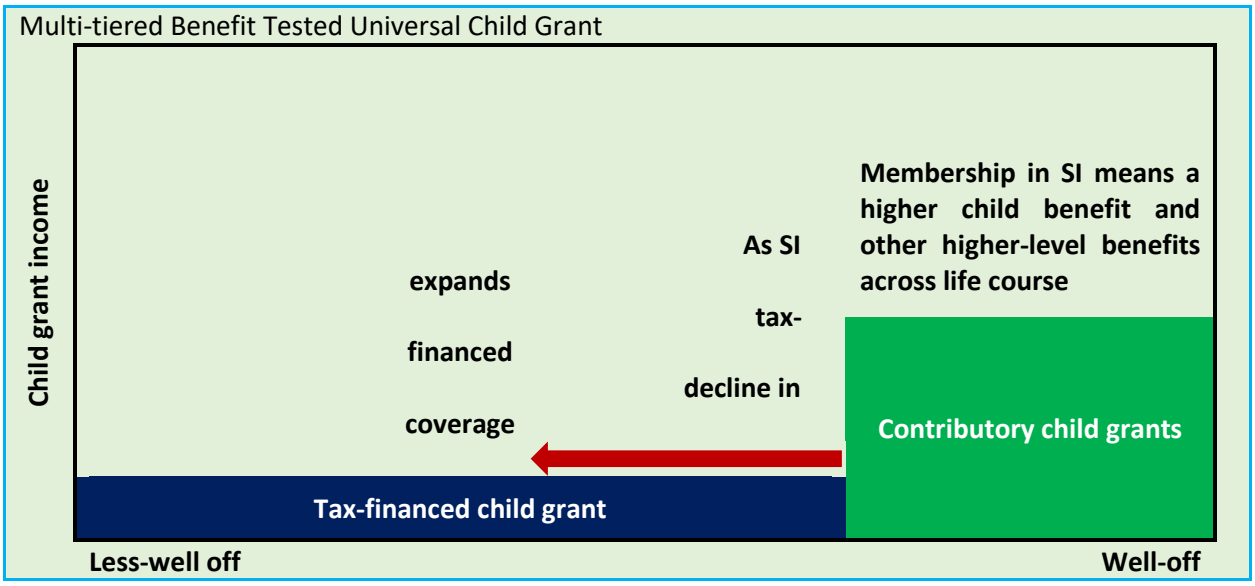
Figure 1.31: Estimated Total Costs of the Schemes and Fiscal Space (% of GDP)



Source: Costing model and Fiscal Framework

7. Recommendations

Programmes for Children: poverty among households with children are pervasive in Bangladesh. In addition to poverty; vulnerability; and under nutrition is a major concern for children. In recent years government has introduced a number of schemes for them along with increase resource allocation. In spite of this positive development, the coverage is still low and there are calls to introduce universal child grant (UCG) with adequate transfer payment and provision for behavioural change training programmes and awareness building initiatives. Due to fiscal space constraints, it may not be feasible to expand the tax-financed child grant to cover every single children of the country. Various innovation may be considered in the case. One such idea has been floated and discussed during the international conference on 'universal child grant' held in February 2019 in Geneva. Conference explored various alternatives such as (i) Multi-tiered universal child grant. In tier 1 an adequate tax-financed guaranteed benefit is ensured to all children. Tier 2 provides opportunity for higher contribution by well-off groups. (ii) Benefit-tested multi-tiered universal child grant. The main advantages of this approach over 1 are that - size and cost of the tax-financed component reduce over time as more people join social insurance. Furthermore, this is an attractive alternative to poverty targeting that is administratively simple and achieves universal coverage. This is shown below.



Source: McClanahan (2019)

In this context the example of Argentina may also be considered. Argentina is trying to reach every child through social protection invoking a mixed approach of tax-financed and contributory schemes.

Argentina: Mixed Approach for Universal Child Allowance

Approach: Argentina has embarked on a combination of measures for universal child grant coverage. In addition to the existing contributory family allowances (CFA) and tax deductions available for higher-income workers with children, Argentina introduced the Universal Child Allowance (UCA) in 2009 with the goal to consolidate several non-contributory fragmented schemes for families with children.

Coverage: Under the UCA, a unique child benefit has been extended to families of unemployed workers, informal workers earning less than the minimum wage, domestic workers and self-employed workers participating in the simplified tax and contribution payment regime for small-scale contributors (known as monotributo).

Transfer Conditions and Amounts: The semi-conditional UCA scheme transfers child grants to children up to the age of 18 (no limit for those with disabilities) and up to five children per family, contingent that beneficiaries fulfil certain requirements relating to health (e.g. vaccination for children under the age of 5) and education (school attendance). The benefit amount was set at around USD 50 a month for each child younger than 18, of which 80 per cent was disbursed on a monthly basis, and the rest accumulated and paid annually provided the conditions are fulfilled. Approximately USD 150 a month is paid for a child with a disability.

Cost: The programme cost 0.6 per cent of GDP as of 2017. According to 2017 statistics, the UCA schemes covered 3.9 million or 30.3 % of all children, and the social protection system for children as a whole (including contributory and non-contributory allowances and tax deductions for higher incomes) reached 87.4 % of children and adolescents under the age of 18, a total of 11.4 million children.

Challenge: Main challenge include exclusion of over 1 million children from any social protection scheme due to strict conditionality. Moreover, studies show 32 % of children in the lowest decile are not covered.

Impact: Impact assessment study concluded that it would be reduced by extreme poverty by about 65 % and overall poverty by 18 % (Bertranou and Maurizio, 2012). More recently, UNICEF carried out an updated analysis showing that the UCA reduces extreme poverty among children by 31 per cent (Paz et al., 2018).

Source: ILO-UNICEF (2019)

Following the above examples, and using the information of National Household Database, Bangladesh may opt for multi-tiered benefit tested universal child grant over the medium term. Contributory child grant may be mandatory for top 30 percent well-off households. They will not be eligible for tax-financed child grant. Rest 70 percent of the children will be eligible to receive a monthly child grant.

Youth Programmes: NEET rate is high is Bangladesh. As many as 29 percent of Youth were in NEET in 2016 exerting high cost to the economy and society. High NEET has both economic and social costs in terms of forgone income; rising poverty and deprivation.

Eurofound (2012), has identified six risk factors that increase the probability of young people becoming NEETs. They include low education, living in remote areas, disability, immigration background, difficult family environment, and low household income. It is further argued that policy responses aimed at reintegrating youth into education, training and the labour market can be clustered into three main types, to address the issue of NEET:

- *Prevention policies, where focuses are mostly on educational policies aimed at preventing early school leaving and at facilitating the smooth transition from school to work;*
- *Reintegration policies, which concentrate on conventional employability policies aimed at supporting young people re-entering the educational system or the labour market; and*
- *Compensation policies, aimed at tackling the most extreme situations, where reintegration seems to be particularly difficult and social assistance measures appear as the last resort in alleviating exclusion.*

Following the above example, Bangladesh may set a target of reducing the current NEET rate from 29% to 10% by 2030 embarking on the following strategies.

Early identification: NEET youth mainly come from poorer households. In some cases, they also reveal behaviours which suggest they might have trouble transitioning to adulthood. Early identification of such characteristics might be attempted in the school system - as this is an institution where all youth participate. Early identification may allow the authorities to design appropriate interventions focusing of continued education; training or employment. This step should be followed by further investigation to determine whether

these youth could benefit from more information on education, training, and employment opportunities. Moreover, greater awareness could be created through a specific outreach programme to students as well as to NEET youths.

Training Plus Package: Majority of the respondents opined to providing skill development opportunities with time bound stipend and credit for NEET Youths. Thus, Youth should be considered for skill development training whereas some need-based skill trainings along with promotional credit facilities. For them a package of intervention involving skill development, stipend and credit should be provided. Emphasis should be on skill development training since it will promote entrepreneurship among the young generation. In this context, engagement of the private sector may also be promoted since they are the potential employers of the youth.

Insurance for Working Age: Lack of decent jobs, and inability to encourage young female workforce to the labour market are some of the key challenges facing the working age group in Bangladesh. Moreover, insurance schemes for the working age groups are virtually non-existent in Bangladesh. Next generation social protection schemes must be tailored to address some of these concerns. This may include access of affordable unemployment insurance schemes for both formal and informal workers; care services (i.e. for both child and adult care) to ensure higher participation of female workforce in the labour market.

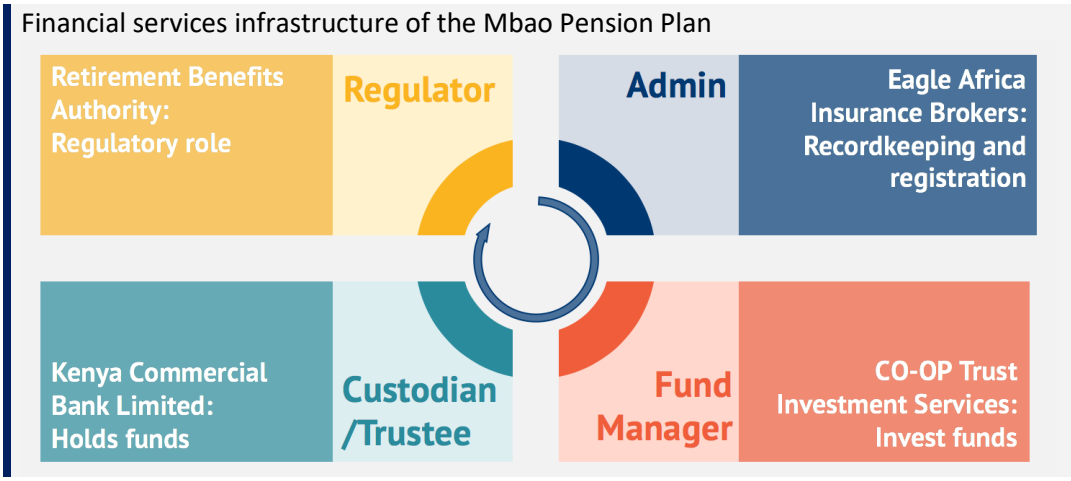
Some of the recommendations made by ILO may also be considered for the working age groups. They include: (i) establish systemic linkages between social insurance and employment promotion programmes, e.g. by entailing social insurance registration as a condition to access the employment promotion programmes. Increase linkages of unemployment insurance benefits with active labour market policies, by designing for instance training responding to the needs of beneficiaries; (ii) develop employment promotion programmes linking with vocational training and registration to social insurance, targeting specifically young herders. Reinforce public employment services, in particular career/employment/training counselling, vocational training and entrepreneurship counselling, rather than focusing only on loan programmes, notably services adapted to urban and rural youth; and (iii) develop a comprehensive programme (that combines training and retraining, counselling for entrepreneurship, career counselling) for reinsertion of differently challenged people due to working injury and occupational diseases.

Ageing and Pension: Bangladesh is still a young country according to the age structure. But it is ageing fast and poised to enter the official stage of an ageing nation by 2030. Number of people aged 60 and above may reach over 40 million in 2050 from only 10 million in 2020. Thus, each of the next three decades may be associated with 10 million additional elderly citizens. Bangladesh government has been completing to introduced universal pension for her elderly citizens. The social pension has experienced impressive expansion in coverage. However, the coverage is still low compared to the need and transfer payment seems inadequate. Due to constraints in fiscal space, it may not be feasible to expand the tax-financed social pension to cover every single elderly citizens of the country. Contributory pension schemes need to be introduced to completement the social pension schemes. Ensuring participation of the large pool of informal workers in the contributory pension schemes may turn out to be a major challenge. Experience of Kenya suggests that it may be possible to introduce contributory pension involving the informal sector or informal workers.

Pension schemes in Kenya are both Government-run and private. It composed of tax-financed schemes (such as the Inua Jamii Senior Citizens' Grant), contributory schemes such as the National Social Security Fund – NSSF, and the Mbao Pension Plan. The Mbao Pension Plan is an innovative programme, targeted at informal-sector workers, provides workers with a voluntary mechanism for pooling and investing their savings – established in

2009. Officially known as the Blue MSMEs Jua Kali Individual Retirement Benefits Scheme[5], the Mbao Pension Plan is a private, voluntary savings plan. Although it better suited for the informal sector, it was opened to all Kenyans from 2011. It is a flagship initiative of the Retirement Benefits Authority (RBA). As of 2018, the Mbao Pension has 100,000 members and a fund value of US$ 1,342,000. The requirements for taking part in the Mbao Pension Plan are as follows:

1. *Applicants must be citizens of Kenya and over the age of 18 years with an ID card;*
2. *Applicants must register for the scheme by paying a KES 100 ($1) registration fee;*
3. *Applicants must fill out a registration form when they present their national ID card;*
4. *Applicants must have a mobile phone to enable contributions into their account.*



Source: Kabare (2108)

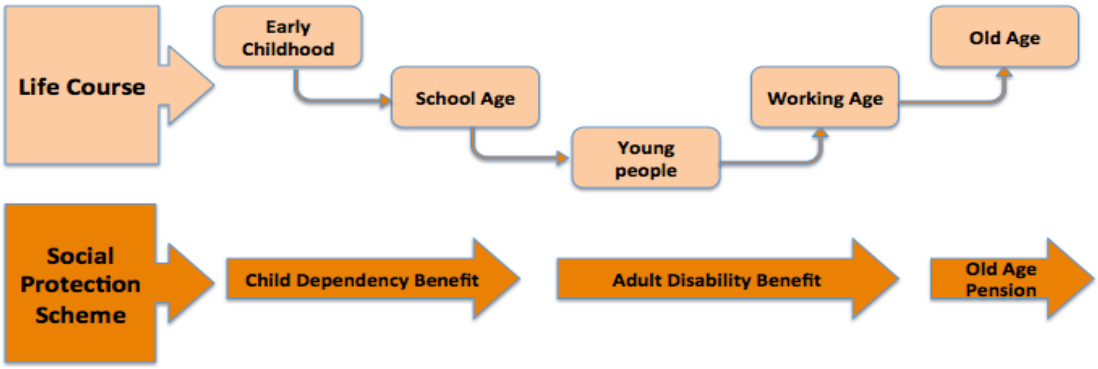
Following the example of Kenya, Bangladesh universal pension may be composed of below-mentioned four schemes.

Pension Schemes	Coverage and eligible	Regulator
Tax Financed Social pension	30% of most vulnerable elderly citizen	Public Sector
Contributory Public Sector Pension	0.5%; public sector employees	Public Sector
Contributory National Social Security Fund (NSSF)	15%; formal private sector employees (mandatory)	Retirement Beneficiary Authority (RBA)
Mbao type contributory Pension Fund	50%; formal private sector employees (Voluntary)	RBA

Expanding Schemes for Disabled Persons: Almost 8 to 9 percent of population in Bangladesh has been suffering some sort of disability. Disability prevalence has also been found for different stages of life cycle. However, prevalence rate increases with age. Moreover, almost 1.5 percent of the population has been diagnosed with sever disability. A universal scheme invoking higher than average transfer amount should be designed for the sever disables persons. Moreover, the social protection system that could be expanded in Bangladesh for disabled persons is set out in the below chart, focusing on the life course schemes.

[5] http://www.rba.go.ke/index.php/en/individual-retirement-benefits-schemes-registered-with-rba .

An expanded social protection system for Disabled Persons



Each of these pillars of a comprehensive strategy is addressed in turn below.

Care Dependency Benefit: A Care Dependency Benefit could be established/expanded for families caring for children with disabilities. The programme could focus on children with severe disabilities irrespective of whether or not they are attending school. Once children are on the scheme, it would not be necessary to recertify them on a regular basis. Children would automatically leave the program when they reach 19 years of age and would be transferred to the adult disability benefit, if their disability were assessed to be sufficiently severe. The absence of recertification would reduce administrative costs and make the program simpler to administer.

Adult disability benefit: An adult disability benefit should be established or expanded for all those aged 19-60 with a severe disability. However, once they become eligible to get social pension or other pension, the adult disability benefit should cease, and beneficiaries would be covered by the pension schemes.

Other: Following the recommendations of the NSSS, Bangladesh must start consolidating the social protection schemes into six core clusters. However, recent trends in the expansion of the schemes under the social protection budget seems to suggest a shift towards the opposition direction. This trend must be arrested, and schemes should be consolidated into the recommended six core clusters based on the life cycle approach or age-specific schemes.

Periodic in-depth review of the system is also needed to raise enhance effectiveness of the system and the value for money. Following recommendations of the experts, the comprehensive review may be undertaken every five year in line with the preparation of the five-year plan.

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Annex 1: Mapping Scheme

Classification	Social Protection Schemes	Ministry/Division
Children	Maternity Allowance Programme for the Poor	MoWCA
	Allowances for Urban Low-income Lactating Mothers	MoWCA
	Grants for Residents in Government Orphanages and Other Institutions	MoSW
	Oppressed Women and Children Welfare Fund	
	Street Children Rehabilitation Programme	MoWCA
	Maternal Health Voucher Scheme	
	Child Sensitive Social Protection in Bangladesh	MoSW
	Services for Children at Risk (Protection of Children at Risk / Child Sensitive Social Protection)	MoSW
	Fundamental Education for Urban Working Children	
	Enabling Environment for Child Right	MoWCA
	Early Learning for Child Development	MoWCA
	Preliminary Education for Development of Children	
	Amader Bari (Our Home): Integrated Old and Children Home	
	Child protection and child welfare	
	Child and Maternal Health & Health Management Development	
School age	Capitation Grants for Orphan Students in Non-gov. Orphanages	MoSW
	Stipend for Disabled Students	MoSW
	Grants for the Schools for the Disabled	MoSW
	Primary School Stipend	MoPMEdu
	School Feeding Programme	MoPMEdu
	Stipend for Dropout Students	MoPMEdu
	Reaching Out of School	MoPMEdu
Youth	Secondary Education Sector Investment Program	MoEducation
	Secondary Education Stipend	MoEducation
	Stipend for Female students at Bachelor Level	MoEducation
	Higher Secondary Stipend	MoEducation
	Secondary Education Quality and Access Enhancement Project (SEQAEP)	MoEducation
	Eradication of Hazardous Child Labour in Bangladesh (3rd Phase)	
	Establishment of Vocational Training and Health Care Centre for the Vulnerable youth	
	Establishment of Training and Employment generation Centre for the Vulnerable Youth and Adolescents	
	Employment Opportunities for Unemployed Youth in 7 Northern District	MoY&S
Working Age	Vulnerable Group Development (VGD)	MoWCA
	Vulnerable Group Feeding (VGF)	MoDMR
	Food for Work (FFW)	MoDMR
	Work for Money (WFM)	MoDMR
	Employment Generation Programme for the Poor	MoDMR
	Operations support to the Employment Generation Programme for the Poorest	MoDMR
	Special Fund for Assistance to women development & entrepreneurs	
	Urban Based Marginal Women Development (Urban Based Women Development Project Phase-2_2017-18)	MoWCA
	Day Care Program for Lower- and Middle-Income Working Women (Establishment of 20 Child Day-care Centre Project_2016-17)	MoWCA
	Conservancy Workers Colony	LGD, MoLGRDC
	Integrated Rural Employment Support Project for the Poor Women	RDCD, MoLGRDC
	Skills for Employment Investment Programme	MoF / FinDiv

Classification	Social Protection Schemes	Ministry/Division
	Construction of Vocational Training and Rehabilitation Centre, CRP-Manikgonj	
	Improving Working Condition in the Ready-Made Garments Sector	MoLE
	Income Support Program for the Poorest	LGD, MoLGRDC
	Skills for Employment and Productivity	MoEducation
	Employment of Ultra Poor in Northern Areas	RDCD, MoLGRDC
	Skill and Employment Programme in Bangladesh	MoEducation
	Strengthening Women's Ability for Productive New Opportunities (SWAPNO)	LGD, MoLGRDC
	Skill and Training Enhancement Project	MoEducation
Old Age	Old Age Allowance	MoSW
	Allowances for the Widow, Deserted and Destitute Women	MoSW
	Honorarium for Freedom Fighters	MoLibWarAff
	Pension for Retired Government Employees and their Families	MoF / FinDiv
	Ration for Shaheed Family and Injured Freedom Fighters	MoLibWarAff
	Universal Pension Insurance Scheme	MoF / FinDiv
Disability	Allowances for the Financially Insolvent Disabled	MoSW
	Honorarium & Medical Allowances for Injured Freedom Fighters	MoLibWarAff
	Fund for the Welfare of Acid Burnt Women and Disabled	MoSW
	Trust for the protection of the persons with neurodevelopmental disabilities	MoSW
	Welfare Trust for Physical disabilities	MoSW
	Service and Assistance Centre for Disabled	MoSW
	Promotion of Services & Opportunity to the Disabled Person in Bangladesh	MoSW
Non-age	Assistance for Cancer, Kidney and Liver Cirrhosis Patients	MoSW
	General Relief Activities	MoDMR
	Block Allocation for Disaster Management	MoDMR
	Non-Bengali Rehabilitation	MoDMR
	Allowances for Distressed Cultural Personalities/Activists	MoCulAff
	Programme for Livelihood Improvement of tea-garden labourers	MoSW
	Housing Support	MoDMR
	National Legal Aid Services	MoLJPA
	Agriculture Rehabilitation	MoAg
	Special Assistance for the development of Char, Haor and under-development area	
	Open Market Sales (OMS)	MoFood
	Test Relief (TR) Food	MoDMR
	Gratuitous Relief (GR)	MoDMR
	Food Assistance in CTG-Hill Tracts Area	MoCHTA
	Test Relief (TR) Cash	MoDMR
	Food Friendly Programme	
	Fund for Micro-Credit through PKSF	MoF / BFID
	Micro-credit for Women Self- employment	MoWCA
	Social Development Foundation	MoF / BFID
	NGO Foundation	MoSW
	Interest free Micro Credit Programme	
	Fund for Assistance to the Small Farmer and Poultry Farms	MoF / FinDiv
	Support to Small Entrepreneurship (PKSF)	
	Swanirvar Training Programme	MoF / FinDiv
	Joyeeta Foundation	MoWCA
	Shamaj Kallyan Parishad	MoSW

Classification	Social Protection Schemes	Ministry/Division
Non-age	100 Days Employment Scheme	
	Skill Development and Earthquake Risk Management Fund	
	Fund for Climate Change	MoEF
	Block Allocation for Various Programme	MoF / FinDiv
	National Service	
	Special Programme for Irrigation and Water Logging	
	Skill Development Fund for Expatriate Returnees and New Entrants to Labour Market	
	Women's Skill Based Training for Livelihood	MoWCA
	Maternal, Neo-natal, Child and Adolescent Health	MoHFW
	Essential Services Delivery	MoHFW
	Community Based Health Care	MoHFW
	National Nutrition Services	MoHFW
	Maternal, Child, Reproductive and Adolescent Health	MoHFW
	Clinical Contraception Services Delivery	MoHFW
	Family Planning Field Services Delivery	MoHFW
	T.B., Leprosy, Communicable Non-communicable Disease	MoHFW
	Establishment of Multipurpose Rehabilitation Centre for Destitute Aged Pupil and Socially Disabled Adolescent Girls	
	Construction of Cleaners Colony of Dhaka City Corporation	
	Expansion and Development of PROYAS at Dhaka Cantonment	
	Northern Area Reduction of Poverty	MoLE
	Pro Poor Slum Integration	MoHPW
	Disaster and Climate Resilient	LGD, MoLGRDC
	Rural Infrastructure Development	LGD, MoLGRDC
	Urban Primary Health Care (Urban Primary Health Care Service Delivery)	LGD, MoLGRDC
	Urban Public Environmental Health Care (Devt. Programme)	LGD, MoLGRDC
	Rehabilitation of Aila Affected Infrastructure	LGD, MoLGRDC
	Haor Infrastructure and livelihood Development	LGD, MoLGRDC
	Coastal Climate Resilient Infrastructure Improvement	LGD, MoLGRDC
	Rural Employment and Road Maintenance Program (RERMP by LGED)	LGD, MoLGRDC
	Agriculture Infrastructure Improvement (Bangladesh Agriculture Infrastructure Development Project)	LGD, MoLGRDC
	Poverty Reduction through Urban Partnership	LGD, MoLGRDC
	Fishermen ID Card and Fisheries Project	MoFL
	Participatory Small-Scale Water Resource Development	MoWR
	Emergency 2007 Cyclone Recovery and Restoration	LGD, MoLGRDC
	Expansion of Polli Daridro Bimochon Foundation for Poverty Alleviation and self-Employment	RDCD, MoLGRDC
	Bangladesh Rural Water Supply and Sanitation (National Sanitation Project)	LGD, MoLGRDC
	Rural Water Supply	LGD, MoLGRDC
	Water Supply and Sanitation Project in Cyclone Prone Sidr Affected Coastal Area	
	Char Livelihood Program	RDCD, MoLGRDC
	One House One Farm	RDCD, MoLGRDC
	Economic Empowerment of the Poorest in Bangladesh	RDCD, MoLGRDC
	Participatory Rural Development (2nd Phase)	
	Participatory Rural Development (New Project)	
	Rural Employment Opportunity for Public Asset	
	Comprehensive Village Development Programme	RDCD, MoLGRDC
	Rural Livelihood (2nd Phase)	RDCD, MoLGRDC

Classification	Social Protection Schemes	Ministry/Division
Non-age	Mujibnagar Integrated Agricultural Development	MoAg
	Initiative for Development, Empowerment, Awareness & Livelihood, Kurigram	RDCD, MoLGRDC
	Integrated Support to Poverty and Inequality Reduction through Enterprise Development	MoIndustries
	Rural Development of Greater Comilla	LGD, MoLGRDC
	Emergency 2007 Cyclone Recovery and Restoration	MoAg
	Integrated Fisheries & Livestock Development in Flood Controlled Areas & Water Bodies	MoFL
	Regional Duck Breeding and Hatchery (3rd phase_2017-18)	MoFL
	Poverty Reduction & Livelihood Security for the People of Economically Backward Area	MoFL
	Food and Livelihood Security (FLS)	
	Small Scale Dairy & Poultry Farmers' Support Project in 22 Selected Districts	
	Small Scale Dairy & Poultry Farmers' Support Project in 22 Selected Districts	
	Bangladesh Climate Resilient Participatory Afforestation and Reforestation	MoEF
	Char Development and Settlement	LGD, MoLGRDC
	Gucchagram (Climate Victims Rehabilitation)	MoLand
	Food Security through enhanced Agricultural Production, Income, Value Addition and Marketing in Bangladesh	MoAg
	Comprehensive Disaster Management Programme	MoDMR
	Second Chittagong Hill Tracts Rural Development	LGD, MoLGRDC
	Construction of Residence for Landless & poor Freedom Fighters	MoLibWarAff
	Establishment of Autistic Academy in Bangladesh	MoEducation
	Generation Break through	
	Institute of Paediatric Neuro Disorder (Institute of Paediatric Neuro Disorder and Autism in BSMMU_2017-18)	
	Construction of Facilities at Dharmarajika Buddha Maha Bihar for Orphans and Disadvantaged	
	Health Economic Financing and GNSP	
	Investment Component for Vulnerable Group Development	
	Vulnerable Group Development for Ultra Poor (Women)	
	Support Service for Vulnerable Group	
	Reconstruction of Houses of SIDR affected Landless People	
	Construction of Flood-Shelter in Flood Prone and River-Erosion Areas	
	Disaster Risk Mitigation and Reduction	
	Project for Small Farmers Development Foundation	
	Regional Fisheries and Livestock Development	
	Projects undertaken for Fisheries Development	
	Jatka (Fish) Protection and Alternative Employment for Fishermen	
	Micro-Nutrient Supplementation	
	Post Literacy Education Project for Human Resource Development	
	Revitalization of Community Health Care Initiative in Bangladesh	
	Sisimpur Outreach Project	
	Pulse and Oil Seed Project	
	Community Based Adaptation to Climate Change through Coastal Afforestation in Bangladesh	
	Poverty Eradication through Social Afforestation	
	Improvement and Quality Seed Production of Rice, Wheat and Maize	

Classification	Social Protection Schemes	Ministry/Division
Non-age	Promotion of Legal and Social Empowerment	
	Create Employment Opportunities of Char Dwellers in Greater Rangpur Districts through Sugarcane cultivation	
	Expansion of Existing Prime Mother and Child Care Hospital with Research Facilities	
	Construction of Multipurpose Sports Complex for Person with Disability	
	Comprehensive and Sustainable Health, Education and Livelihood Development Programme	
	Re-construction of Rehabilitation Centre for Destitute Children, Konabari, Gazipur	
	Establishment of Sheikh Rasel Training and Rehabilitation Centre for the Destitute Children	
	Construction of Probin Nibas in Five Divisional Head Quarter & One Zila	
	Empowerment of communities, groups and individuals	
	Construction of Hostel for the Sarkari Shishu Paribar (8 Units)	
	Multi-purpose Disaster Shelter Construction	LGD, MoLGRDC
	Rural Settlement Construction for improvement of Rural Livelihood	RDCD, MoLGRDC
	Poverty Reduction Through Inclusive and Sustainable Markets	MoIndustries
	Adaptation to Climate Change and Rehabilitation of Livelihood	MoEF
	Social Security Policy Support (SSPS) Programme	Cabinet
	Strengthening Public Financial Management for Social Protection	MoF / FinDiv
	Support to the Urban Health and Nutrition to Bangladesh	MoHFW
	Urban Resilience Project: (DNCC & DDM)	MoDMR
	Income Generating Activities for Women at Upazila Level	
	Multi-sectoral Programme to Prevent on Violence Against Women (4th Phase)	
	Child protection and child welfare	
	Development of the Living Standard of the Marginal People of Bangladesh	
	Tottho Apa: Empowering Women Through ICT Towards Digital Bangladesh	
	Preferential Village Water Supply	
	Construction of Flood Shelter in the Flood and River Erosion Prone Area - 3rd Phase	
	Flood Management and Livelihood Improvement Project in Haor Area	
	Development Support for Special Needs	
	Development of living standards of extinct enclaves	
	Improved life Standard for low-income people	

Annex 2: Costing

Package one

	2020	2025	2030	2035	2040	2045	2050
Children							
Population (Million Person)	16.1	15.8	14.5	14.0	13.8	13.6	13.2
Beneficiary (Million Person)	16.1	15.8	14.5	14.0	13.8	13.6	13.2
Transfer (BDT/Month/Person)	1,200	2,157	3,951	7,344	13,977	24,546	44,165
Cost (Billion BDT)	247.8	438.4	736.4	1,320.9	2,478.4	4,279.3	7,505.6
Share of GDP (%)	**0.80**	**0.74**	**0.65**	**0.60**	**0.57**	**0.54**	**0.52**
School Age							
Population (Million Person)	30.4	30.1	30.8	29.4	27.7	27.1	26.8
Beneficiary (Million Person)	9.7	10.5	10.8	10.3	9.7	9.5	9.4
Transfer (BDT/Month/Person)	1,200	2,157	3,951	7,344	13,977	24,546	44,165
Cost (Billion BDT)	163.7	291.8	546.2	969.2	1740.8	2991.7	5313.6
Share of GDP (%)	**0.527**	**0.492**	**0.479**	**0.438**	**0.399**	**0.379**	**0.365**
Youth							
Population (Million Person)	48.3	50.5	48.6	45.6	45.2	44.5	42.8
Beneficiary (Million Person)	16.9	17.7	17.0	16.0	15.8	15.6	15.0
Transfer (BDT/Month/Person)	1,200	2,157	3,951	7,344	13,977	27,579	44,165
Cost (Billion BDT)	260.4	489.5	862.9	1504.3	2838.0	5515.8	8504.7
Share of GDP (%)	**0.838**	**0.825**	**0.756**	**0.680**	**0.650**	**0.618**	**0.585**
Working age							
Population (Million Person)	61.0	67.4	75.2	83.7	88.5	89.8	91.5
Beneficiary (Million Person)	9.1	10.1	11.3	12.6	13.3	13.5	13.7
Transfer (BDT/Month/Person)	1,200	2,157	3,951	7,344	13,977	24,546	44,165
Cost (Billion BDT)	140.9	280	572	1,184	2,383	4,246	7,782
Share of GDP (%)	**0.45**	**0.47**	**0.50**	**0.54**	**0.55**	**0.54**	**0.53**
Old age							
Population (Million Person)	13.7	16.2	20.7	24.3	29.0	35.3	41.2
Beneficiary (Million Person)	13.7	16.2	20.7	24.3	29.0	35.3	41.2
Transfer (BDT/Month/Person)	1,200	2,157	3,951	7,344	13,977	24,546	44,165
Cost (Billion BDT)	210.9	449.8	1186.1	2287.8	5201.3	11126.6	23344.8
Share of GDP (%)	**0.68**	**0.76**	**0.91**	**1.03**	**1.19**	**1.41**	**1.60**
Population (Million Person)	169.4	180.0	189.8	196.9	204.2	210.3	215.5
Beneficiary (Million Person)	65.5	70.4	74.3	77.1	81.6	87.4	92.5
Coverage (% of population)	38.7	39.1	39.1	39.1	39.9	41.6	42.9
Cost as % of GDP	**3.3**	**3.3**	**3.3**	**3.3**	**3.4**	**3.5**	**3.6**

Source: Costing module

Package two

	2020	2025	2030	2035	2040	2045	2050
Children							
Population (Million Person)	16.1	15.8	14.5	14.0	13.8	13.6	13.2
Beneficiary (Million Person)	5.6	5.5	5.1	4.9	4.8	4.8	4.6
Transfer (BDT/Month/Person)	1,714	3,082	5,644	10,491	19,968	35,066	63,093
Cost (Billion BDT)	123.9	219.2	368.2	660.4	1,239.2	2,139.7	3,752.8
Share of GDP (%)	**0.40**	**0.37**	**0.32**	**0.30**	**0.28**	**0.27**	**0.26**
School Age							
Population (Million Person)	30.4	30.1	30.8	29.4	27.7	27.1	26.8
Beneficiary (Million Person)	6.9	7.5	7.7	7.3	6.9	6.8	6.7
Transfer (BDT/Month/Person)	1,714	3,082	5,644	10,491	19,968	35,066	63,093
Cost (Billion BDT)	167.1	297.8	557.3	989.0	1776.3	3052.8	5422.0
Share of GDP (%)	**0.538**	**0.502**	**0.488**	**0.447**	**0.407**	**0.387**	**0.373**
Youth							
Population (Million Person)	48.3	50.5	48.6	45.6	45.2	44.5	42.8
Beneficiary (Million Person)	12.1	12.6	12.2	11.4	11.3	11.1	10.7
Transfer (BDT/Month/Person)	1,714	3,082	5,644	10,491	19,968	39,399	63,093
Cost (Billion BDT)	265.7	499.4	880.5	1535.0	2895.9	5628.4	8678.3
Share of GDP (%)	**0.855**	**0.841**	**0.771**	**0.694**	**0.664**	**0.631**	**0.597**
Working age							
Population (Million Person)	61.0	67.4	75.2	83.7	88.5	89.8	91.5
Beneficiary (Million Person)	12.2	13.5	15.0	16.7	17.7	18.0	18.3
Transfer (BDT/Month/Person)	1,714	3,082	5,644	10,491	19,968	35,066	63,093
Cost (Billion BDT)	268.3	533	1,090	2,256	4,540	8,087	14,822
Share of GDP (%)	**0.86**	**0.90**	**0.96**	**1.02**	**1.04**	**1.02**	**1.02**
Old age							
Population (Million Person)	13.7	16.2	20.7	24.3	29.0	35.3	41.2
Beneficiary (Million Person)	4.8	5.7	7.2	8.5	10.1	12.4	14.4
Transfer (BDT/Month/Person)	1,714	3,082	5,644	10,491	19,968	35,066	63,093
Cost (Billion BDT)	105.4	224.9	593.1	1143.9	2600.6	5563.3	11672.4
Share of GDP (%)	**0.34**	**0.38**	**0.46**	**0.52**	**0.60**	**0.70**	**0.80**
Population (Million Person)	169.4	180.0	189.8	196.9	204.2	210.3	215.5
Beneficiary (Million Person)	41.6	44.8	47.2	48.9	50.9	53.0	54.7
Coverage (% of population)	24.6	24.9	24.9	24.8	24.9	25.2	25.4
Cost as % of GDP	**2.995**	**2.989**	**2.993**	**2.978**	**2.991**	**3.017**	**3.048**

Source: Costing module

Social Security Policy Support (SSPS) Programme

Cabinet Division

and

General Economics Division (GED) of Bangladesh Planning Commission

Government of the People's Republic of Bangladesh

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