

Population Management Issues: Monograph – 3



**‘Strengthening Capacity of the General Economics Division (GED)
to Integrate Population Issues into Development Plans’ Project, UNFPA**



**General Economics Division (GED)
Planning Commission**

March 2016



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General Economics Division (GED) implements a Project Title Strengthening Capacity of the General Economics Division (GED) to Integrate Population Issues into Development Plans with the support from UNFPA Bangladesh since 2012. Through the Project General output-1, and another is Population Management Issues: Monograph-2 on Population and Development Issues. Presently the Project published the following two books

Bangladesh ICPD 1994-2014 Country Report

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A H M Mustafa Kamal, FCA, MP
Minister
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Bangladesh



MESSAGE

I am happy to learn that the General Economics Division (GED) of the Bangladesh Planning Commission organized three separate policy dialogues on Population Management issues. Those dialogues focused on finding out the trends and patterns of population changes in Bangladesh, examining the demographic changes in relation to sustainable development, investigating emerging population challenges for Bangladesh and mapping the scope of mainstreaming population issues in formulating national development plans and policies. A decision to bring out the Population Management Issues: Monograph-3 containing three important research papers presented in the dialogues is a praise worthy step. This Monograph-3 would help to guide the macro planning process to face the challenge for population management to achieve the goal of attaining maximum from our human resources.

The policy monograph has been prepared through extensive consultation with ministries, development partners, academia, researchers, civil societies, think tanks and NGOs. I would like to appreciate GED officials as well as UNFPA Bangladesh for providing their support in preparing this monograph which will be beneficial for the policy makers, researchers and development partners dealing with the Population and Development issues.

A H M Mustafa Kamal, FCA, MP
Minister for Planning



M A Mannan MP

Minister of State
Ministry of Finance and Ministry of Planning
Government of the People's Republic of
Bangladesh



MESSAGE

I am very happy to learn that the General Economics Division (GED) of Bangladesh Planning Commission is going to publish Population Management Issues: Monograph-3 by compiling the three policy papers; 'Assessing the Need of Sexual and Reproductive Health Services for the Youth Population and the Scale of Investments that are Necessary to Harness the Demographic Dividend', 'Projection of Youth and Adolescent Needs for Human Resource Development in Bangladesh' and 'The Level of Integration of Population Dynamics Issues in the 7th Five Year Plan Document for 2016-20'. The report is expected to incorporate recommendations for development interventions in these areas.

The main objective of this publication is to disseminate knowledge among various stakeholders who are engaged in efforts to integrate population issues into development plans of the country. This compilation can play an important role in synthesizing population dynamics in the context of sustainable development challenges.

Bangladesh is now experiencing a stage of 'demographic transition' as a result of low birth rate and low death rate with slower population growth. The resultant youth 'bulge' in the population structure of Bangladesh offers a unique demographic window of opportunity, which we can use in attaining our development goals. The lessons learned from the policy papers will guide GOB planners towards following the right course in implementing population management techniques in the Seventh Five Year Plan.

I take this opportunity to thank the GED officials and the researchers for their efforts in preparing this report, which, I am sure, will be useful to the policy makers and others engaged in the activities of the country's development process.

(M. A. Mannan, MP)



Prof. Shamsul Alam, M. A. Econs, Ph.D

Member (Senior Secretary)

General Economics Division (GED)

Planning Commission

PREFACE

This monograph on population issues has been prepared by GED by compiling three policy papers presented in three national dialogues organized by GED, Planning Commission during 2015. These policy dialogues were organized with the view to exchange knowledge and views among various stakeholders in Bangladesh relating to population issues in the context of preparation of Seventh Five Year Plan document and the formulation of UN's post-2015 Sustainable Development Goals (SDGs) agenda. The GED has prepared the monograph taking input from relevant ministries, divisions and related stakeholders through policy dialogues on policy papers. The policy dialogues provided a forum for different relevant stakeholders to examine the increasingly important role of population dynamics in the context of sustainable development challenges of Bangladesh.

Countries in South Asia have experienced impressive economic growth in recent years and some of these gains have been attributed to demographic changes particularly with changing age structure and increasing proportion of economically active population. This phenomenon is particularly known as 'demographic dividend'. Economic growth can be accelerated from a decline of country's birth and death rates and subsequent changes in the age structure of the population leading to increase in working age people. At this stage of changing population age structure the ratio of productive workers to dependents, children and elderly, improves that help make more savings leading to more investment for faster economic growth.

One might be aware that there is some uncertainty about the population, especially in a developing country such as Bangladesh with high illiteracy and a large under nourished rural population. The extremely high density of population, rapid unplanned urban growth, wide-spread illiteracy and conservative socio-cultural environment, together with poor reproductive health status – characterized by as yet high maternal and infant mortality and morbidity, high incidence of communicable diseases, wide spread malnutrition and a very high teen-age fertility rate with limited access to services for adolescents – make the problems desperately serious. On a longer term perspective, another unwelcome, but inevitable, prospect of rising sea level caused by greenhouse gas effect of development activities would lead to large scale displacement of population from low lying coastal areas. With very little absorption capacity in the rural areas of the already crowded country, a large proportion of the excess population would likely gravitate to urban centers resulting in further growth of slum population. These situations depict the challenging scenario for the policy makers.

The existing unmet needs justify making family planning services to be activated as the most priority focus in population policies. Policies should aim at, first, expanding access to safe, effective and affordable contraceptive services, secondly, improving reproductive health, and thirdly, implementing social and economic measures that would generate further demand for fertility diminishing.

Planning Commission has a key role in development planning and public expenditure management. The Government has adopted the Vision 2021, in recognition of meeting the long term development challenges of the country. Utilizing the potential strength of the economy to achieve a status of middle income country by 2021, a Perspective Plan 2011-2021 has been adopted. Lowering the rate of growth of the population is a major challenge for Bangladesh during the Seventh Five Year Plan. In order to take advantage of the demographic dividend, the Seventh Five Year Plan addressed challenges in improving labour force quality implementing a well thought out human development, education and training strategies and development of associated policies and institutions.

The Multi Sectoral Issues Wing of General Economics Division carried out the task under close guidance of the Member, GED. In light of the GED's mandate, roles and responsibility within the Government of Bangladesh, the 'Strengthening Capacity of the General Economics Division (GED) to Integrate Population Issues into Development Plans' project is designed to integrate population issues and gender concerns into national plans and policies and that the in-house capacity for utilizing research and key findings for policy analysis on critical population and development issues is brought to fore among government officials and personnel working within the Planning Commission.

I am thankful to Key Note presenters Ms. Rumana Huque, Associate Professor, Department of Economics, University of Dhaka, Dr. Md. Kamrul Islam, Assistant Professor, Department of Population Science, University of Dhaka, and Mr. M. Ataharul Islam, Professor, Department of Applied Statistics, East West University, for providing us informative and analytical papers. I am also thankful to designated Discussants Prof. Dr. Ahmed Neaz, Advisor, MHP Programme, American International University of Dhaka, Prof. Dr. Bazlul Hoque Khandhoker, Chairman, South Asian Network on Economic Modeling (SANEM), Dr. Bellal Hossain, Associate Professor, Department of Population Science, University of Dhaka, Dr. Barkat-e-Khuda, Professor, Dhaka University, for their analytical thoughts on the issues. The formulation and elaboration of this report has benefitted from a number of persons. I am grateful to all the participants for their valuable time to share their wisdom with GED.

I take this opportunity to thank all including concerned GED officials, representatives from different ministries/department, donor representatives. I specially thank our Hon'ble Planning Minister Mr. A H M Mustafa Kamal, FCA, MP and Mr.M.A. Mannan Hon'ble State Minister for Planning for their intimate support in holding the dialogues and inspiration in bringing out this monograph.



(Prof. Shamsul Alam)

ACKNOWLEDGEMENTS

The GED acknowledges the contribution of all the officials of the relevant Ministries/Divisions for their help in preparing the report. The Multi Sectoral Issues Wing of General Economics Division carried out the task under close guidance of the Hon. Member, GED. I also appreciate the UNFPA for providing necessary support in finalizing the report through the “Strengthening Capacity of the General Economics Division (GED) to Integrate Population Issues into Development Plans” Project.

I feel delighted to acknowledge the role of officials concerned for preparation of the policy papers and also holding the policy dialogues on ‘Assessing the Need of Sexual and Reproductive Health Services for the Youth Population and the Scale of Investments that are Necessary to Harness the Demographic Dividend’; and ‘Projection of Youth and Adolescent Needs for Human Resource Development in Bangladesh’. ‘The Level of Integration of Population Dynamics Issues in the 7th Five Year Plan Document for 2016-20’;

It is worth mentioning that the GED officials in association with the Bureau of Economic Research University of Dhaka, ‘Department of Population Sciences’, University of Dhaka, and the Department of Applied Statistics, East-West University have professionally and meticulously prepared the reports presented in the policy dialogues. I believe policy makers, researchers and students of higher studies will be benefited by this outcome document of the dialogues organized by the GED. I thank UNFPA, project staff and others for their support to organize the policy dialogues on these population dynamics issues.



(Md. Shahjahan)

Joint Chief & Project Director
General Economics Division (GED)
Planning Commission

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Policy Paper on

Assessing the need of sexual and reproductive health services for the youth population and the scale of investments that are necessary to harness the demographic dividend

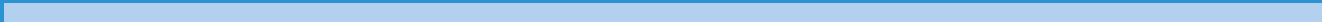
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PAPER 1



**General Economics Division (GED)
Planning Commission**

**Ministry of Planning, Dhaka, Bangladesh
March 2016**



Preface

Investments in sexual and reproductive health are critical for saving lives and reducing ill-health among women and their children and for fulfilling their internationally recognized right to good health. The current youth ‘bulge’ in the population structure of Bangladesh offers a one-time window of economic opportunity, popularly known as demographic dividend. This demographic dividend will not come automatically. It needs proper investments in youth particularly in health and education to foster the opportunities for developing a skilled and healthy labor force.

Bangladesh has made a great progress in improving people’s health and achieving Millennium Development Goals related indicators. Under Health, Population and Nutrition Sector Development Programme (HPNSDP, 2011-16) mortality rate has declined further and health services have improved considerably (MTR, 2014). However, still the gap with developed countries in terms of reproductive health, especially maternal, neonatal and child health, nutrition and family planning services etc. are quite large and require further attention. Economic growth is a function of several factors and technological aspects, but no doubt that number of healthy and skilled workers does also matter greatly. A better state of reproductive health ensures more productive workforce as well as more workers, which in turn accelerates the growth, *ceteris paribus*.

Developed countries reaped the benefit of demographic transition, especially in the form of higher productivity, more savings and more capital formation. By ensuring a very good state of reproductive health of youth, along with other policies for example education and employment creation, a country can ensure a very productive workforce as well as more participation of the women in economic activities. Reproductive health status of Bangladesh is not that bad. In terms of the indicators of reproductive health such as lower fertility rate, higher life expectancy at birth, lower child and maternal mortality rate the achievement of Bangladesh is as par the achievement of the middle income countries. The achievement mentioned above are not universal, regional disparities are there. More importantly, adolescent health is not at the desired level and the pregnancy rate of young women is very high. In fact the gaps with the developed countries in terms of the indicators of reproductive health indicate that there are huge rooms for improvement in all the areas of reproductive health. Improvement of reproductive health to a satisfactory level requires proper investment in reproductive health services.

The General Economics Division (GED), in cooperation with UNFPA, has conducted this study on sexual and reproductive health needs and budgetary implication in collaboration with the Bureau of Economic Research (BER), University of Dhaka. The study has given effort to find out information about Demographic transition and Potential of Demographic Dividend for Bangladesh, reproductive health scenario of Bangladesh, efforts and spending for RH services in the country and finally investment required for RH Services in Bangladesh to harness the demographic dividend.

Acknowledgements

This research project demanded colossal amount of hard work and perseverance from the team. Still, implementation would not have been possible if we did not receive support from many individuals and institutions. Therefore we would like to extend our sincere gratitude to all of them.

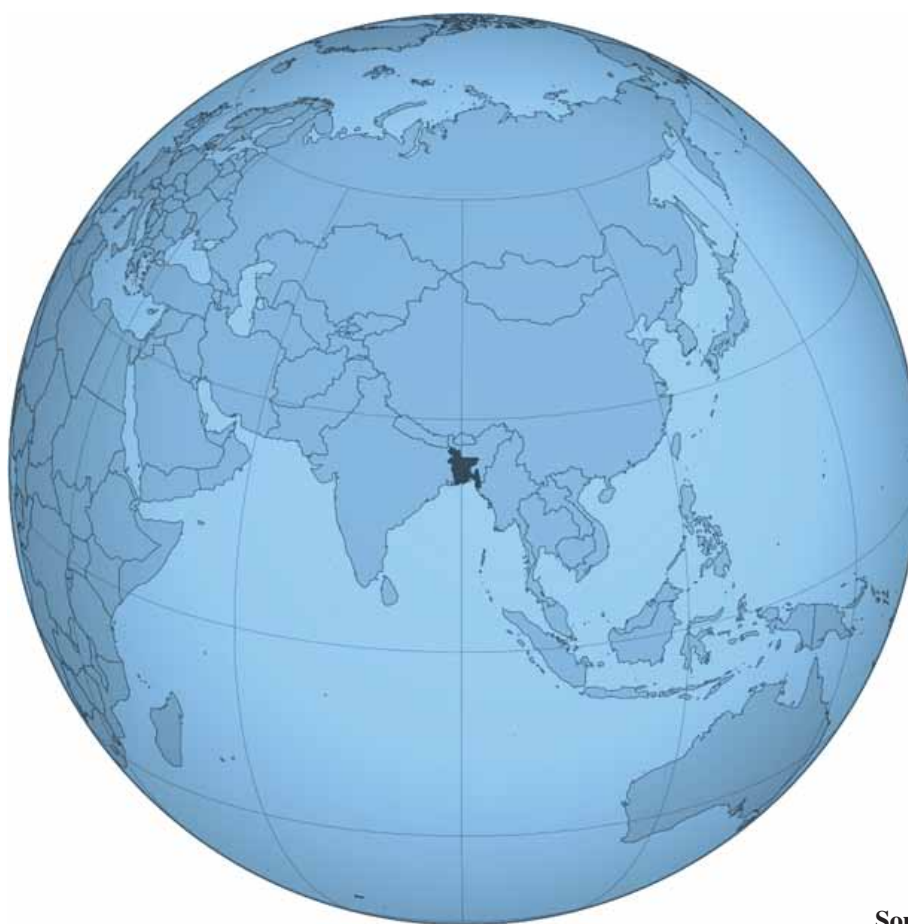
First of all we are thankful to the General Economics Division (GED), Planning Commission and UNFPA for their financial and logistical support and for providing necessary guidance concerning project implementation.

We are also grateful to the Chairman, Professor Farid Uddin Ahmed and the Director, Professor Dr. Shafique uz Zaman, of the Bureau of Economic Research (BER), University of Dhaka for provision of expertise, and technical support in the implementation. Without their superior knowledge and experience, the Project would lack in quality of outcomes, and thus their support has been essential.

We would like to express our sincere thanks towards all officials from the General Economics Division (GED), Planning Commission and also from the Bureau of Economic Research (BER), University of Dhaka for providing appropriate and necessary institutional support. All of them have devoted their time and knowledge and played important role in the implementation of this research project.

We thank all who provided great effort to prepare related materials such as Bangladesh Statistical Year Book, Bangladesh National Health Accounts 1997-2012, 6th Five Year Plan of Bangladesh and 7th Five Year Plan of Bangladesh. These are very rich documents and required extraordinary effort to produce these documents.

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Source: Wikipedia

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Abbreviations

ADP	Annual Development Programme
AIDS	Acquired Immunity Deficiency Syndrome
ANC	Antenatal care
BDHS	Bangladesh Demographic Health Survey
BNHA	Bangladesh National Health Accounts
CEmOC	Comprehensive Emergency obstetric care
CIDA	Canadian International Development Agency
DFID	Department for International development
DGFP	Directorate General of Family Planning
DGHS	Directorate General of Health Services
DH	District hospitals
DHS	Demographic and Health Survey
EC	European Commission
EmOC	Emergency management of obstetric care
EOC	Emergency obstetric care
GOB	Government of Bangladesh
GTZ	German Development Corporation
HDI	Human Development Index
HIV	Human Immunodeficiency Virus
HNP	Health, Nutrition and Population
HNPS	Health, Nutrition and Population Sector Programme
ICPD	International Conference on Population and Development
IMR	Infant Mortality Rate
JICA	Japan International Cooperation Agency
MCH	Maternal and Child Health
MCWC	Maternal and Child Welfare Centers
MDG	Millennium Development Goal
MICS	Multi Indicator Cluster Survey
MMR	Maternal Mortality Rate
MOF	Ministry of Finance
MOHFW	Ministry of Health and Family welfare
NGO	Non-Government Organization
NHA	National Health Account
NIPORT	National Institute of Population Research and Training
PHC	Primary Health Care
PNC	Postnatal care
RH	Reproductive Health

RHA	Reproductive Health Account
SHA	System of Health Accounts
SRH	Sexual and Reproductive Health
STD	Sexually transmitted Disease
STIs	Sexually Transmitted Infections
SWAp	Sector-wide Approach
TFR	Total Fertility rate
THE	Total Health Expenditure
U5MR	Under-5 Mortality Rate
UHCs	Upazila Health Complexes
UHFWC	Union Health and Family Welfare Centers
UNDAF	United Nations Development Assistance Framework
UNDP	United Nations Development Program
UNFPA	United Nations Population Fund
USAID	U.S. Agency for International Development

Executive Summary

Bangladesh has made a remarkable progress in improving people's health and achieving Millennium Development Goals related indicators. Under Health, Population and Nutrition Sector Development Programme (HPNSDP, 2011-16) mortality rate has declined further and health services have improved considerably (MTR, 2014). However, still the gap with developed countries in terms of reproductive health, especially maternal, neonatal and child health, nutrition and family planning services etc. are quite large and require more attention. Economic growth is a function of several factors and technological aspects, but no doubt that number of healthy and skilled workers does also matter greatly. A better state of reproductive health of youth will ensure more productive workforce as well as more workers, which in turn will accelerate the savings, investment and growth for sure, *ceteris paribus*.

Demographic Dividend

The boost in economic development resulting from increase in number of working population relative to the number of dependant could be referred as demographic dividend. A country like Bangladesh who is trying heart and soul to stimulate the economic growth to a magic level of 7 or 8 per cent, and graduate from the level of Least Developed Country (LDC) to Developed one, harnessing demographic dividend is vital. It is especially because of two reasons. First the country has already achieved a huge stock of young population through demographic transition, so transferring them into economically active work group would help to increase the overall production of the economy and hence economic growth. Secondly since the country already has shortage of resources and low investment – GDP ratio, decrease in dependency ratio which is a result of demographic transition will open the window of increase private saving that can in turn be transferred into investment to achieve a higher economic growth. Developed countries reaped the benefit of demographic transition, especially in the form of higher productivity, more savings and more capital formation. By ensuring a very good state of reproductive health of youth, along with other policies, for example education and employment creation, a country can ensure a very productive workforce as well as more participation of the women in economic activities.

Initially demographic dividend arises in the form of first dividend: more resources can be released from child care to education and employment generation. Eventually, the first dividend disappears as within few decades old-age dependency ration increases, so more resources are required for the care of older people. However, in the process of demographic transition and first dividend, proper policies in the areas of education, health and employment lead to savings generation and capital accumulation. Higher capital increases the marginal product of the labour, so as the economic growth. Capital accumulation due to demographic transition leads to the second dividend of demographic changes.

Reproductive Health of Youth to harness the Demographic Dividend

A very good status of reproductive health is essential to reap the benefit of demographic dividend. Youth population with a better state of reproductive health in turn become a highly productive workforce. Reproductive health can be measured using some indicators such as life expectancy, fertility rate, lower maternal and child mortality rates etc. A very good state of reproductive health can ensure the effective participation of the women in economic activities. Thus, reproductive health is essential to accumulate the benefit of demographic dividend.

Demographic transition and reproductive health in Bangladesh

Bangladesh has been experiencing rapid demographic transition in last few decades. Dependency ratio has been decreasing, number of youth has been increasing, and currently number of older people has been

increasing as well. So Bangladesh is in the second stage of demographic transition now, and if Bangladesh sets a plan to achieve demographic dividend, it should be the second dividend.

To achieve the second dividend of demographic transition, policies should target quality education for all, employment generation and reproductive health etc. In some context the reproductive health of Bangladesh is satisfactory. Current fertility rate is 2.2, life expectancy is 71, maternal mortality rate is 170 and child mortality rate is 46. In terms of these indicators Bangladesh is better than its South Asian counterparts, and even from middle income countries, though Bangladesh itself is a lower-middle income country. However, there are some areas of concern as well: regional disparities are present, there are places where fertility rate and mortality rate are higher. Rural-urban differences prevail in life expectancy in favour of the urban people. There are rooms for improvement in the areas of child and maternal mortality rates, contraception use, unwanted pregnancy and delivery etc. Moreover, malnutrition in Bangladesh in many cases worse than from some African Countries.

Financing of reproductive health in Bangladesh

Data suggest that total health expenditure in Bangladesh is only 3.5% of its GDP which is much worse than many countries. Out of total health expenditure only 10-15% is used for reproductive health services. Out-of-pocket expenditure for health is two-third of the total health expenditure, and public health expenditure is only one-fourth of the total health expenditure. Donors and NGOs have been increasing their contribution over the years. The areas of concern are: total health expenditure is relatively at very low level, and the contribution of the public sector is not at the desired level.

In fact, to ensure a very good reproductive health status of the youth, public health expenditure should play the key role. Public health expenditure on reproductive health and maternal and child care can be spent in an efficient way and disadvantaged groups can get access to these services easily. As long as allocation for the health related ADP will not be the dominant source of financing health care, it will be difficult to deal with the regional disparities in reproductive health services and to ensure the reproductive health of youth, especially the women's reproductive health.

The Goals in 7th FYP, 4th SWAp and SDGs

In 7th Five Year Plan, 4th Swaps and Sustainable Development Goals, achieving the goals of reproductive health is prioritised. Target is set to increase the life expectancy to 71, fertility rate to decrease to 2.0, maternal mortality rate to decrease to 105 from 170 and malnutrition to decrease to a satisfactory level. Public health expenditure is also proposed to increase over the years.

Investment necessary to harness the demographic dividend

However, evidence suggest that proper health related policies could increase the life expectancy to 76, and fertility rate can be decreased to a level which is less than the replacement level. Reducing child mortality rate to less than 15 and maternal mortality rate to less than 100 are important to ensure proper reproductive health. Under nutrition must be decreased substantially. Therefore, it is important to revise the targets set in the 7th FYP related to reproductive health services to ensure a higher life expectancy, lower fertility rate and lower maternal and child mortality rate to the levels in line with the developed countries.

These can be done by ensuring access to maternal and child care services by all mothers and children, by ensuring that all mothers using antenatal care and skilled attendants and that they give births in health facilities. It is also important to ensure universal coverage of contraception and increasing use of long-term methods. More funds must be available publicly to fight against communicable diseases.

To improve the reproductive health in order to harness the demographic dividend, public health expenditure must be increased 2/3 times than its proposed level at 7th FYP. Huge investment by the Ministry of Health and Family Welfare to improve the reproductive health of youth will effectively improve the health of the youth to the desired level and the country will be able to achieve the benefit in the form of demographic dividend.

Will the investment in reproductive health effect the other sectors?

Evidence suggest that countries invested for reproductive health to get the benefit of demographic dividend enjoyed huge growth. Huge GDP growth will make more revenues available for the government to spend in other public sectors. Investing in health is not only the right, it is also a very good investment in countries where demographic transition have been going on.

To sum up, Bangladesh has the potential to be a middle income country if it can accumulate the benefit of demographic dividend. To ensure the growth which may arise due to second dividend of demographic transition, a comprehensive policy including huge investment on reproductive health, especially by the government, are important. Experiences from developed countries suggest that health investment in Bangladesh is low and the scale of public investment is extremely low. Proper investment by the public sector on health care services can make the sector efficient and can effectively ensure a very good reproductive health of youth. In fact, public investment on reproductive health should be increased by two to three times to ensure the demographic dividend and to faster the economic growth of Bangladesh.



Introduction

Better Reproductive Health for a higher economic growth

Bangladesh has made great progress in improving people's health and achieving Millennium Development Goals related indicators. Under Health, Population and Nutrition Sector Development Programme (HPNSDP, 2011-16) mortality rate has declined further and health services have improved considerably (MTR, 2014)¹. However, still the gap with developed countries in terms of reproductive health, especially maternal, neonatal and child health, nutrition and family planning services are quite large and requires more attention. Economic growth is a function of several factors and technological aspects, but no doubt that number of healthy and skilled workers does also matter greatly. A better state of reproductive health will ensure more productive workforce as well as more workers, which in turn will accelerate the growth for sure, *ceteris paribus*.

Demographic Transition and Demographic Dividend

The boost in economic development resulting from increase in number of working population relative to the number of dependence could be referred as demographic dividend. A country like Bangladesh who is trying heart and soul to stimulate the economic growth to a magic level of 7 or 8 per cent, and graduate from the level of Least Developed Country (LDC) to Developed one, harnessing demographic dividend is vital. It is especially because of two reasons. First the country has already achieved a huge stock of young population through demographic transition, so transferring them into economically active work group would help to increase the overall production of the economy and hence economic growth. Secondly since the country already has shortage of resources and low investment – GDP ratio, decrease in dependency ratio which is a result of demographic transition will open the window of increased private saving that can in turn be transferred into investment to achieve a higher economic growth.

Reproductive Health

Reproductive health has been defined in a variety of ways in the literature. Most of them defined it focusing

¹ Daniels, D and Kabir, H (2014). Mid term Review (MTR 2014) of the HPNSDP, 2011-2016. Ministry of Health and Family Welfare. Final report, October 2014.

predominantly on physiological and fertility aspects while others went for a more holistic view. However, it is the WHO International Conference on Population and Development held in Cairo, 1994 where 165 countries have arrived a consensus view on reproductive health. The concept of reproductive health that the above mentioned platform actually has explained can be postulated as follows:

“Reproductive health is defined as a state of physical, mental, and social well-being in all matters relating to the reproductive system, at all stages of life. Good reproductive health implies that people are able to have a satisfying and safe sex life, the capability to reproduce and the freedom to decide if, when, and how often to do so. Men and women should be informed about and have access to safe, effective, affordable, and acceptable methods of family planning of their choice, and the right to appropriate health-care services that enable women to safely go through pregnancy and childbirth”.

<http://www.reproductive-health-journal.com/about/faq/whatis>

The state of reproductive health in Bangladesh is not quite unsatisfactory. The indicators to measure reproductive health such as life expectancy at birth, maternal and neonatal mortality rate, fertility rate, birth weight etc. suggest that the reproductive health state of Bangladesh is in par with the reproductive health status of the middle income countries and better than the average of South Asian Countries as well. Yet two areas of concern are, there are regional disparities, and the gaps with the developed countries are substantial; indicating there are scopes for more improvement in these areas. To improve the state of reproductive health of youth, more focused policies are required so as more investment.

Demographic Dividend and Reproductive Health

Demographic transition does not guarantee demographic dividend: demographic transition is an opportunity whereas demographic dividend is to be achieved. Demographic transition means decrease in fertility rate and mortality rate and increase in life expectancy which allows to have more people in working age, and also more women to participate in the labour force. However, to achieve the benefit of demographic transition, demographic dividend, a series of policies are required to be considered in the areas of education, employment, reproductive health and good governance. Especial focus should be on reproductive health which actually results better health state, more work days, more productivity and more women to participate in the workforce. Hence, reproductive health is not only to achieve the health related goals but also to ensure the fruit of the demographic transition that our country is going through.

In Bangladesh, proportion of youth is increasing in the total population and dependency ratio hence decreasing. Increase in life expectancy will impact the country in coming years. To reap the benefit of these changes a handsome investment in focusing on reproductive health of youth especially the women is utmost important.

Vision 2021 and 2041

Over the past few decades, Bangladesh has made remarkable progress in raising incomes, reducing poverty and improving social indicators. The Government's Vision 2021 has set several economic and social outcomes to be achieved in next six year. Through the implementation of Sixth Five Year Plan (6 FYP, 2011-15) and Seventh Five Year Plan (7 FYP, 2016-20) these long-term development targets would be achieved. However, the rate of growth required to become the middle income country requires demographic dividend in addition to the growth to be achieved through growth focused strategies. Demographic dividend in East Asian countries has played a great role in their economic growth. Study shows that 1-2% growth can be achieved ensuring demographic dividend. Under the 6th FYP solid progress has been made in reducing poverty through a strategy of pro-poor economic growth. Now 7th FYP can lead us the desire path of growth. Though the importance of reproductive health and policies targeting reproductive health are well recognized in both 6th and 7th FYP, to get the best from the demographic dividend, more focus, financing and hence investment is important for reproductive health, especially targeting those who are youth.

MDGs to the SDGs

From September 2015, the United Nations' focus is to achieve Sustainable Development Goals (SDGs) were adopted by world leaders in New York on the 25 September 2015. The SDGs and the 2030 Agenda for Sustainable Development articulates an ambitious set of targets aimed at transforming the world by ending poverty, hunger and inequality, taking action on climate change and the environment and improving health and education. SDGs are directly or indirectly related to the reproductive health and other aspects to achieve the demographic dividend by ensuring quality education, health and employment for all.

- **Demographic transition in Bangladesh can be utilized to harness the demographic dividend.**
- **Demographic dividend is not automatic, policies are to be taken to achieve the benefit of demographic dividend.**
- **A good state of reproductive health can lead to a more productive workforce as well as can increase the number of workers leading to the path of achieving the demographic dividend in economic growth.**
- **About 1%-3% GDP growth can be ensured through the optimum level of demographic dividend.**
- **Reproductive health and demographic dividend are important for vision 2021 and 2041 and to attain SDGs**

The State of the Nation's health

MOHFW adopted the 3rd SWAp in 2011, Health, Population and Nutrition Sector Development Programme (HPNSDP), to strengthening health systems and improving health, nutrition and family planning services. During this period the Government of Bangladesh adopted its 6th FYP which was developed prioritizing the achievement of MDGs by 2015. In October 2014 MOHFW and Development Partners conducted Mid Term Review (MTR 2015) of the program. Progress report of the 6th FYP is also now available.

From MTR 2014 and the progress report of the 6th FYP it is evident that good progress has been achieved in maternal, neonatal, child, reproductive and adolescent health; and population and family planning services, in primary healthcare provision and informing people about health issues; all these are related to the reproductive health of the nation. Bangladesh reached the target for MDG 4 on under five year old mortality and was on-track in achieving many of the other MDG targets due to be achieved by 2015. MTR observed that significant progress has been achieved across several key health, nutrition and population outcomes, as further evidenced by the findings of successive Bangladesh Demographic and Health Surveys 2014 (BDHS 2014). According to MTR 2014, Fertility rate is around 2.3 births per woman and it is moving towards the replacement level of fertility gradually, though there are regional disparities to be addressed. As of 2014, 62% of women are using contraception and 54% using a modern method (BDHS 2014). Neonatal mortality rate is 24 per 1000 live birth. Between 1990 and 2012, under-

Table 1: Key Demographic, Health and Economic Indicators for Bangladesh

Indicator	Base Year (2010)	Progress under 6 th FYP 2015	7 th FYP 2020
Population	150.5 million (2011)		167-171 million
Population growth rate	1.4	1.37	1
Sex ratio	102.3	2010	
Life expectancy at birth	70.4 (2013)		72
TFR	2.7	2.11	2.0
Infant Mortality rate (per 1,000 live birth)	50.73	38 (2014)	20
Maternal Mortality rate (per 100,000 live births)	194	170 (2014)	105
Contraceptive Prevalence rate	60	62	75
Unmet need for contraception	17	12 (2014)	10
Percentage of children received full immunization	87	84	100
GNI per capita (in US\$)	843	1314	2009
HDI ^α	.469	2010	
Head Count Poverty (%)	31.5	24.8	18.6
Adult Literacy Rate	55	57.2	100
Employment to population ratio ^α (Percentage of population age) (15-64)	67.9	2008	

Sources: World Development Indicators (World Bank database) 2015; United Nations, 2015, 7 FYP of Bangladesh

five mortality decreased by 73 percent. Current under-five mortality rate is 46, against the target of 48 per 1000 live births in 2015. The infant mortality rate is 38 deaths per 1,000 live births, and the child mortality rate is 8 per 1,000 children. About 81% of children aged 12 - 23 months received all scheduled vaccines by 12 months of age. All of these are indicating our movement towards a state of very good reproductive health.

National Health Sector Policy Framework and Reproductive Health

National health policy 2000 emphasised on client centred reproductive health. The revised National Health Policy 2011 acknowledged 'health' as a right. The strategic directions and objectives of the new 4th Sector Programme are closely aligned with the overarching economic and social development objectives of the government. The 4th SWAp will be followed by three successive SWAs for realising the health targets of SDGs by 2030. This 4th Sector Programme (HNPSIP) is consistent with GOB's 7th FYP and its policy framework. The 4th SWAp is developed based on the experiences gained:

- From the GOB's 6th FYP
- Goals in 7th FYs
- Vision 2021
- government's political commitment for 2041
- National Health Policy, National Population Policy, Drug Policy
- Millennium Development Goals (MDG) experience
- New Sustainable Development Goal (SDG) targets
- Universal health Coverage (UHC) framework and GOB policies and strategies related to health and well-being

In addition, 4th SWAp has also prioritised the inevitable consequences of demographic changes as well as reproductive health issues of the youth.

²UN World Population Monitoring 2002- Reproductive rights and reproductive health: selected aspects.

Challenges and Issues for the 4th Sector Programme and Reproductive Health

The MTR (2014) concluded that while achievements against some of the MDG indicators were good, there were areas which required more attention. There are areas where quality and accessibility of health, family planning and nutrition services are not efficient. Rapid rise in non-communicable diseases are not addressed. Governance and stewardship are the areas also require more attention and investment. Expanding access to services through public and private sector providers continues to be a challenge.

In tackling demographic challenges regional disparities should be addressed, for example, in Sylhet TFR is 3.1/CPR 45% where as in Khulna TFR is 1.9/CPR 67%. Average looks good like the statistician whose head in oven and leg inside fridge. Early age of marriage, teenage pregnancy, high caesarean section are also areas requiring more attention and investment. More investment are required in the areas of maternal and child health, to universal coverage of family planning and to increase the use of long-term method of contraception, to fight with non-communicable diseases related to reproductive health, to address the regional disparities in the fertility rate, to reduce the complications of the women aged 15-49 during pregnancy etc.

Background for the study

Improving reproductive health (RH) is not only a key component of social and economic development but plays important role to materialize demographic dividend. 179 countries signed the Program of Action (PoA) to ensure the access to reproductive health services by all in the International Conference on Population and Development (ICPD) held in Cairo in 1994. Though the RH was not an explicit Millennium Development goal (MDGs) but acknowledged its significance for development, fighting poverty, and meeting the MDGs.

Bangladesh has a goal to be a middle income country by 2021 and it has the potential to do so if it can materialize its growth potential through demographic dividend: additional growth that can be achieved using demographic dividend. To get the benefit of demographic dividend a workforce with a very good health state is essential for which reproductive health services are essential. Though Bangladesh was a signatory of the ICPD, it did not address the RH explicitly for several years and when addressed, financing was not at the desired level. The importance of RH is recognized by the Government of Bangladesh (GoB) in last few years and in Seventh Five Year Plan (2016-20) RH is well recognized. Ministry of Health and Family Welfare, Planning Commission and Development Partners have been working together for better state of RH and recently the focus has turned to the demographic dividend which is to be earned through proper policies targeting education, employment and RH. Therefore, it's important to assess the current state of RH, and current financing for RH, to implement proper policies targeting RH and to estimate investment necessary for RH targeting youth with an objective to ensure the demographic dividend.

- Achievements of Bangladesh in the areas of health and reproductive health is praiseworthy
- Government's 6th FYP, 3rd SWAp, other health policies have played great roles in achieving these success.
- But there are areas remaining to be addressed: regional disparities in fertility rate, universal use of contraception yet to be achieved, maternal and child mortality rates are still high compared to the developed countries, use of maternal and child care services are not up to the mark, complications of the youth during pregnancies are still very alarming.
- 7th FYP and 4th SWAp are under processing and addressing many of these key issues including the demographic changes.
- However, to achieve a potential 1-3% additional growth through demographic dividend requires more focused policies in several areas including reproductive health.
- More priorities should be given and goal based policies should be adopted through 7th FYP and 4th SWAp and to be included in the consecutive FYPs and SWAp.

Objective of the study

The objective of this study is to assess the Reproductive Health and Family Planning in Bangladesh to achieve the potential demographic dividend.

More specifically, this study aims to:

- Develop the link between demographic dividend (DD) and reproductive health (RH) and to study some country experiences
- To assess the demographic transition and the potential of DD in Bangladesh
- To assess the current state of RH status and financing
- To review the 7 FYP targeting the policies and financing in RH
- To address the investment necessary for RH based on demographic dividend and gaps in policies and financing in 7 FYP in terms of actual requirements.
- To develop a framework suggesting possible policies for RH state and financing in Bangladesh targeting demographic dividend.

Methodology

The study is based on secondary data and literature review. The data are taken from World Bank website, World Health Organization Website, Bangladesh National Health Accounts, 6th Five Year Plan, 7th Five Year Plan, and Health Sector SWAp. National and international publications including the publications from Ministry of Health and Government of Bangladesh are reviewed for the report. Consultation is done with some key academicians working in this sector.

Organization of the report

The report has been structured in 7 chapters. Second chapter explains the concept and relevance of demographic dividend and priority areas to achieve demographic dividend. Third chapter presents the state of demographic transition and reproductive health in Bangladesh. Chapter 4 presents the state of reproductive health financing over time. Chapter 5 presents a summary of achievement so far and reviews the policies proposed in Seventh Five Year Plan targeting reproductive health. Based on the review and findings last chapter proposes policies and targets regarding investing in reproductive health for the youth to achieve demographic dividend.

Future Scopes:

Given more time and budget the study could estimate the exact amount of investment required to harness the demographic dividend. This could be done by collecting data and relevant policy documents from other countries which addressed and achieved the demographic dividend. Econometric analysis of such data and measuring the elasticity of growth with respect to investment can give a clear picture about the necessary investment from the public sector and how that will cover the gaps in the investment in other sectors over the years. Given additional time and fund, primary data can be collected about the reproductive health status and behavior of youth of Bangladesh which will be helpful to address the health policies at micro level. At macro level, allocation of budget over the years in Bangladesh and in other countries can be reviewed and analyzed to get a clear picture about the scopes for more investment in the health sector, and its impact on the other sector. Moreover, the effect of higher growth on GDP due to demographic dividend can be decomposed from the total growth and over the years GDP growth due to growth in additional investment in health is possible to measure. The scopes are there to estimate the effect on tax and revenue of the government from different sources due to the impact of demographic dividend and in which level this additional revenue of the government can mitigate the budgetary pressure due to higher investment.

Summary

Last few decades Bangladesh has been experiencing demographic transition which has been leading to a decrease in dependency ratio.

Bangladesh has the huge potential to transform this demographic transition to demographic dividend, especially in the form of higher productivity of labor, more workforce, and generation of more savings and formation of capital.

By taking integrated policies including health policies targeting reproductive health Bangladesh has the potential to increase its GDP growth to 8-9%.



Demographic Transition and Demographic Dividend

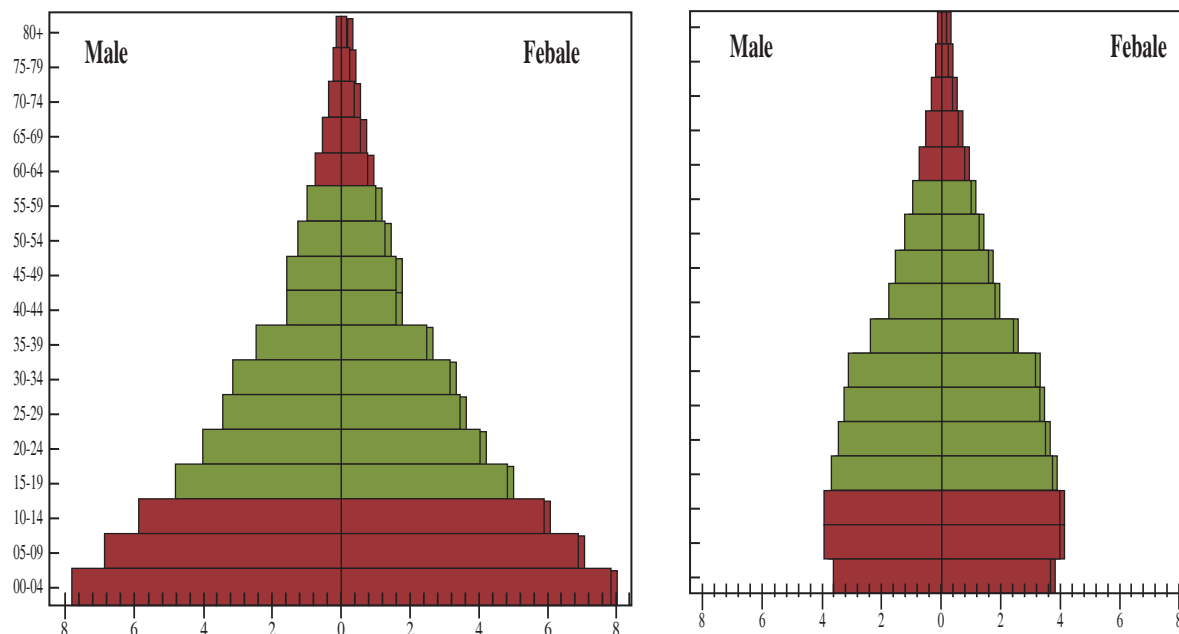
Demographic dividend is a consequence of demographic transition. It refers to rapid economic growth resulting from (John Ross, 2004):

- falling birth rate and falling mortality rate that change in the age distribution,
- fewer investments are required to meet the needs of the youngest age groups,
- releasing resources for investments in economic development and family welfare
- increase in the size of working age population and reduction of the dependency ratio

The large number of youth people because of demographic transition can put pressure on schools, labor markets, and services. However, declining dependency ratio allows for increased investment in education and family welfare (Mattias L and David L, 2007). Because of the demographic change, number of working people increases and they can be more productive. The dividend that we can earn due to demographic changes causing more youth in the societies is called the demographic dividend.

For demographic dividend (DD), demographic transition is a necessary condition, but not sufficient. Demographic transition ensures more youth and greater workforce, but whether we can reap the benefit of this transition depends on the policies undertaken.

Figure 1: Population Pyramids Before and After Demographic Transition



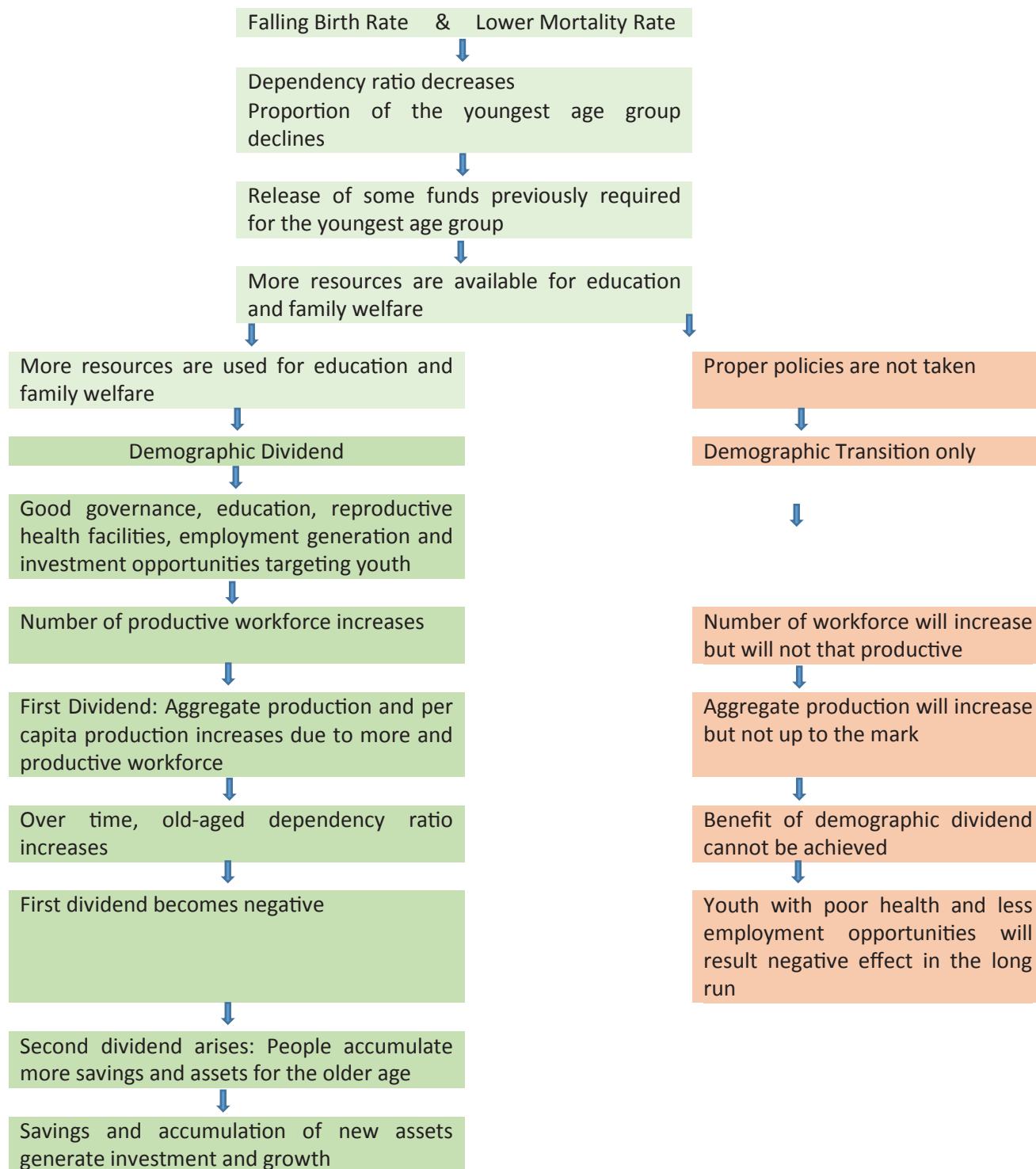
The above pictures show an example of demographic transition. Because of the transition, proportion of population in the youngest group has declined and proportion of working people has increased. This offers the society to reap the benefit of demographic transition by implementing proper policies targeting the youth. As youngest group has declined in size, this offers an opportunity to release some fund previously required for them which can be used for the reproductive health of youth and family welfare. In addition, if proper policies related to employment, investment and governance can be undertaken, then demographic transition can lead to demographic dividend for the society by ensure higher aggregate production as well as aggregate per capita production.

Stages of Demographic Dividend:

The stages of demographic dividends are as follows:

- Falling birth rate
- Lower Mortality Rate
- Proportion of the youngest age group declines
- Dependency ratio decreases
- Release of some resources required for the youngest age group
- More resources are available for education and family welfare
- Number of workers increases
- Productivity of workers increases due to better education
- Female participation in the workforce increases due to smaller family size
- First dividend and the transitory bonus: arises due to increased work force
- Over time old age dependency ratio will increase which will require more resources to take care of those who are older and in retirement age.
- Second dividend and sustainable development: a nation with more older people has an incentive to accumulate more assets
- All of these lead to a higher aggregate production as well as a higher per capita production
- The outcomes are not automatic but depend on appropriate policies to harness the demographic dividend.

Figure 2: Schematic Flow Chart of Transition Stages and Emerge of Demographic Dividend



The Effects of Demographic Dividend:

Demographic dividend typically has three direct effects which cause several indirect effects through economic multiplier:

1. Demographic Dividend and Factors of Production:

Let us assume that the aggregate production function is a Cobb-Douglas production function: $Q = AK^aL$

Where L is labor and K is all other resources available in the economy. A is the technological parameter representing the level of technology available in the society.

For a developing country which is going through demographic changes, in general resources are underutilized at initial stages because of lack of workers. Though population might be higher, because of a very high dependency ratio, and therefore less participation of the women in the labor force, results a labor force much less than the optimal. Suppose the Cobb-Douglas Production function representing aggregate production is as follows for a developing country going through demographic transition: $Q = AK^aL$

Where $K^* < K$, the use of resources are less than the available resources due to less than optimal number of workers.

Clearly, increase in labor force due to demographic change will result increase in production as well as increase in per capita production. This will happen in several ways given that proper policies are undertaken:

1. Number of workers will increase due to demographic changes
2. Smaller family size will encourage women to participate in the labor force.
3. More educated and trained workforce will be involved in the production process which will increase the productivity of the labor force.
4. As number of workers as well as productive workers will increase, use of resources will also increase, and will increase at greater rate.
5. All of these will lead to a better use of resources and higher level of aggregate production as well as per capita production.

The first dividend is the increase in per capita income due to larger workforce and higher productivity. Hence demographic transition leads to a more productive use of all resources.

2. Demographic Dividend and Consumption and Savings:

Due to higher per capita production, per capita income will also rise. This will increase consumption which will increase production through multiplier effect. Increase in production will also lead to an increase in the level of savings and investment.

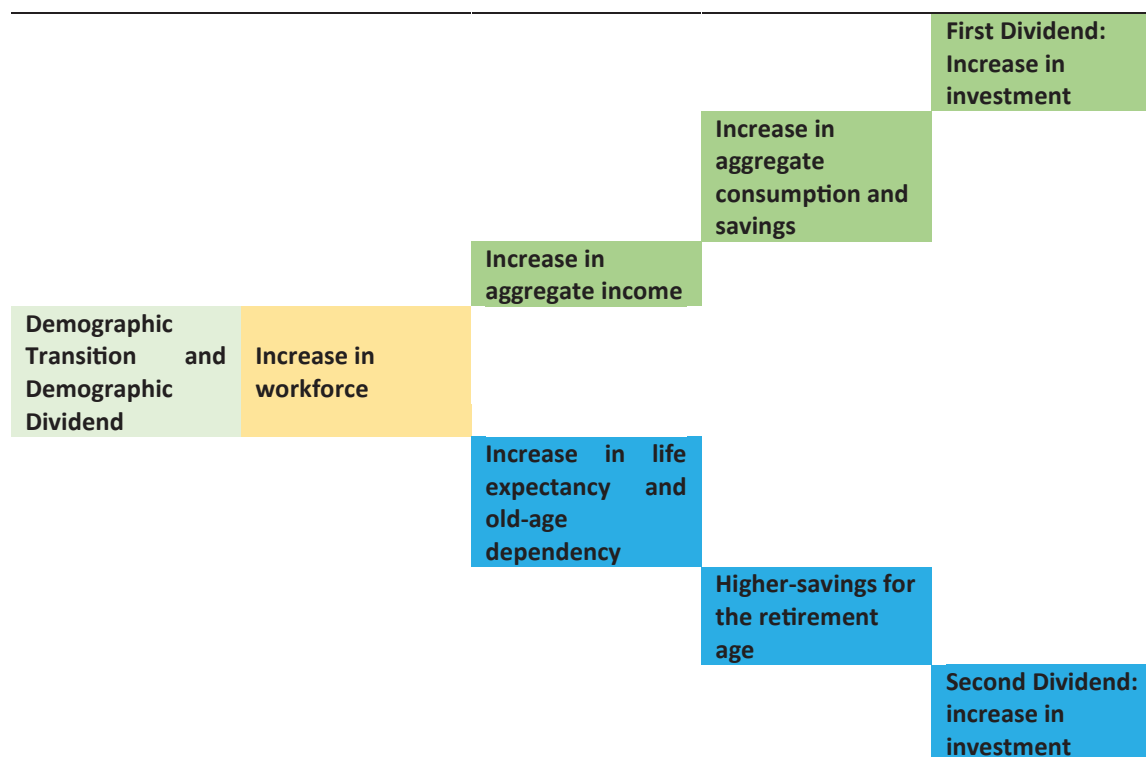
The aggregate production function is:

$$Y = C + I + G + X - IM$$

Where, Y is aggregate production, C is consumption, I is investment, G is government expenditure, X is export and IM is import

Using simple calculation it can be shown that increase in aggregate income will lead to an increase in aggregate consumption, which in turn will lead to an increase in aggregate production further (Blanchard, 2010). Increase in aggregate income and aggregate consumption will also increase aggregate savings. Higher aggregate savings will flow to the economy through financial market in the form of investment.

Figure 3: Schematic Flow Chart on the Effect of Demographic Dividend



Savings will also generate through the second dividend of demographic transition. Due to a higher life expectancy, over time the old age dependency ratio will increase. This will lead to a higher level of savings by the working people for their retirement age. However, their savings will be used in the economy through the financial market (Ronald Lee and Andrew Mason, 2006). Due to increase in aggregate income and aggregate savings, investment will increase automatically. Savings and investment will increase further as over time people will save more for their retirement age due to higher life expectancy. This is called the second dividend of the demographic transition which can be accumulated.

3. Demographic Dividend and Human Capital:

Demographic transition has significant effects on investments in human capital. Parents choose to educate their children to more advanced levels. Educational investment makes the labor force more productive. Wages increase and standard of living improves. Bloom (2002) finds that women and men tend to enter the workforce later as they are likely to be more productive once they start working. Demographic transition and investment to ensure demographic dividend, therefore, results higher level of human capital in the society.

Thus, in a nutshell:

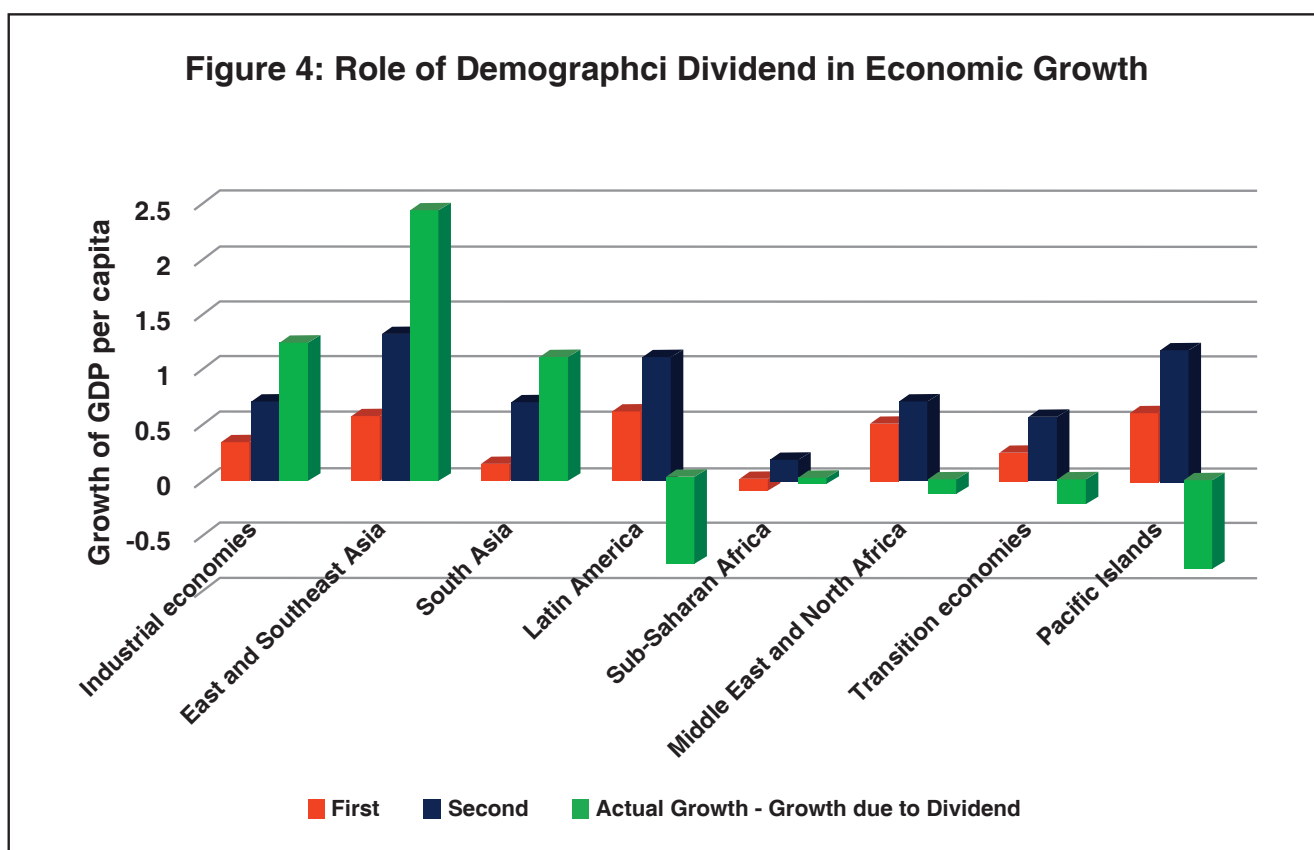
- Demographic transition and demographic dividend will increase productive workforce as well as number of workers.
- Initially the benefit of demographic dividend will come in the form of first dividend: higher product due to more workers and higher productivity
- After a period, the benefit of demographic dividend will come in the form of second dividend: higher capital due to higher savings by the people for their older age.
- Policies focusing demographic dividend will also lead to more human capital in the economy who are more educated and technologically superior.

- For a country like Bangladesh impact of increasing human capital can lead to a very sharp growth: skilled people will go abroad and remittance earnings will increase sharply.

Role of Demographic Dividend in Economic Growth

Countries which addressed demographic transition credibly to harness the demographic dividend, have enjoyed better growth. Between 1970 and 2000, industrial countries enjoyed 50% of their growth from demographic dividend. More than 1.5% of the growth in East and Southeast Asian countries came from demographic dividend. This growth led the huge growth of these countries during the period to emerge as developed countries. These countries also ensured economic growth from other forms, for example adopting new technologies and market based policies, infrastructure development etc. In Latin America and Middle East, the marginal growth the countries enjoyed were simply due to demographic dividend.

South Asian Countries experienced little growth in all forms of growth and could not capitalize the demographic transition the countries enjoyed. The potential of these countries were much higher, both in terms of demographic dividend and other growth potentials. Achieving second demographic dividend could make more capital available in these countries which could accelerate the growth of these countries to their potential level of growth.



Source: Andrew Mason, 2005, "Demographic Transition and Demographic Dividends in Developed and Developing Countries," United Nations Expert Group Meeting on Social and Economic Implications of Changing Population Age Structures (Mexico City). Actual growth in GDP per effective consumer (GDP/N), 1970–2000, in percent a year.

Key Policies to Harness the DD

First of all, as initially proportion of youth will increase due to demographic transition, the policies should have greater focus on the youth: their health, education and employment.

Invest in Health:

- Reproductive health and family planning for the youth
- Child survival
- Health system strengthening
- Ensuring that infants receive good medical care
- Protecting women's reproductive health
- Focusing on low-income populations with public sector programs.
- Appropriate policies to control HIV/ AIDS
- Appropriate policies regarding unsafe abortion and pregnancy

Quality Education for All:

- Higher education
- Labor market based training
- Proper curriculum
- Girls' education

Economic Policies for Job Creation, Use of Resources and Higher Investment:

- Modernized labor market with appropriate incentive
- Job creation for all
- Policies to encourage trade
- Policies to encourage investment
- Competitive private sector
- Higher public expenditure for the youth at the beginning but over the time reduction of government public expenditure as a proportion of private expenditure

In addition the following areas should be prioritized:

- Transparency and accountability
- Human rights and democracy
- Gender equality
- And fight against corruption

Summary:

Bangladesh has been going through demographic changes. Dependency ratio has been decreasing whereas life expectancy currently stands at 70.6.

Demographic transition creates opportunity to release fund from child care which can be used for providing quality education and a better reproductive health. Due to low fertility rate, women can also participate in productive activities. All of these lead to increase in workforce as well as the productivity which in turn increase the GDP.

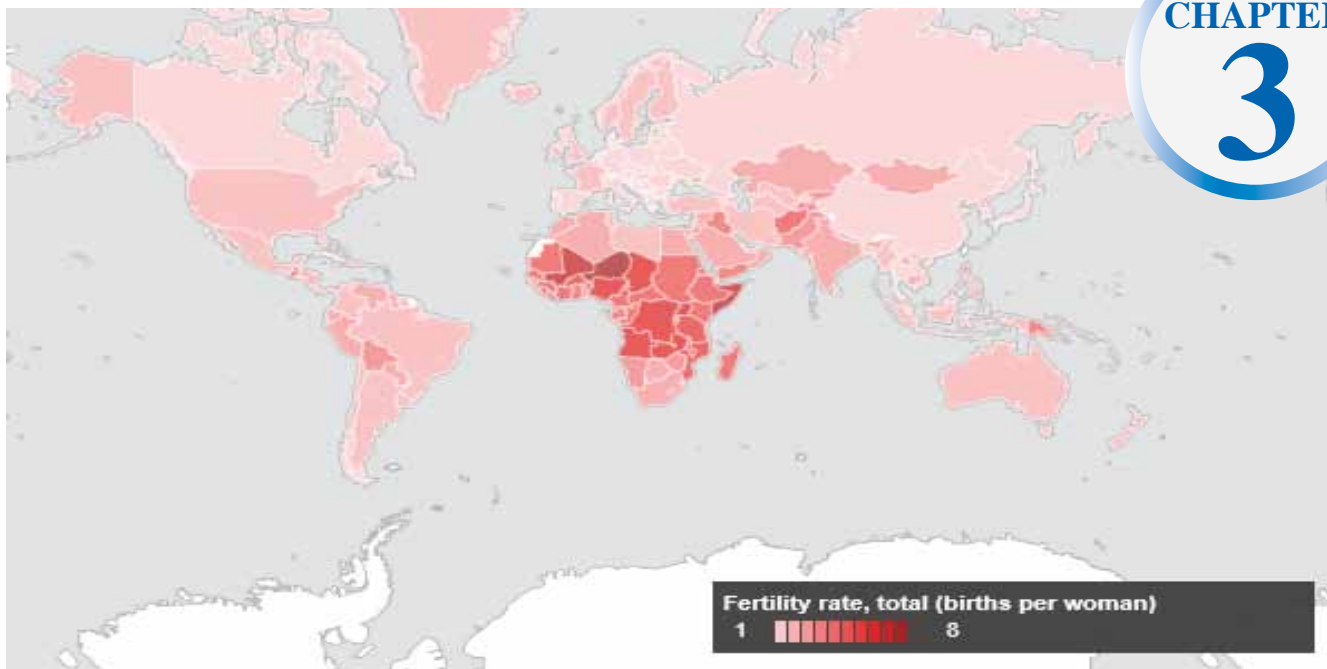
However, over the years, the first dividend, which appear in the form of more workforce, disappear, and more care is required for the older people.

In such case, the opportunity is to increase the savings by the workforce for their retirement age which can be helpful for accumulation of new capital.

To get the full benefit of second dividend in the form more savings and capital, it is important to ensure the youth to have very good level of education, health, productivity and employment.

South-East Asian countries and other developed countries which went through demographic transition, took the benefit of second dividend by taking integrated policies including education, health and employment.

Bangladesh has also the potential to use the demographic transition effectively to ensure a higher growth. To reap the benefit of demographic transition in the form of second dividend, in addition to quality education and favorable employment policies, Bangladesh must ensure the reproductive health of its youth.



Source: World Bank Website, 2015

Demographic Transition, Youth Population and State of Reproductive Health in Bangladesh

Demographic Transition in Bangladesh:

As defined in the standard literature “demographic dividend” indicates the experience of rapid economic growth of a country that results mainly from “demographic transition” which by definition is the movement of status from high fertility and high mortality to low fertility and low mortality. Because of this declining trend in fertility and mortality rates there opens a window of opportunity for the country to achieve faster economic growth and human development subject to the presence of effective policy. The channels through which demographic transition helps the country to get the dividend in the form of economic growth and human development could be three. One is labor supply, the second is improvement in saving and the final one is human capital development. For instance because of transition the volume of working age population could be accelerated and provided that they have enough working opportunity production increases¹ that in turn enhance the economic growth. During the transition period there would also occur a redistribution of resources from household expenditure to the investment in economic development because of declining trend in age dependency ratio. Again as the family size will become smaller, probably women has to spend much lesser time in household works and have the opportunity to involve themselves in the mainstream workforce of the economy. The demographic transition can also provide the dividend in the form of increased saving. As income of the people would increase due to decrease in age dependency ratio and also for becoming member of active workforce, the personal savings would also be amplified.

With the presence of proper policy support these enormous savings can be transmitted into investment which will eventually stimulate economic growth further. It is well established that human capital investment would be

¹ Following Cobb & Douglas (1928), a production function can be expressed as $Y = AK^{\alpha}L^{1-\alpha}$ where K stands for capital and L for labor. Assuming that marginal productivity of labor is positive the total production will be increased if there is increase in labor force along with sufficient working opportunity and capital availability.

further increased due to demographic transition which will materialize the dividend in the form of economic growth². As life expectancy at birth increases in transition period attitude of people towards education, health and other socio economic issues for their family members also changes. They become keen to provide better education to the members irrespective of their gender and also become more health conscious. All these contribute in the human capital development which is on the other hand already established as an important determinant for growth.

The experience of East Asian countries could be mentioned here as the example of achieving high economic growth as a direct result of demographic dividend. In East Asia demographic transition occurred during 1950s and 1960s. Increasing trend in investment in youth and access to family planning resulted in smaller family size during the transition time. Due to dropping off fertility rate resource redistribution was possible which lead to increase in investment in infrastructure. Thus the countries have experienced handsome economic growth which would not have been taken place had they not been go through the transition.

The above figure contains a hypothetical projection of real GDP for Bangladesh under different scenario. It can be argued that if the current level of efficiency is maintained by the economy with the existing policy along with slow progress in economic development and demographic transition then the GDP projection trend would become the green one. However if the country gave more emphasis on economic development and made modest family planning and educational investment then GDP projection trend would follow a near exponential trend. If family planning and educational investment are prioritized along with the economic development then the GDP projection trend could possibly become exponential as shown by the red curve.

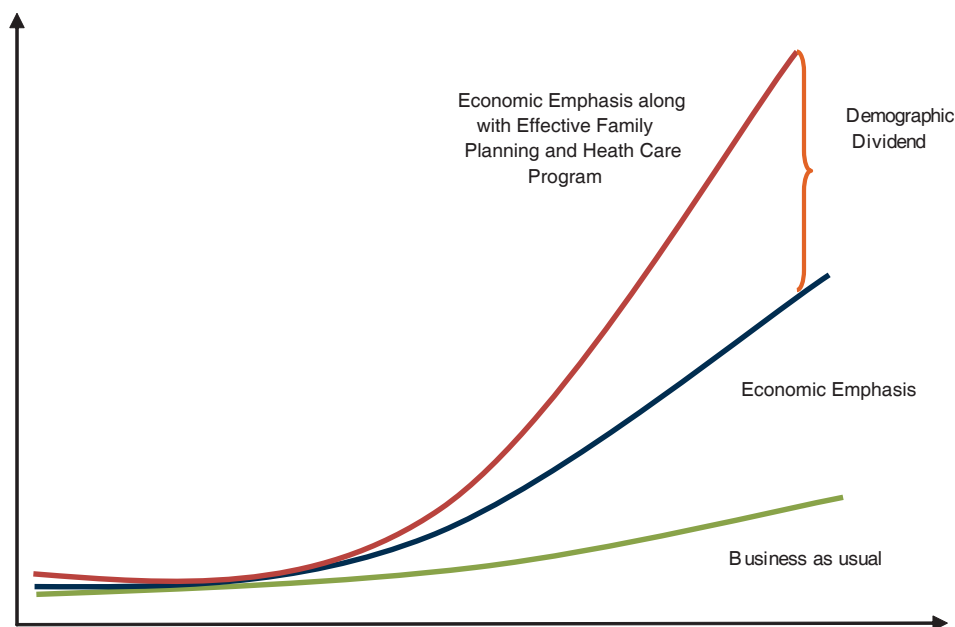
Bangladesh has been experiencing rapid demographic changes in last few decades and it will continue.

Dependency ratio will continue to decrease, proportion of youth will increase, and however, old-age dependency ratio will also increase.

The benefit of first dividend of demographic change will disappear soon as we will need more fund for the care of older people.

It is the second dividend for which we should now set our policies.

Figure 4: Potential Growth Opportunities in Different Scenarios



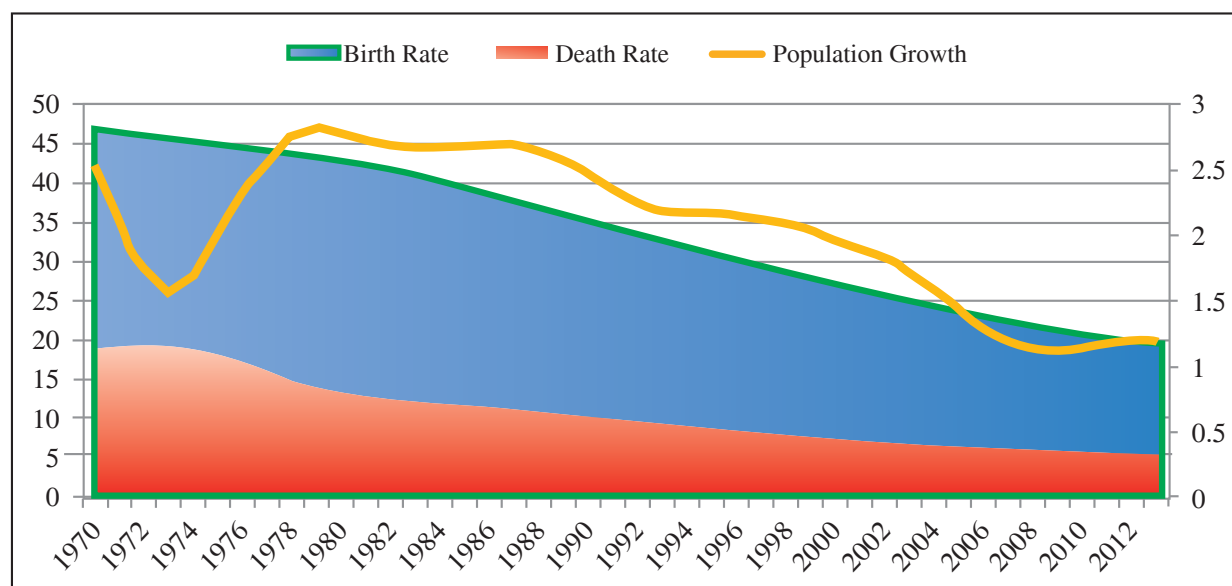
Justification of Demographic Dividend: Case of Bangladesh:

The boost in economic development resulting from increase in number of working population relative to the number of dependence could be referred as demographic dividend. A country like Bangladesh who is trying heart and soul to stimulate the economic growth to a magic level of 7 or 8 per cent and graduate from the level of Least Developed Country (LDC) to Developed one harnessing demographic dividend is vital. It is especially because of two reasons. First the country has already achieved a huge stock of young population so transferring them into economically active work group would help to increase the overall production of the economy and hence economic growth. Secondly since the country already has shortage of resources and low investment – GDP ratio, decrease in dependency ratio which is a result of demographic transition will open the window of increased private saving that can in turn be transferred into investment to achieve a higher economic growth.

It has already been mentioned that opportunity of demographic dividend arises after demographic transition takes place. During transition birth and death rates reach from a high level to low and since conventionally death rate falls before birth rate there occurs a rapid population growth. At early years of transition though dependency ratio tend to increase, in the successive years because of falling fertility rate the ratio also follows a decreasing trend. As a result there will be structural change in the age distribution of people in the economy which is popularly presented using the graphical tool named population pyramid. In particular the shape of population pyramid during transition period should change from an “expanding” to “stationary” one.

Figure 6 contains the demographic transition for Bangladesh. The figure depicts the trend of crude birth and death rate and annual population growth rate. It can be observed that both the birth and death rates have been decreasing over the years. In 1970 birth rate and death rate was 47 and 19 per 1000 population respectively which declined to 20 and 5 during 2013. The rate of decline in birth rate has been observed to be sharper than that in death rate since mid 80's. As a result during that time the population growth was rapid. However the difference between these two rates was decreasing gradually since the recent past resulting in a decreasing trend of annual population growth towards a low level. Therefore it can be argued that Bangladesh has been going through the demographic transition at advance level, nonetheless it is yet to be completed.

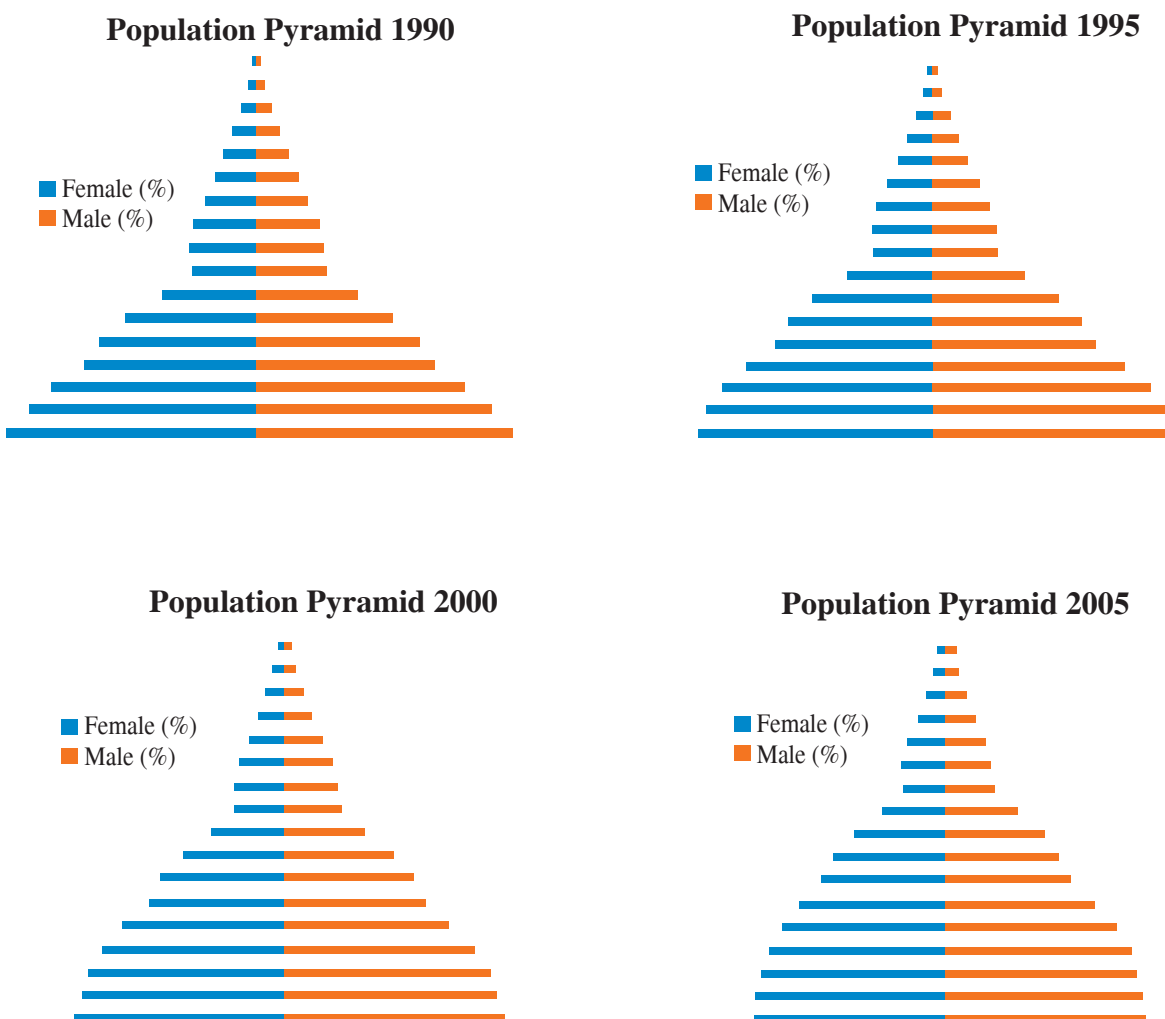
Figure 5: Demographic Transition in Bangladesh since 1970



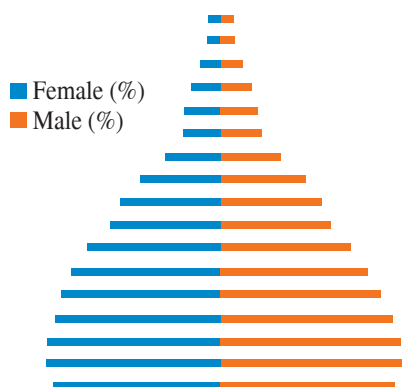
Source: World Development Indicators (WDI), 2015

Figure 7 contains the population pyramids of Bangladesh since 1995 for every after 5 years which had undergone through significant changes in pattern due to the aforementioned demographic transition. It can be clearly observed that the age sex distribution of Bangladesh's population had an expanding pyramid shape at 1990. Almost 42 per cent of the total population was under 15 of age and around another 3 per cent was above age 65. Thus, a total of 45 per cent people were actually dependent on the rest 55 per cent during 1990. In the early 90's actually the country has started to experience the change in age sex distribution which results in the changing pattern of population pyramid during year 1995. In that year the total population aged under 15 was calculated to be almost 40 per cent (2 per cent less compared to the year 1990) while the total population aged above 65 found to be still around 3 per cent. Therefore the economically active group of people who is taking the burden of inactive group was actually increased by about 2 per cent from 1990 to 1995. The changing pattern of age sex distribution of population has been continuing during late 90s as well. As the population pyramid of Bangladesh for year 2000 shows, the total population aged less than 15 was counted to be 37 per cent (3 per cent less than year 1995) and that aged above 65 was 4 per cent (1 per cent more than year 1995). Again in a "net" sense the economically active working group was actually increased by 2 per cent during five year period. According to population pyramid for the year 2005 the total population aged less than 15 was dropped off by 3 per cent compared to the year 2000 to become 34 per cent of

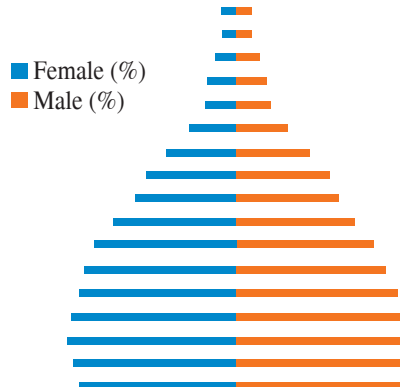
Figure 6: Dynamics of Population Pyramid in Bangladesh Since 1990



Population Pyramid 2010



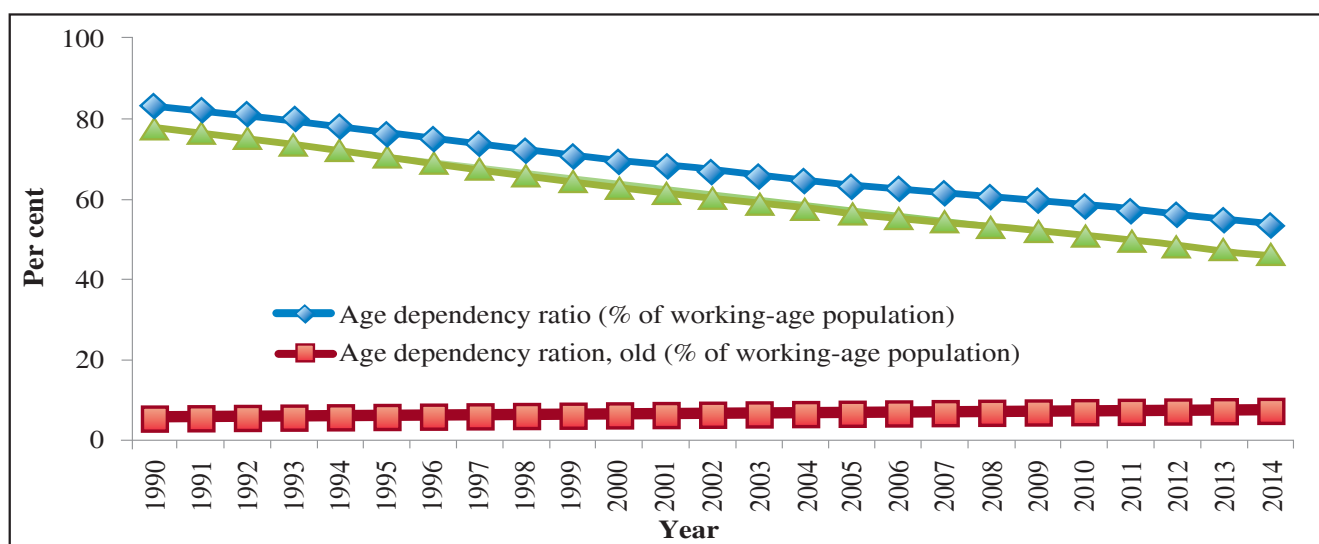
Population Pyramid 2014



the actual population. On the other hand the share of population aged above 65 in the total population remained more or less constant at 4 per cent as before. Thus by the end of year 2005 the share of economically active work force in the total population increased further and stood roughly at 62 per cent. In the next five years share of population aged less than 15 in the total population reduced to 32 per cent while that for population aged above 65 raised to 5 per cent causing a net 1 per cent increase of working age population to become as high as 63 per cent. The decreasing trend of the share of population aged below 15 has been found to remain consistently continuous. By the end of year 2014 it decreased further 2 per cent to become 30 per cent of the total population while the share of population aged above 65 remained around 5 per cent as before. Thus, during 2014 the share of economically active population was calculated to be around 65 per cent. It can also be observed from the changing pattern of population pyramid for Bangladesh from year 2005 to 2014.

Figure 8 contains the trend of age dependency ratio for total population, young and as well as old age population for Bangladesh since 1990. It is evident from the figure that though the ratio of older dependents have remained to some extent constant over the years, the burden of younger dependents on the working age population has been decreasing. These characteristics were also found in the analysis of shifting pattern for the demographic pyramids of Bangladesh. As a result the overall age dependency on the working age population has also been decreasing. Therefore in Bangladesh the decreasing trend in dependency ratio is actually the consequence of decreasing trend in the ratio of younger population (usually age less than 15) to the working age population (usually age 15 to 64) which is a direct result of demographic transition.

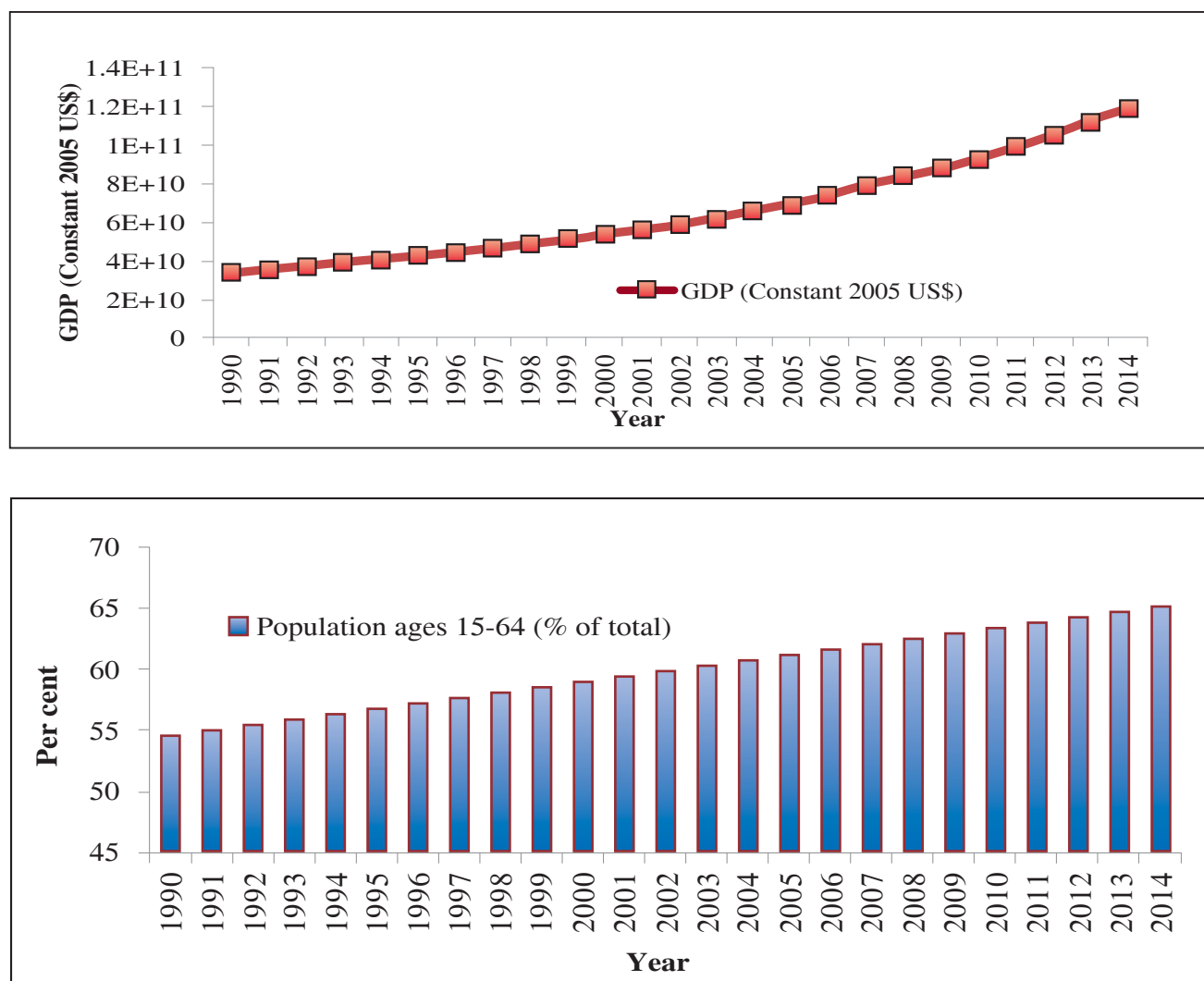
Figure 7: Trend of Age Dependency Ratio in Bangladesh



ource: World Development Indicators (WDI), 2015

From the above discussion it is pertinent that the economically active working group is increasing in Bangladesh which potentially can be treated as vital for stimulating economic growth especially for two reasons. First, an economy like Bangladesh where capital is scarce and labor is abundant addition of working age people in the labor force will lead to decrease the cost of labor further resulting a decline in production cost and improvement in the competitiveness of the country. Secondly if increase in labor force can be accompanied by improvement in their efficiency through proper educational and health care support then it could bring a miracle for the country. Because then Bangladesh would possibly become the least skilled labor cost country in the world, for which domestic production will increase as well as the foreign investors will become interested to make investment here. The economy could also earn a huge amount of foreign currency by exporting skilled workers. Also the effective participation of women in labor force will bring a significant portion of the inactive people in the economy in mainstream income earning group.

Figure 8: Trend of Real GDP, Working Age Population and Total Labor Force in Bangladesh





Source: World Development Indicators (WDI), 2015

Figure 9 presents the trend of real GDP, percentage of population age between 15 to 64 and total labor force since 1990 for Bangladesh. It is evident from the figure that real GDP of Bangladesh has grown about 246 per cent to reach at 118951694303 during 2014 from a level of 34309376331 during 1990. During 90's the real GDP was growing at a moderate rate while since 2000 it started accelerating almost at an exponential rate. The trend of economically active working age population and also the total labor force shares almost a common increasing trend. Thus it is justified that the economic growth of the economy along with all other factors also depends on the labor force accumulation. It has emerged as a vital component of economic growth in Bangladesh as the country is labor intensive.

If the increase in working age population along with labor force is continuous in the future then the exponential increasing trend in real GDP will also be present here. However, the outcome is conditioned upon the availability of sufficient employment and also the improvement of education and health status of the potential youth labor force. The reproductive health care seeking behavior is an important determinant of health status especially for the women. Although the causal relationship between reproductive health improvement and socio economic development has always been difficult to establish it is true that reproductive health and population dynamics does contain impact on economic growth and poverty reduction through a number of pathways. For example improved reproductive health services would result in a reduction in the number of births per women as well as reduction in mortality and morbidity risks faced by women in their reproductive years. It will open up the new window of opportunity for the women to enhance their skills as they would require less time to spend in household works. It will also provide some incentives to take part in the active work force. Given that they would have access to educational opportunities and productive employment this is going to enhance the GDP. The reproductive health improvement can also bolster household income, as number of income earning family members increases.

Reproductive Health Scenario of Bangladesh: Comparative Analysis

It is well established that "population dynamics" contains a profound impact on the economy and as well as on the human development. It is also acknowledged that "reproductive health" improvement would have impact on economic growth and poverty reduction following different channels of which change in population dynamics is important. For instance changes in reproductive health behavior could possibly bring the changes in population growth rate, age – income distribution of the people and hence in poverty rates of the region concerned. All these changes coupled with proper policy actions could further bring shift in economic growth. On the other hand there is a close interdependency between safe and secure reproductive health behavior and achievement of potential

economic benefits from “demographic dividend”. Therefore it is imperative to have a crystal clear idea about the meaning of reproductive health and also the concept of demographic dividend.

Reproductive health has been defined in a variety of ways in the literature. Most of them defined it focusing predominantly on physiological and fertility aspects while others went for a more holistic view. However, it is the WHO International Conference on Population and Development held in Cairo, 1994 where 165 countries have arrived at a consensus view on reproductive health. The concept of reproductive health that the above mentioned platform actually has explained can be postulated as follows:

“Reproductive health is defined as a state of physical, mental, and social well-being in all matters relating to the reproductive system, at all stages of life. Good reproductive health implies that people are able to have a satisfying and safe sex life, the capability to reproduce and the freedom to decide if, when, and how often to do so. Men and women should be informed about and have access to safe, effective, affordable, and acceptable methods of family planning of their choice, and the right to appropriate health-care services that enable women to safely go through pregnancy and childbirth”.

<http://www.reproductive-health-journal.com/about/faq/whatis>)

The way reproductive health concept has been defined makes it unique in comparison to other field of health. Reproductive health does not indicate the health status only during time of reproduction, rather it indicates the health status that extends into the years before and as well as following years of reproduction. Scrutinizing the definition it can be argued that reproductive health includes the following issues:

- physical, mental, and social well-being related to reproductive health system, at all stages of life
- satisfying and safe sex life
- Ability to reproduce and freedom in the decision
- access to safe, effective, affordable, and acceptable methods of family planning
- Access to information about reproductive health service
- Safe pregnancy and child birth for women through appropriate health care service

In order to provide an overview of reproductive health situation in global and national levels WHO has come up with a short list of 17 indicators (Reproductive Health Indicators, WHO, 2006). All these indicators are largely population based. Nevertheless the following indicators are globally accepted as the crucial for reproductive health status:

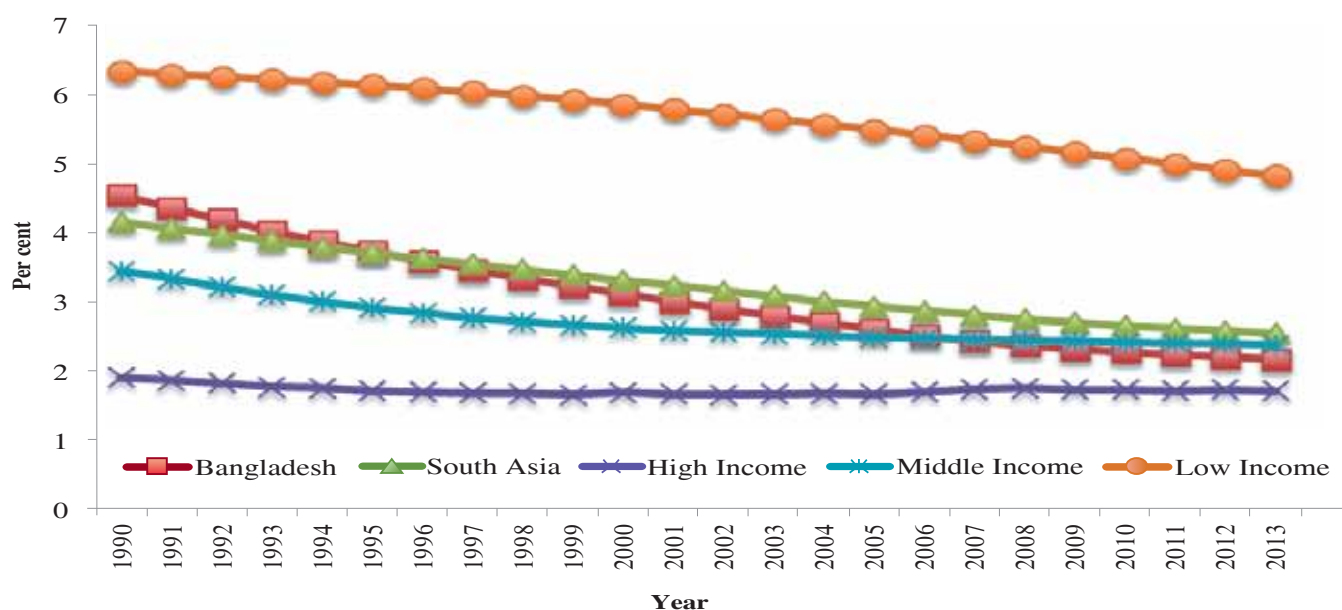
- Total Fertility Rate
- Contraceptive Prevalence Rate
- Maternal Mortality Ratio
- Perinatal Mortality Rate
- Life Expectancy at Birth
- Low Birth Weight Prevalence

Total Fertility Rate (TFR):

Fertility rate is an important indicator of reproductive health. It is considered as a more direct measure of fertility level compared to crude birth rate and regarded as showing the potential for change in population dynamics in the country. In number replacement level of fertility is defined as two children per women. Fertility rate above two will indicate that population is growing in size with a decline in median age while a rate below two indicates that population is decreasing in size and growing older. Figure 10 contains a comparative trend scenario of Total Fertility Rate (TFR) for Bangladesh. Here Bangladesh is compared with the TFR of South Asia, Low Income, Middle Income and High Income Countries. TFR in Bangladesh was more than twice (4.55) the replacement level during 1990. Nevertheless the rate has been observed to be continuously

decreasing to become almost replacement level by the end of 2013. At that time the rate was 2.17. It is a clear indication that Bangladesh is performing well in implementing family planning programs. As the figure shows Bangladesh has always been performing better than low income country average since 1990. The TFR was found to be higher in Bangladesh than the South Asian average till mid 90s, but since then the country performs well maintaining a lower rate compared to the later one. If we compare Bangladesh with middle income countries then it could be argued that she had reached to the fertility level of middle income countries as far back as in 2005. In recent years the performance is even better than the middle income countries.

Figure 9: Comparative Trend in TFR for Bangladesh



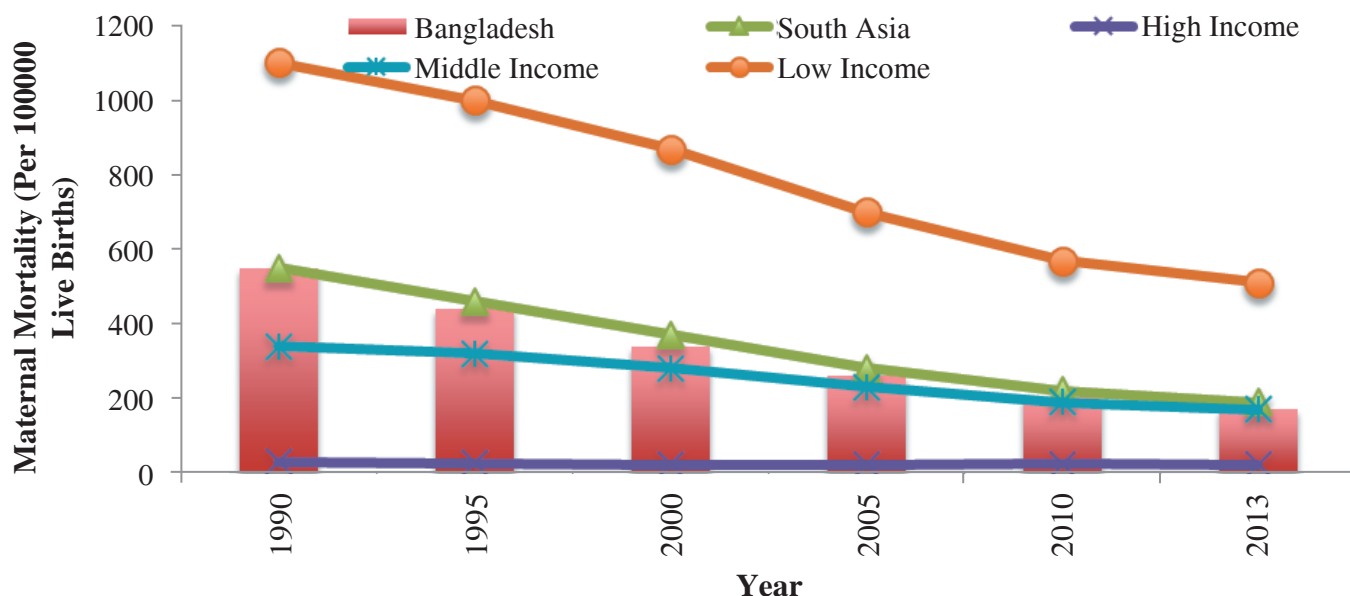
Source: World Development Indicators (WDI), 2015

By comparing the country with the high income countries it can be observed that initially though the difference between them was higher, it has been decreasing over the years. The reason behind this is that while the average rate of fertility in high income countries had remained almost constant that for Bangladesh has been declining. In the year 2013 value of fertility rate for high income countries was 1.72, in contrast the rate for Bangladesh was observed to be declined by almost 52 per cent from 1990 to reach at 2.17.

Maternal Mortality Ratio (MMR):

Maternal Mortality Ratio (MMR) which is recognized as another important indicator of reproductive health usually is defined as the annual number of female deaths per 100000 live births from any cause related to or aggravated by pregnancy or its management. As far as MMR is concerned Bangladesh has experienced a paradigm shift in its image. Because the number of females dying for causes related to maternal health care issues have really come down compared to what it was few decades back. More specifically the ratio was 550 during 1990 which has declined by almost 69 per cent to become as low as 170 at the end of 2013. If we consider the comparative scenario it can be observed that Bangladesh has always been performing well in comparison to low income countries. The performance has also been better compared to South Asia. Encouragingly since 2005 Bangladesh has been doing as good as middle income countries in terms of maintaining a declining trend in MMR.

Figure 10: Comparative Trend in MMR for Bangladesh

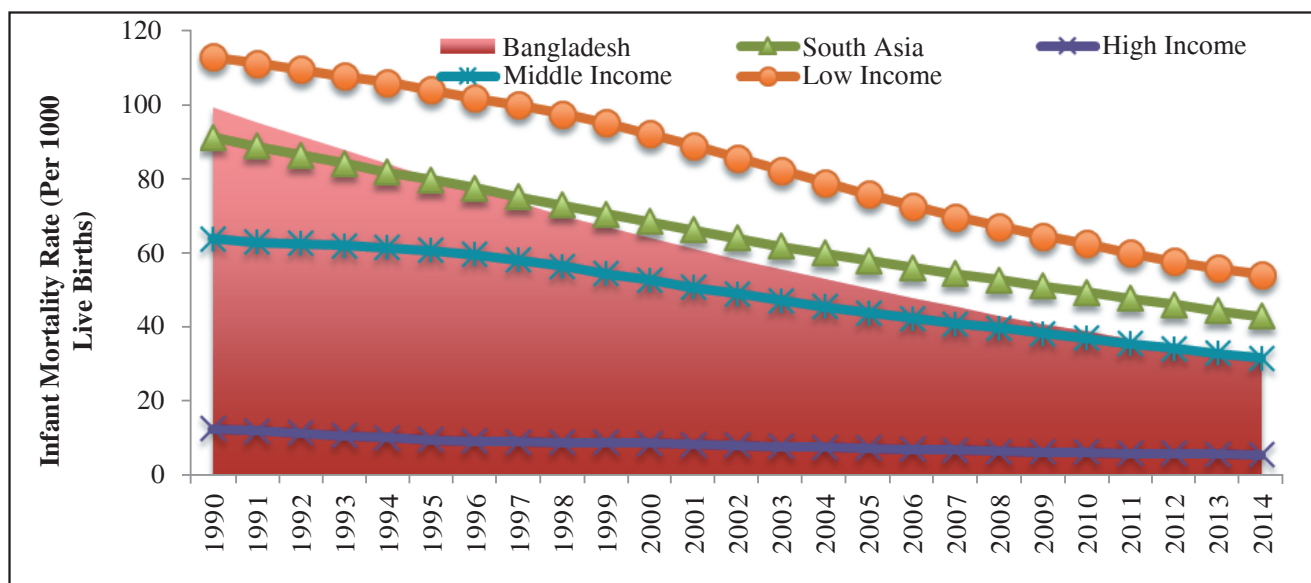


Source: World Development Indicators (WDI), 2015

Infant Mortality Ratio (IMR):

Infant Mortality Rate (IMR) is often used as an indicator of health level of a country. Figure 12 presents a comparative scenario of trend in IMR for Bangladesh. Similar as other indicators of reproductive health Bangladesh is also performing well in decreasing IMR compared to other low income countries and South Asia. In fact the country has reached almost the level of IMR maintained by middle income countries in the recent years. During the period 1990 to 2014 IMR has reduced almost 68 per cent to become 32.1 per 1,000 live births in 2014. However, the rate is still way above than high income countries.

Figure 11: Comparative Trend in IMR for Bangladesh

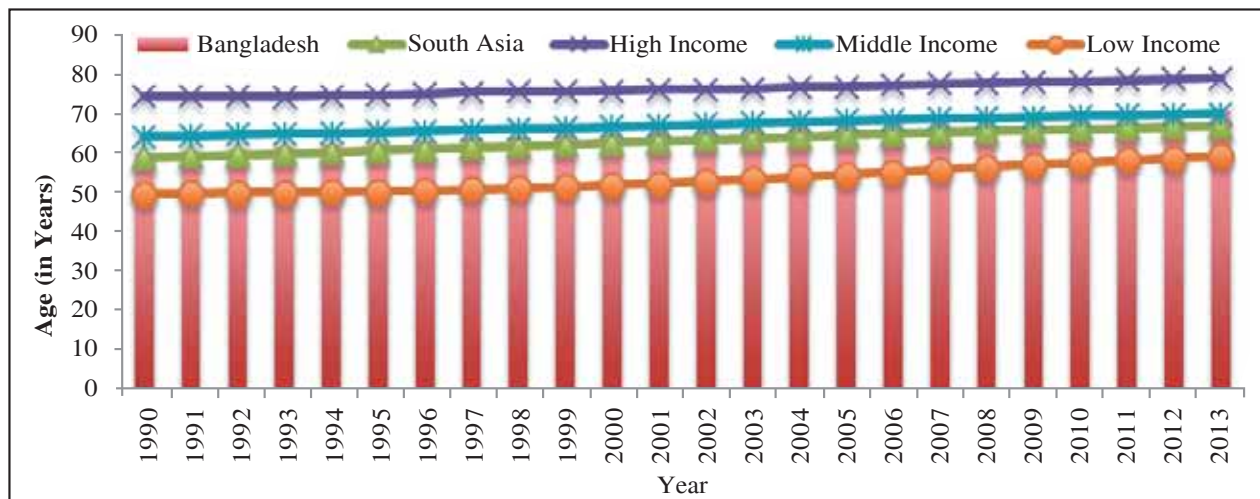


Source: World Development Indicators (WDI), 2015

Life Expectancy at Birth:

Figure 13 contains the comparative trend in life expectancy at birth for Bangladesh. It is evident that the life expectancy at birth has gone up significantly compared to what it was in the last decade. In 1990 life expectancy at birth was 60 years in Bangladesh which stood at 70.69 years by the end of 2013 depicting an increase of 17.80 percent. It is a direct result of better access to health care facility, immunization, nutrition and overall economic development. By looking at the comparative trend it can be argued that Bangladesh the increasing trend in life expectancy in Bangladesh was higher than South Asia and it become almost close to the middle income countries since the beginning of the last decade. As the rate of growth is observed to be higher also the difference with high income countries is gradually decreasing.

Figure 12: Comparative Trend in Life Expectancy at Birth for Bangladesh

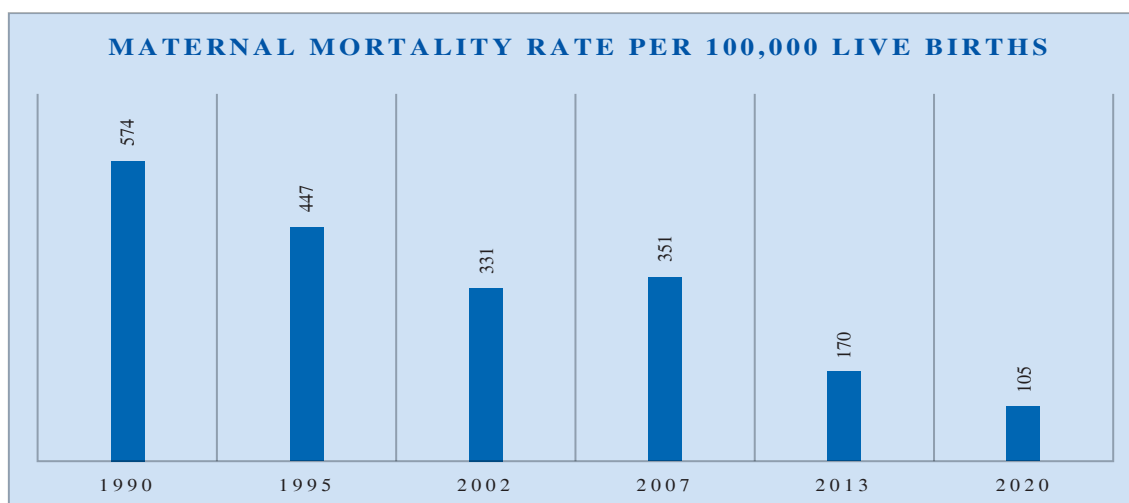


Source: World Development Indicators (WDI), 2015

Reproductive Health Status and Needs:

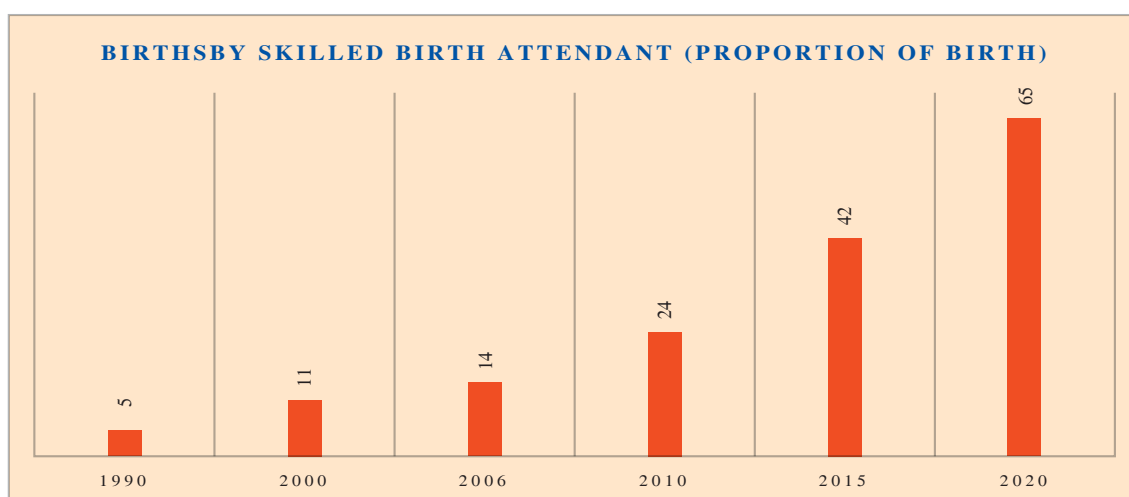
In spite of various initiatives by the Government, number of births attended by skilled health personnel is still low. Around 85 percent of deliveries still take place at home and the proportion of those receiving assistance during delivery by medically trained providers was only 18 percent (BDHS-2007). Training of skilled health personnel, improvement in infrastructure and regular monitoring is essential to reach MDG target by 2015. Comprehensive EmOC services in public health facilities, especially at district level and below, is also not adequate to reach the target level. Though obstetricians and anesthetists are being trained and appointed as per Maternal Health Strategy 2001, but there is also a frequent failure to retain both the obstetricians and the anesthetists to perform caesarian sections in a facility due to variety of reasons (MTR 2008). The Government should take steps to overcome this problem by giving special emphasis to reducing absenteeism in rural areas. Currently, EmOC is provided at district and upper level facilities with very limited access in Upazila level. The government should strengthen the existing facilities to provide EmOC and increase coverage in public and not-for-profit private health facilities, especially in all UHCs. Bangladesh experienced a remarkable decline of approximately 40% between 1990 and 2005 in maternal mortality.

Figure 13: MMR per 100,000 Live Births



Source: 7th FYP Document, Bangladesh

Figure 14: Births by Skilled Birth Attendant



Source: 7th FYP document, Bangladesh

This tremendous decline occurred due to various medical, socioeconomic and demographic factors. Education of young women have been rising rapidly, increasing use of maternal health services. There had been a substantial improvement in the use of medically trained attendant and use of facility for deliveries. The number and distribution of facilities offering maternal health services has increased. Due to improved road transport (roads, bridges, bus services) access to health services has become easier. Also income at national and household levels have improved, due to which number of people visiting a health facility has increased. Yet, the use of skilled attendant at birth, a very important reproductive health services, is underutilized hugely. Figure 15 states that although our success in terms of reproductive health achievement is tremendous, there are yet many areas require attention and investment.

Policy Documents in Bangladesh for Reproductive Health:

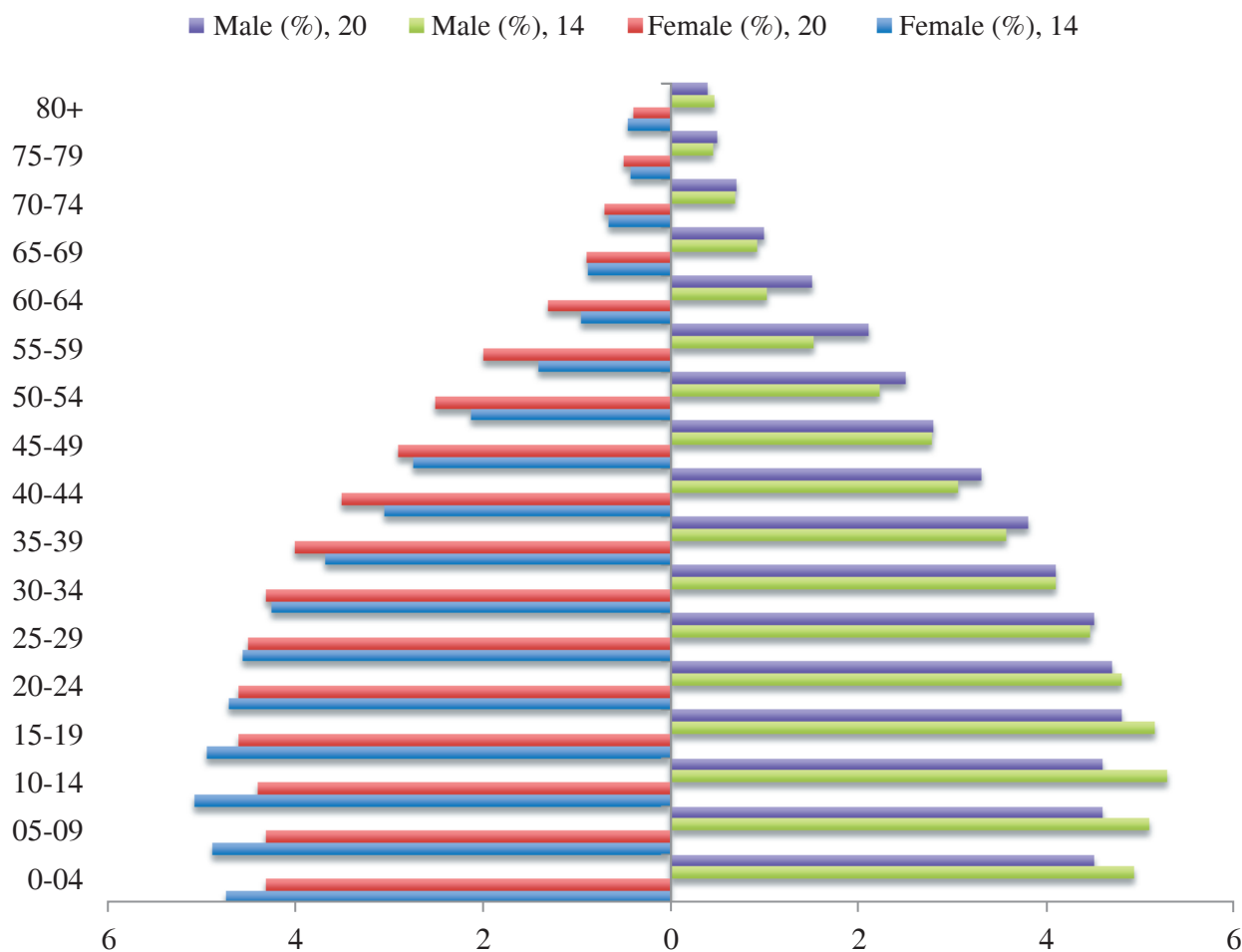
Some key policy and strategy documents that are relevant for reproductive health program in Bangladesh are as follows:

- 6th FYP
- 7th FYP
- 1st, 2nd, 3rd and 4th SWAps
- Poverty Reduction Strategy Paper, 2005-2008
- National Strategy for Economic Growth, Poverty Reduction and Social Development
- United Nations Millennium Development Goals
- Bangladesh National Strategy for Maternal Health,
- MOHFW Strategy for Contraceptive Security in Bangladesh
- MOHFW's Conceptual Framework for the Health, Nutrition and Population Sector Programme (HNPS) July 2003-June 2006.
- Essential Drugs List, 2008 Revision
- Adolescent Reproductive Health Strategy, 2006
- National Reproductive Health Policy
- Essential Service Package
- National Contraceptive Security Strategy, 2002
- Age of marriage policy
- National Maternal Health Policy (2001-2010)
- National Health Policy , National Population Policy , National Policy on HIV/AIDS and STD-related Issues , National Drug Policy
- National Food and Nutrition Policy and Gender Equity Strategy, 2001
- 1994 International Conference on Population and Development and sectoral strategies

From the above discussion it can be argued that Bangladesh's performance in reproductive health indicators has been encouraging. Given that at least current state of reproductive health status and family planning program prevails there is going to occur a clear visible change in the age sex distribution of population in the country by 2020. Figure 16 contains the comparative population pyramids of Bangladesh in year 2014 and 2020 (expected). A keen look into the figure reveals the fact that by 2020 both male and female percentage of population in the age 0 to 14 is going to be reduced significantly while that in the age interval 15 to 64 is going to increase. Thus, the age dependency ratio which had a declining trend is going to prevail and it will come down even further by 2020. Therefore, if the economy can come up with enough job opportunities for the potential workforce and at the same time ensure their (especially the youth people) improved health status focusing on reproductive health then it will surely be possible to stimulate the GDP growth. However, if the economy fails to do that then the additional youth workforce would become a burden for the economy which can in turn aggravate the social tension.



Figure 15: Population Pyramid of Bangladesh in 2014 and 2020



Source: World Development Indicators (WDI), 2015 & <http://populationpyramid.net/bangladesh/>

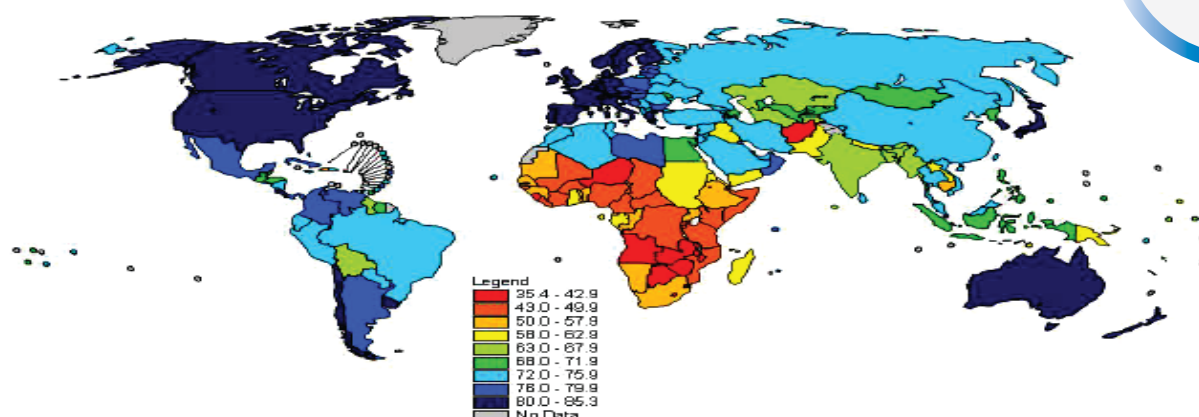
The figure and above discussion about demographic changes and reproductive health status in Bangladesh suggest that by 2020:

- Number of workers will increase further and dependency ratio will decrease more
- However, old-age dependency ratio will increase
- Therefore, first dividend will start to disappear
- But as the working age people will increase further as well as the life expectancy, this will create huge opportunity to accumulate the benefit of second dividend.
- A proper reproductive health system along with education, employment opportunities and good governance etc. will result accumulation of huge amount of capital in the form of second dividend.
- Due to economic and growth related policies if we can achieve 6-7% of growth rate, second dividend will result additional growth rate.
- Our reproductive health indicators suggest that we are making really a good and steady progress, but comparing with the developed countries, what we see is that there are ample scopes to improve reproductive health status further.

- Though the progress of reproductive health status in the forms of mortality related indicators are quite good, but morbidity related scores are not up to the mark yet.
- A significant number of children are either wasted or stunted or both and the scenario is no better than African Countries.
- Moreover, though the fertility rate is acceptable, a big number of girls aged 15-19 gives births of babies when they are very young. This is really bad for their reproductive health as well as their productivity.
- Furthermore, the use of skilled attendants and health facilities to give births are quite low which is causing high levels of morbidity of mothers and children.
- In addition, though average scenario is good and indicating a very commendable success in achieving MDGs, but regional disparities are there and in rural areas the indicators are actually quite high.
- If we can address these problems of reproductive health, this will result a very productive workforce, more participation of the female in the workforce etc. which is important to acquire the benefit of second dividend and capital accumulation for the longer period.
- Bangladesh has been experiencing rapid demographic changes.
- Rapid demographic changes along with favorable policy framework can accelerate economic growth.
- One important concern is the reproductive health of the youth which is directly related to the productivity of the workforce
- The reproductive health status of Bangladesh is currently very good which is evident from the fertility rate, life expectancy at birth, child and maternal mortality rate etc.
- However, there are some areas of concern and there are rooms for further improvement of reproductive health conditions of the youth.

Life Expectancy Worldwide

CHAPTER 4



Source: UN World Population Prospects, 2006.

Reproductive Health Financing in Bangladesh

Macroeconomic conditions influence health investment as well as health stock. Though per capita Gross Domestic Product (GDP) was estimated at US \$1,115 in 2013-14, more than one-fourth of the population are poor and one-fifth are unemployed or underemployed (BBS 2011; BBS 2011a). Although the GDP growth is quite satisfactory so as the per capita GDP, government revenue collection and utilization are poor. More emphasis should be given to poverty reduction, infrastructure development etc. People are not also concerned about their health status like those who live in developed countries. Health spending is increasing over the years, yet the percentage contribution of Gross Domestic Product (GDP) to health is still very low. Public health spending comprises less than 1% of the GDP and total health expenditure (THE) is 3.5% of GDP. Per capita THE is US\$ 27 which is the lowest in South Asia. The budget of Ministry of Health and Family Welfare (MOHFW) as percentage of national budget is on continuous decline: from over 6% in FY 2010/11 to 4.31% in FY 2015/16. The proportion of budget for reproductive health in total GDP is less than 1% which is an area of concern. On the other hand as the health status and the reproductive health status are low, we are not getting the benefit of demographic dividend to its potential level. Therefore, 1-2% potential growth is missing which could increase the GDP as well as the health expenditure further.

Health systems

Table 2: Health System Structure for RH Services in Bangladesh

Health Facility	Level of Care
<ul style="list-style-type: none"> National and regional training centers Model Clinics 	Tertiary
<ul style="list-style-type: none"> Model Clinics Maternal Child Welfare Clinics (MCWC) District hospitals(MCHFP clinics) (59) 	Tertiary

<ul style="list-style-type: none"> • MCH-FP clinics • MCWC 	Secondary
<ul style="list-style-type: none"> • Union Health and Family Welfare Centers • Rural dispensaries • MCWC 	Primary
<ul style="list-style-type: none"> • Satellite Clinics • Domiciliary Services 	Community/primary

National and regional training centers, Model Clinics, Maternal Child Welfare Clinic (MCWC) and District Hospitals provide tertiary care. MCH-FP clinics and MCWC provide secondary care and Union Health and Family Welfare Centers, Rural Dispensaries and MCWC provide primary health care services. At community levels Satellite Clinics and Domiciliary services are available.

With respect to improving reproductive health systems, good progress has been achieved in the areas of (a) health sector planning and budgeting; (b) procurement and supply chain management; (c) drug administration and regulation; gender, equity and voice; (d) sector wide program management and coordination; (e) and Non-Governmental Organizations and Public Private Partnership. On the other hand progress is not satisfactory in the areas of human resources for health (HRH); quality assurance, standards and regulation; and physical facilities and maintenance.

Reproductive Health Financing: Trend in Bangladesh

In order to harness the demographic dividend along with employment opportunity reproductive health care security is a must. Bangladesh where a significant portion of the people are still poor, government has to come forward with proper reproductive health care service and efficient service distribution method for ensuring the safe and secure reproductive health status for the youth. Especially this is of a vital importance for the youth women in the economy. Because, they are characterized as the “poorest of the poor” in the demographic and socio economic literatures concerning this country. So, creating enough job opportunity for the youth women and transferring them from a burden group to active one while securing safe maternal and reproductive health will undoubtedly have a positive impact on economic growth.

Bangladesh has been following supply-side financing of health care services. Only one-third of the total financing is from public sources. Ministry of Health & Family Welfare has two separate wings (a) Directorate of Health (DGHS-Directorate General of Health Services) and Directorate of Family Planning (DGFP- Directorate General of Family Planning Services), to manage and supervise health care financing and delivery. MOHFW expenditures are funded from (a) Revenue Budget, financed by tax and non-tax revenues, borrowing from domestic market etc. and (b) Development Budget or the Annual Development Program financed by the GOB revenue surpluses and development partners’ assistance.

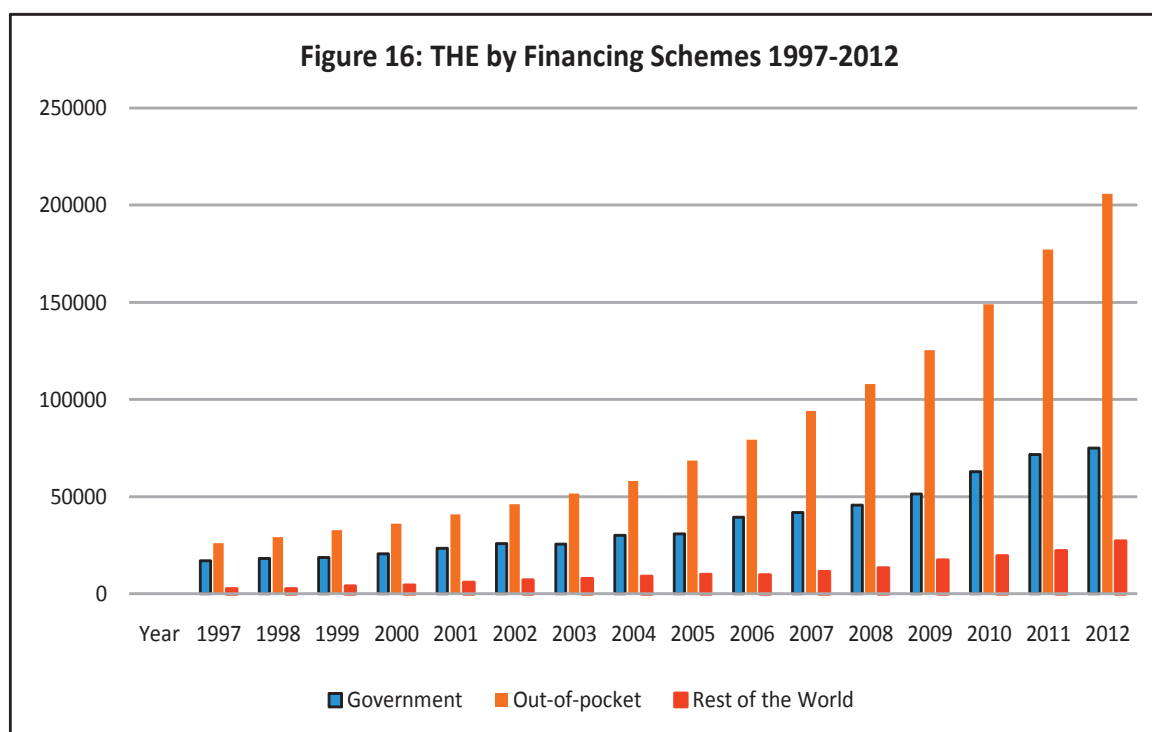
Households, government, donors and NGOs are responsible for reproductive health financing. According to National Health Accounts of Bangladesh, the Central Government and the local governments play a major role in financing reproductive health services. Private out of pocket expenditures are mostly funding for the medical goods including medicines. Development partners are providing funds for mainly preventive services in Bangladesh.

Total Health Expenditure

In Bangladesh Total Health Expenditure (THE) comprises three key components: public, private and development partners. Bangladesh National Health Accounts 1997-2012 provides an overview of this expenditure.

Table 3: THE by BNHA Financing Scheme, 1997 - 2012

Year	Government Million Taka	Out-of-pocket Million Taka	Rest of the World Million Taka
1997	17,064	25,923	2,651
1998	18,247	29,120	2,715
1999	18,714	32,665	4,034
2000	20,539	36,097	4,534
2001	23,390	40,842	6,079
2002	25,838	46,010	7,276
2003	25,570	51,505	7,907
2004	30,182	58,087	9,192
2005	30,683	68,513	9,957
2006	39,449	79,202	9,908
2007	41,899	94,141	11,525
2008	45,580	107,936	13,317
2009	51,333	125,401	17,317
2010	62,737	148,976	19,641
2011	71,530	177,230	22,314
2012	75,071	205,820	27,144



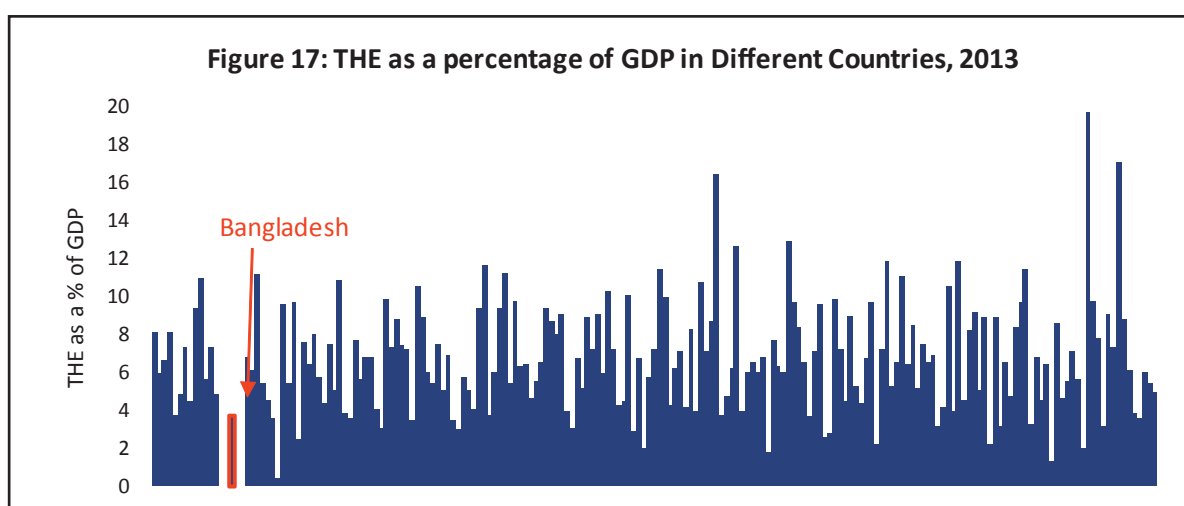
Source (Table 3 and Figure 17): BNHA 1997-2012

According to (HF); three major financing groups are: (i) public, (ii) private, and (iii) Rest of the World (ROW) which includes all foreign development partners.

Financing Schemes (FS) of Bangladesh is classified into four broad categories: (i) government schemes; (ii) Non-Profit Institutions Serving Households (NPISH) schemes; (iii) Rest of the World (ROW) schemes; and (iv) household financing schemes. Funds spent by the NGOs in healthcare service delivery are primarily generated from foreign development partners and from NGO's own source. Funds that are generated by the NGOs from its own source are classified as NPISH schemes.

Households are the biggest financing scheme for Bangladesh healthcare system. The share of household was 63% (Taka 206 billion) in 2012. Government financing was only 23% in 2012. However, government spending in healthcare has increased steadily. In 1997 government spending on healthcare was Taka 17 billion which increased to 75 billion in 2012. Development partners contribute a sizeable amount of their assistance through the government or through NGOs. In 1997 contribution from Rest of the World financing schemes was Taka 2.7 billion (6% of THE) and Taka 27 billion (8% of THE) in 2012. NGOs provided Taka 0.46 billion from its own fund in 1997, and 5.7 billion in 2012. Share of corporations, autonomous bodies and private companies are around 3% currently.

Though THE has showed an increasing trend in Bangladesh, THE as a % of GDP is not at the desired level, it is only 3.7% of the total GDP whereas there are many countries where THE as a % of GDP is more than 10%. A good health status of a nation is not automatic; it requires huge spending on health. Huge spending on health can ensure a very good health status, productive life and a very good level economic growth. The return on health investment is very high which is evident from the health investment in developed countries.



Source: World Health Organization 2013

In UK THE as a per cent of GDP was 9.1%; both in absolute term as well as relative term THE was much higher there. In Bangladesh percentage of private expenditure on health as a percentage of total expenditure on health was 64.7% in 2013, whereas in UK it was only 16.5%. Government can spend for health in a more profound way than the private spending and overall health system can be improved by increasing the contribution of the Government rather than the increase in private sector's contribution.

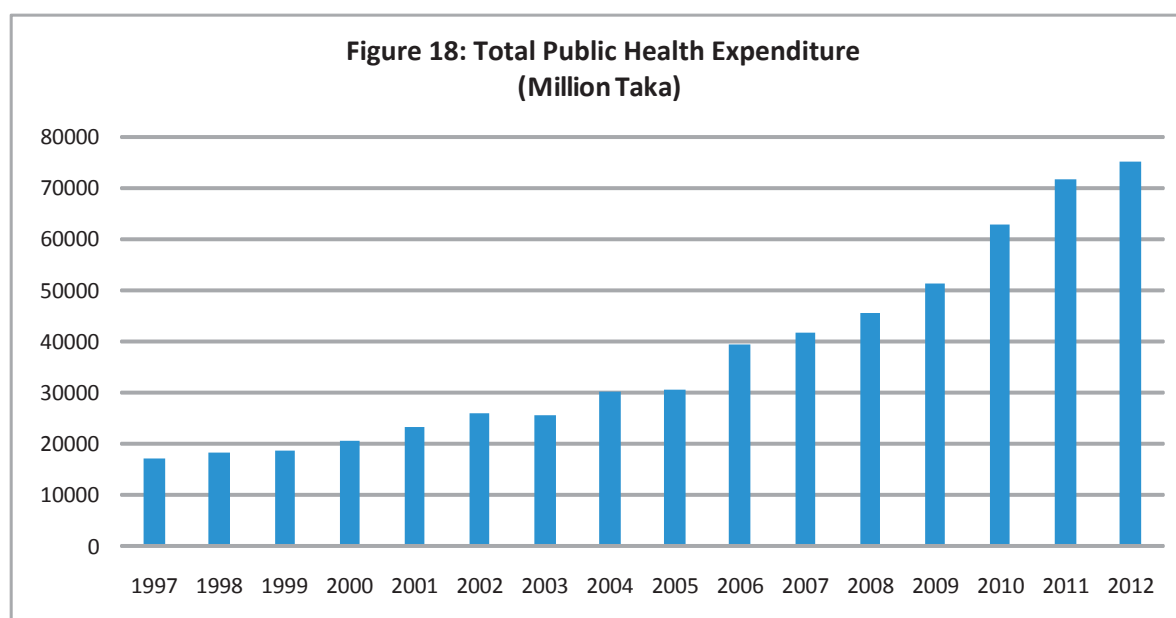
Table 4: Comparison of Bangladesh on Health Care Financing

	2013	2000	UK (2013)	India (2013)
THE as a % of GDP	3.7	2.6	9.1	4
% of Government expenditure on Health as a % THE	35.3	40.7	83.5	32.2
% of Private expenditure on Health as a % total expenditure on health	64.7	59.3	16.5	67.8
Government expenditure (GE) on health as a % of total GE	7.8	7.4	16.2	4.5
External resources for health as a % of THE	8.6	7.3	0	1.1
Out-of-pocket expenditure as a % of private expenditure on health	93	94.7	56.4	85.9
Out-of-pocket expenditure as a percentage of total expenditure on health	60.2	57.8	9.3	58.2

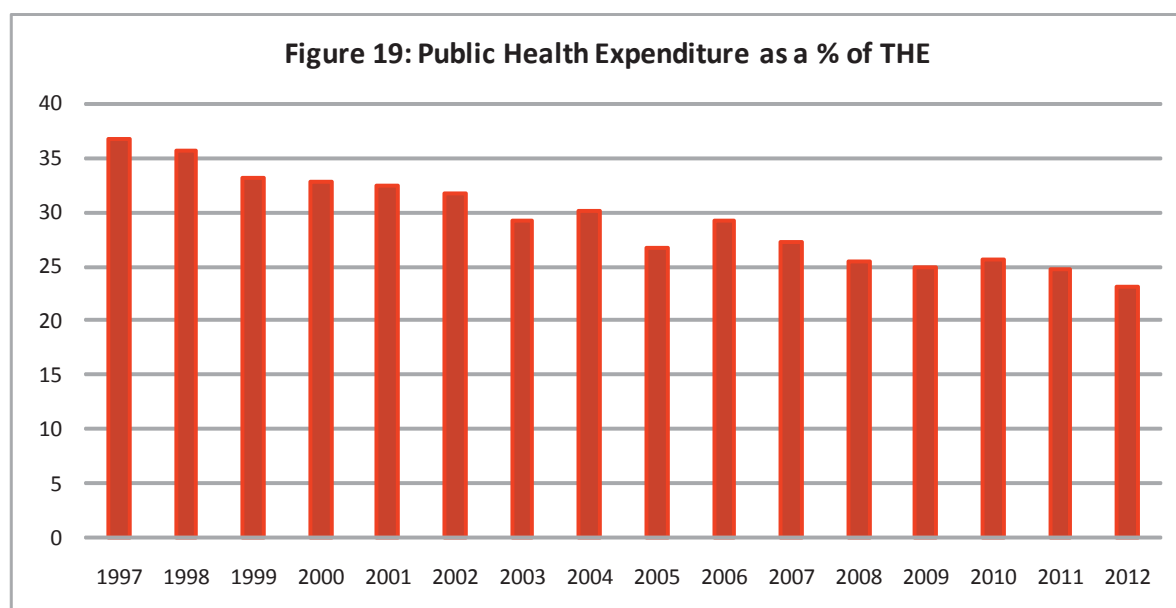
Source: WHO 2013

Public Health Expenditure

The Ministry of Health and Family Welfare (MOHFW) has two implementation wings: the Directorate General of Health Services (DGHS) and Directorate General of Family Planning (DGFP). The DGHS is responsible for implementation of all health programs and advises and supports medical college hospitals, district hospitals and Upazila health complexes (UHC). The DGFP is responsible for implementing family planning (FP) programmes using district-level maternal and child welfare centers (MCWC) and union-level Union Health and Family Welfare Centers (UHFWC). Over the years public health expenditure has increased steadily. In 1997 total public health expenditure was 17064 million Taka which increased to 75071 Million Taka in 2012. However, public health expenditure as a % of total health expenditure decreased over time. In 1997, 36.8% of the total health expenditure was public health expenditure. Currently the share of public health expenditure in total health expenditure is less than 25%.



Source: BNHA 1997-2012



Source: BNHA 1997-2012

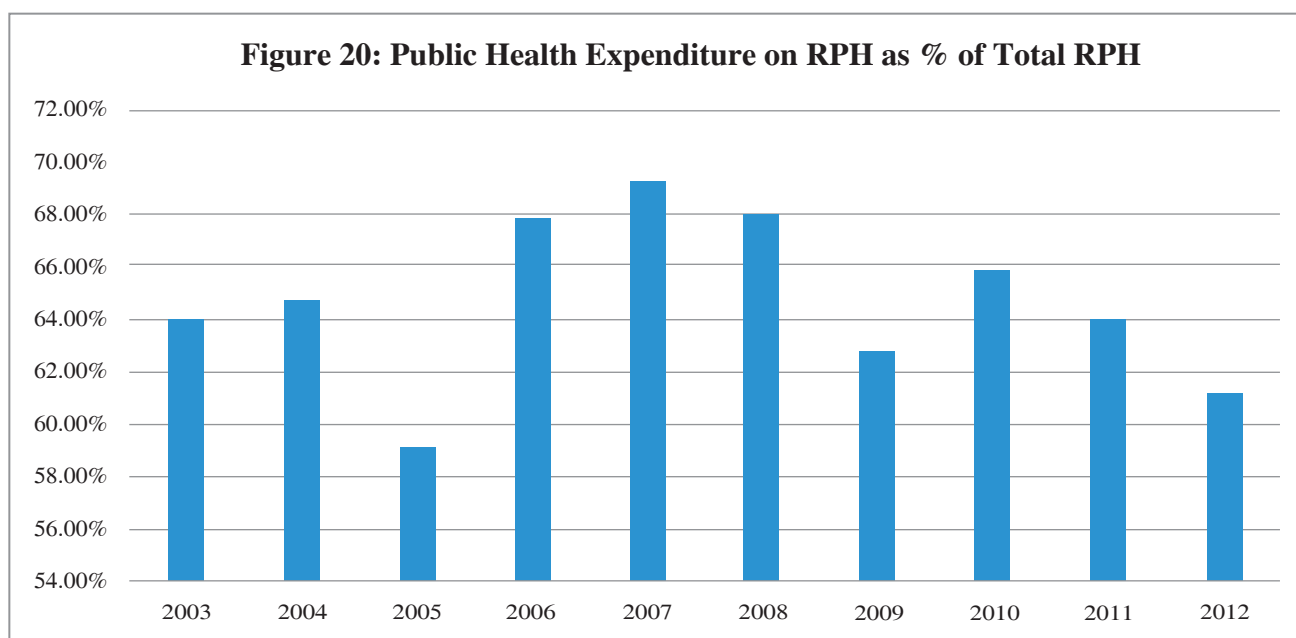
Though % public health expenditure in THE has showed a downward trend over the years, the major share of the reproductive health financing is done by the government. In 2003, Government spent Taka 10,944 million to provide RPH, MCH and FP. 64% of the total health expenditure on preventive care was spent by the government in that year. In 2012, the amount increased by more than 100% in absolute term, to Taka 26,725 million, and it remain steady in relative term as well.

Table 5: RPH financing by Providers

	Government		NPISH		Rest of the World		Total
	Mil. Taka	%	Mil. Taka	%	Mil. Taka	%	
2003	10,944	64.00%	1,024	6.00%	5,142	30.10%	17,109
2004	12,906	64.70%	1,176	5.90%	5,877	29.40%	19,959
2005	11,848	59.20%	1,681	8.40%	6,479	32.40%	20,008
2006	15,528	67.90%	1,802	7.90%	5,552	24.30%	22,882
2007	18,791	69.30%	1,844	6.80%	6,499	24.00%	27,134
2008	19,186	68.10%	1,875	6.70%	7,130	25.30%	28,191
2009	18,777	62.70%	1,999	6.70%	9,176	30.60%	29,952
2010	23,759	65.80%	2,094	5.80%	10,264	28.40%	36,118
2011	25,384	64.00%	3,168	8.00%	11,092	28.00%	39,644
2012	26,725	61.20%	3,193	7.30%	13,753	31.50%	43,671

Source: BNHA 1997-2012

Other than the government, the spending on RPH comes from the NPISH, NGOs own fund, and from the development partners. However, to date government share of the preventive health care spending is more than 60%. Government is the key provider of RPH services in Bangladesh.



Source: BNHA 1997-2012

Out-of-Pocket Payment

In Bangladesh out-of-pocket payment is the major source of health care financing. More than 60% of the health care financing is made directly by the users of health care services from their own pocket.

Table 6: OOP Expenditure by Function, 1997 - 2012

	Curative Care	Ancillary Services	Medical Goods	General Govt. Administration Of Health	Outpatient and Home- based TCM	Total Out-of- Pocket Expenditure	OOP as % of THE
1997	3,919	1,192	19,646	330	836	25,923	55%
1998	4,543	1,591	21,728	360	898	29,120	57.00%
1999	5,383	2,068	23,812	417	985	32,665	57.80%
2000	6,229	2,578	25,895	321	1,073	36,097	57.80%
2001	7,242	3,131	29,079	258	1,132	40,842	56.80%
2002	8,490	3,747	32,283	296	1,194	46,010	56.50%
2003	10,279	4,516	35,104	323	1,283	51,505	58.90%
2004	12,537	5,410	38,411	345	1,384	58,087	57.90%
2005	15,498	6,040	45,062	400	1,513	68,512	59.90%
2006	17,790	6,887	52,246	402	1,877	79,202	58.70%
2007	20,688	8,027	62,369	694	2,364	94,141	61.20%
2008	24,547	9,918	69,623	804	3,043	107,936	60.30%
2009	28,429	11,522	80,724	909	3,817	125,401	61.10%
2010	32,834	13,520	96,819	1,025	4,778	148,976	61.00%
2011	37,928	15,451	116,550	1,182	6,118	177,230	61.30%
2012	44,814	17,790	133,997	1,367	7,852	205,820	63.30%

Share of out-of-pocket expenditure is more than 60% currently. Households spend more than three-fifth of the total health expenditure, and the share of OOP is increasing over the years. This is because over the years new hospitals are built and several health care facilities are available through the private providers. In 1997 share of OOP was 55% and the amount spent by the household was 25,923 million Taka. This share increased to 63% in 2012, and the total amount spent was astronomical: 205,820 Million Taka.

However, households spend OOP mainly to purchase or to get access to medical goods. In 2012, out-of-pocket expenditure for medical goods was 133,997 million Taka. Other than this, households mainly spend to get access to curative care and ancillary services.

Further breakdown of OOP by provider is done by BHNA which found that retailer of medicine and medical goods, commonly known as “pharmacy”, accounts for majority of OOP expenditure. In 1997 spent 76% of their OOP expenditure 65% in 2012 to buy drugs (BHNA 1997-2012). Out of pocket spending constitutes a significant proportion of the total spending on RH. According to Khan and others (2009) out-of pocket spending was a major source for paying for delivery and other RH services for most of the households.

Development Partners (DP)

Bangladesh has introduced sector-wide approach (SWAp) in the health and population sector, and the Health and Population Sector Programme. The Development Partners provide pool funding, non-pool funding and parallel

funding mechanisms for development assistance to the Government under the SWAp and HPNSP programs.

Under the pool funding mechanism development partners align and coordinate their support according to the needs of the country. Pooled financing includes that from partners including World Bank, the Department for International Development (DFID), the Netherlands, and the European Union (EU). A substantial amount of DP funding is channeled, released and expended using GOB systems.

The financing mechanism in Bangladesh also includes an element of DP funding to be provided within the framework of the HNPSP operational plans. Use of this mechanism provides some flexibility, enabling a rapid response to changing requirements. Parallel funds are used on urban health care, family planning and social marketing of contraceptives, and maternal health. Development partners with non-pool funding are providing support in maternal and child health, HIV-AIDS, women's health, equitable access to health-care finance and facilities, and micronutrients. Non-pool funds are managed by development partners such as CIDA, GTZ, Japanese Government, JICA, KfW, SIDA, UNFPA, UNICEF and WHO. ADB, DFID, EC, SIDA, USAID and some other development partners run parallel funds.

As a whole development Partners play great role in health financing in Bangladesh. Development Partners gave Taka 27 billion direct assistance to NGOs which was 8.3% of THE.

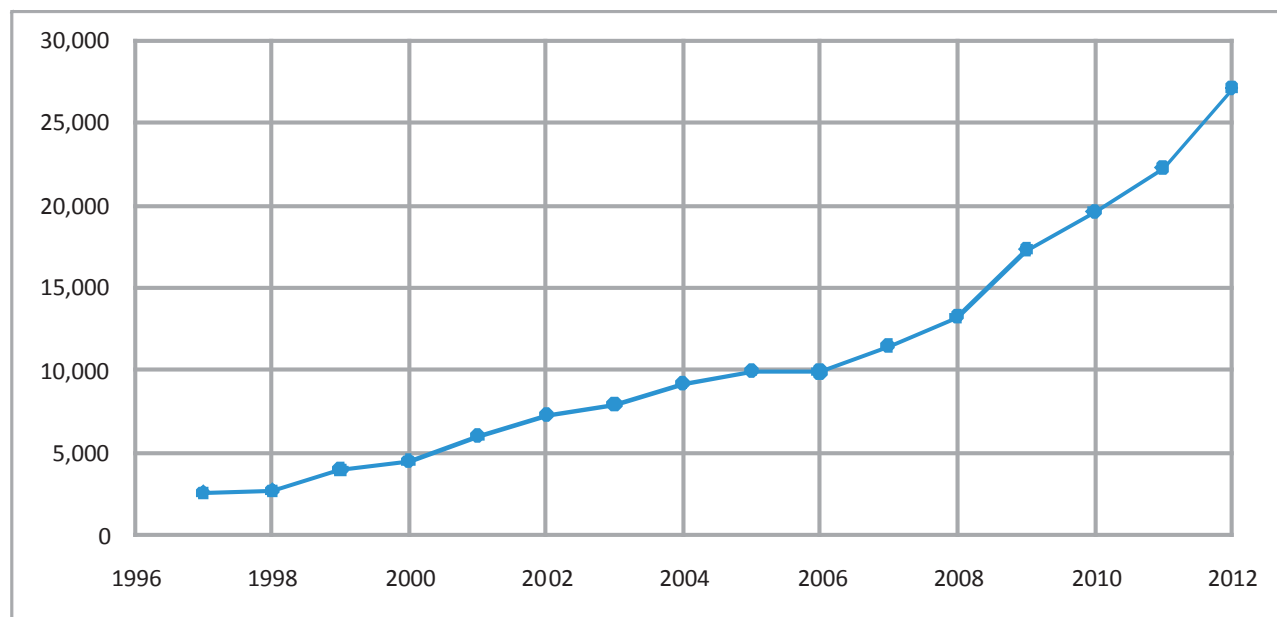
Development partners contribute a sizeable amount of their assistance through the government or through NGOs. Development partners give fund to the government directly. However, direct assistance given to NGOs is reflected in the Rest of the World Financing Schemes. In 1997 Development partners contributed Taka 2.7 billion (6% of THE) through NGOs which increased to 11.5 billion Taka in 2007 and Taka 27 billion (8% of THE) in 2012.

Table 7: Contribution of DP in Health Care Financing in Bangladesh

Year	Rest of the World	
	Million Taka	ROW (%)
1999	4,034	7.10%
2000	4,534	7.30%
2001	6,079	8.40%
2002	7,276	8.90%
2003	7,907	9.00%
2004	9,192	9.20%
2005	9,957	8.70%
2006	9,908	7.30%
2007	11,525	7.50%
2008	13,317	7.40%
2009	17,317	8.40%
2010	19,641	8.00%
2011	22,314	7.70%
2012	27,144	8.40%

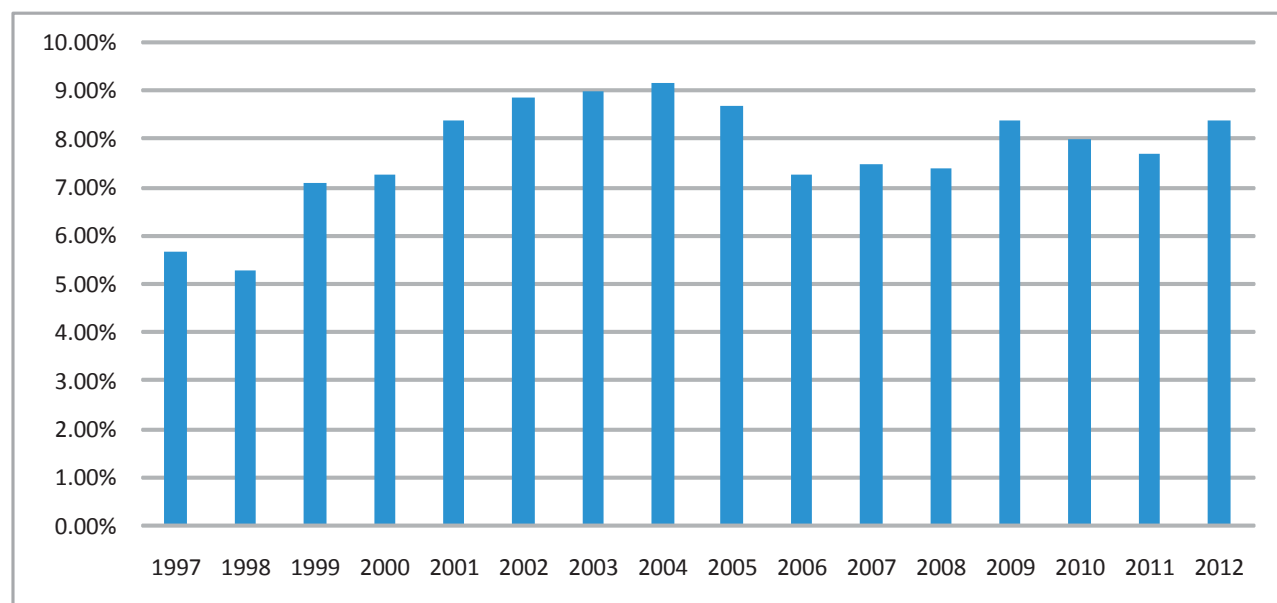
Source: BNHA 1997-2012

Figure 21: Trend of Health Expenditure by DP (Million Taka)



Source: BNHA 1997-2012

Figure 22: Percent of THE by DP



Source: BNHA 1997-2012

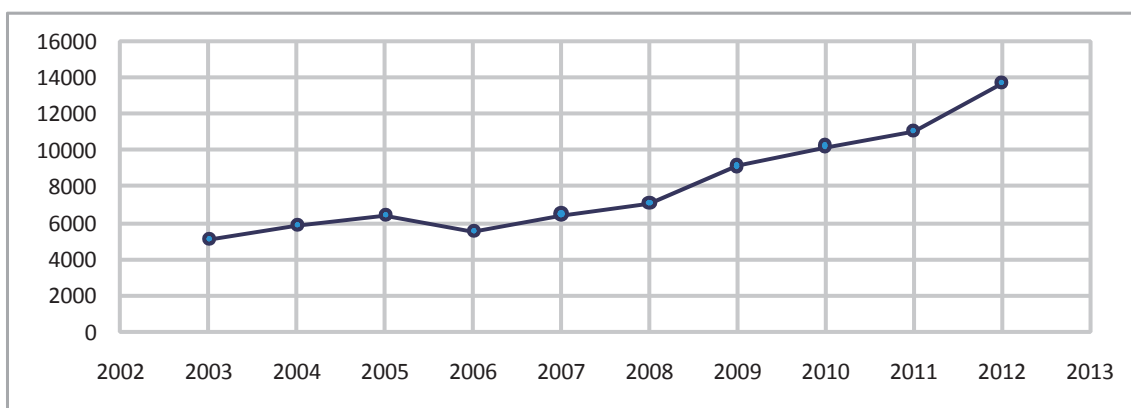
Major share of the fund allocated by the Development Partners is used to provide preventive care services. In 2003, 30% of the expenditure in preventive care was made by the development partners through NGOs. In 2007, the amount increased to 6499 Million Taka, reached the double digit in 2010, and currently it is around 14,000 Million Taka. Currently more than 31% of the preventive care services is financed by the NGOs using the fund of the development partners.

Table 8: Expenditure of Preventive Care by Development Partners

	Mil. Taka	%
2003	5142	30.1
2004	5877	29.4
2005	6479	32.4
2006	5552	24.3
2007	6499	24
2008	7130	25.3
2009	9176	30.6
2010	10264	28.4
2011	11092	28
2012	13753	31.5

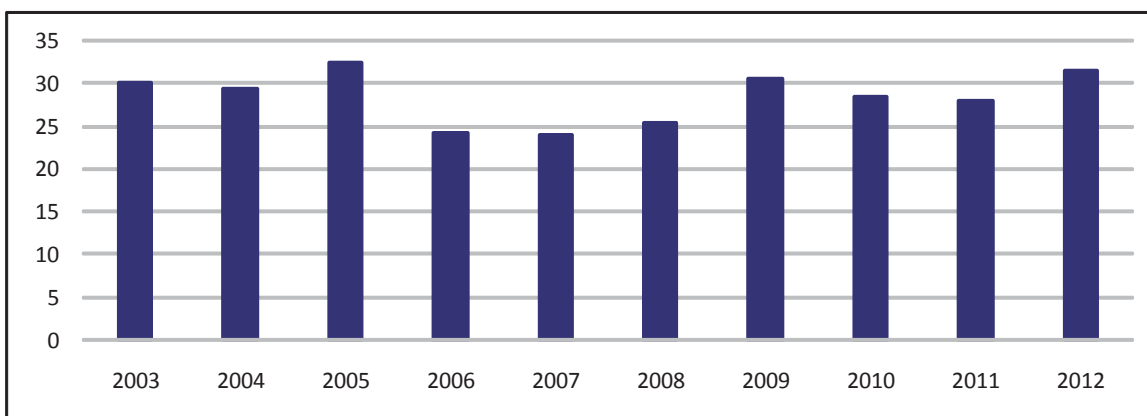
Source: BNHA 1997-2012

Figure 23: Expenditure on RPH, MCH and FP by DP (Million Taka)



Source: BNHA 1997-2012

Figure 24: Percent of the RPH, MCH and FP by DP



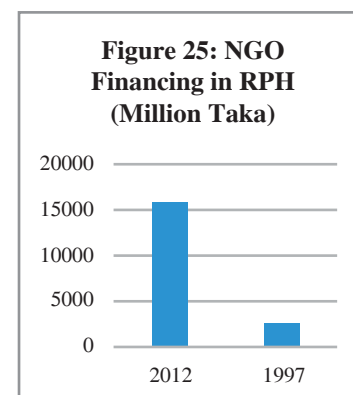
Source: BNHA 1997-2012

NGOs

NGOs play significant role for the development of the health sector as well as for the reproductive health. A number of NGOs is now offering health care services and the role of NGOs in providing health care has been increasing over the years.

Table 9: NGOs Preventive Care by Function, 1997 and 2012

	2012 Mill. Taka	1997 Mill. Taka
Private NGO Medical College Hospitals	334.2	
NGO Hospital s at District Level	13652.6	826.1
NGO Specialized Hospitals	1815.2	147
NGO ambulatory health care centers at District and Union	9.2	
NGO public health programs	1155.5	1493.8
	15811.2	2466.9

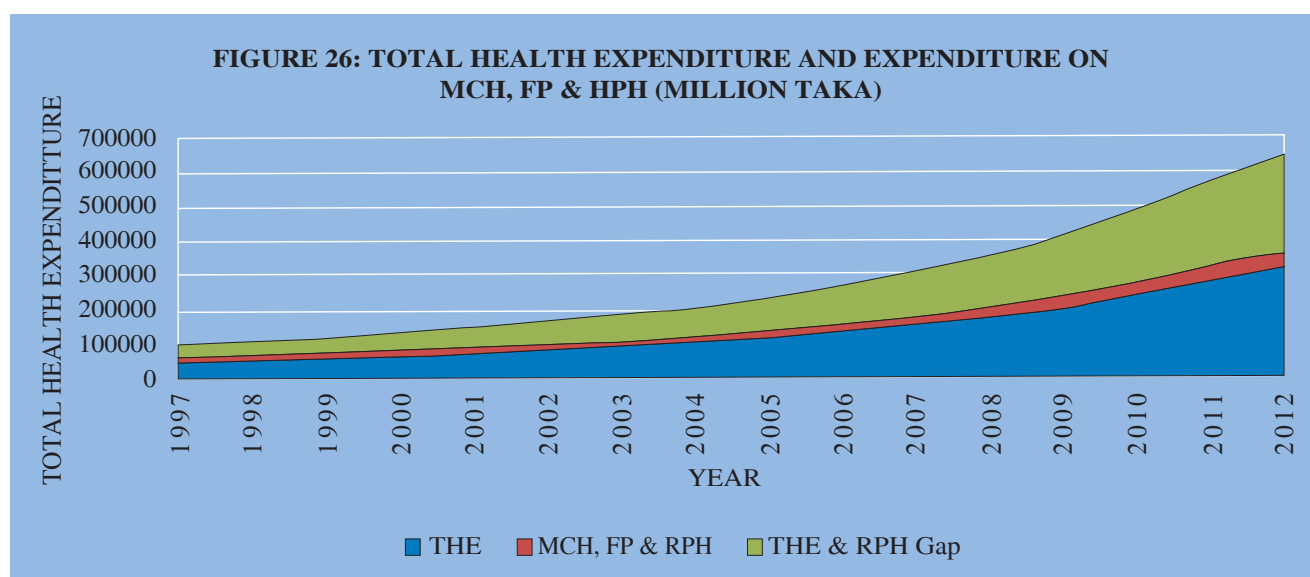


Source: BNHA 1997-2012

Foreign development partners generate funds for the NGOs to spend in healthcare service delivery. Some funds are generated by the NGOs from its own source (NPISH). NGOs have been receiving direct funds from development partners under a contractual arrangement. In Bangladesh many donor agencies developed programs or activities on their own, and implement them through international or local NGOs.

Private and NGO hospitals in particular have grown in number over the past decade, coupled with the entry of a handful of large-scale, tertiary level private healthcare facilities in Dhaka city. Expenditure at Private and NGO hospitals in 2012 was Taka 69 billion, which constitutes 70.4% of total outlays on hospital services. NGOs own contribution in healthcare services for 2012 was around Taka 6 billion which is approximately 2% of the THE (BNHA 1997-2012).

Reproductive Health Financing is not up-to-the Market

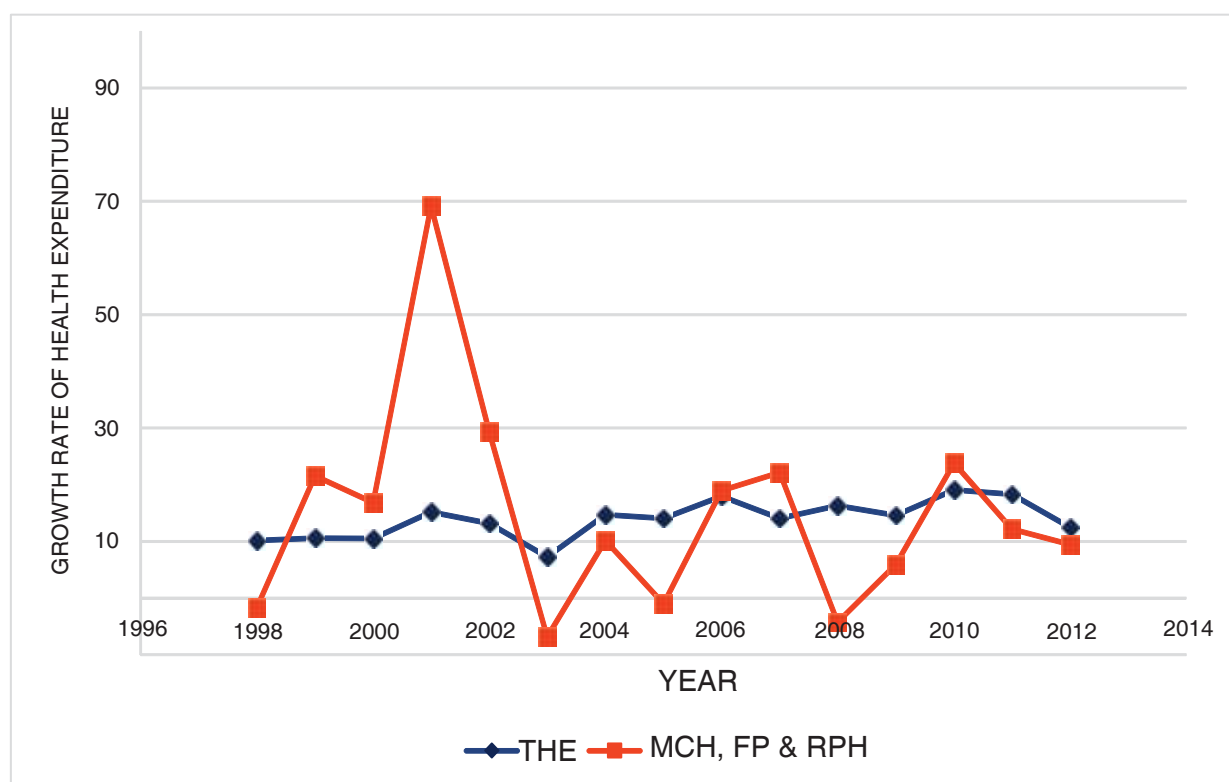


Source: BNHA 1997-2012

Figure 26 contains the trend in the expenditure difference for total health care and MCH, FP and RPH. It is evident from the figure that although the expenditure on MCH, FP and RPH is increasing, it was not sufficient enough in relation to the expenditure on THE. Therefore the difference among these two is unfortunately increasing over the years. In recent past the difference has been observed to be even more. From 1997 to 2012 the expenditure gap has increased by an amount of 601 per cent which is exactly equal to the growth of expenditure in THE in the same time period. Thus apparently the difference is solely driven by the increase in expenditure for THE.

Figure 27 contains the trend of annual growth of THE, MCH, FP and RPH and also the share MCH, FP and RPH in the THE over the years. The average annual growth for THE was around 14 per cent with some periodical moderate fluctuations. The highest growth was accounted in the year of 2010 and 2011 when the rate was observed to be 19.1 and 18.3 per cent respectively. In contrast the growth of expenditure for MCH, FP and RPH went through huge ups and downs, even being negative in some years. Therefore it is evident that expenditure on reproductive health has not always been successful to gain a constant attention.

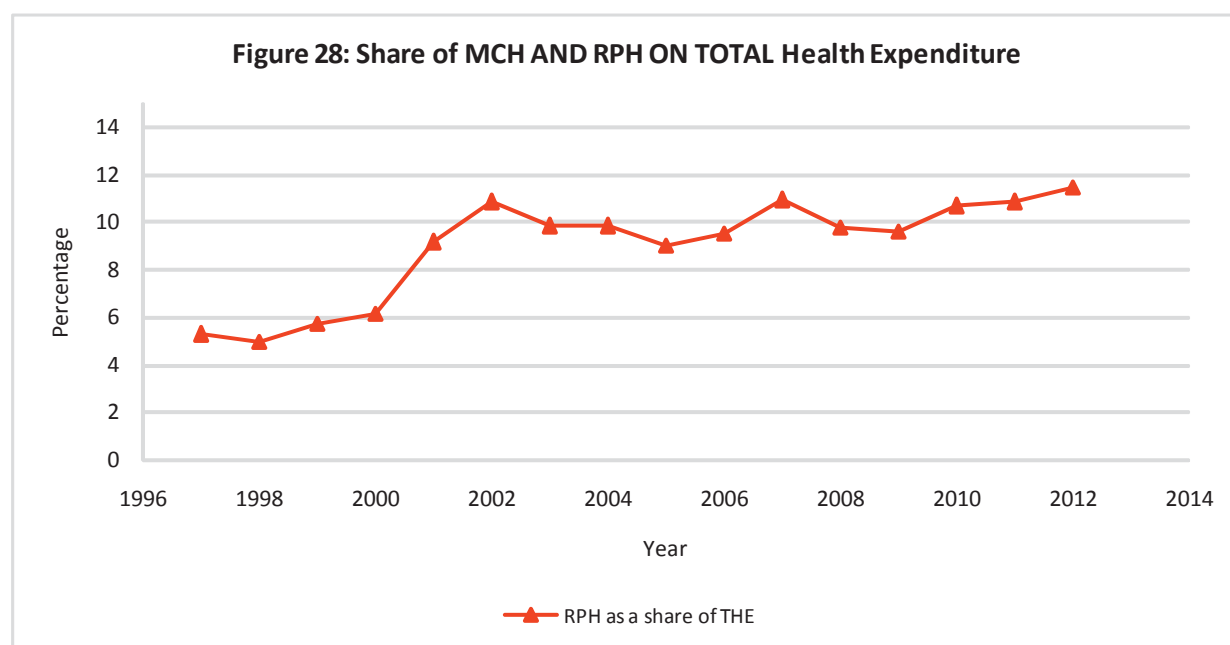
Figure 27: growth rate of Health Expenditure and Expenditure on MCH, FP & RPH



Source: BNHA 1997-2012

Table 10: Growth Rate of THE, MCH, FP and RPH

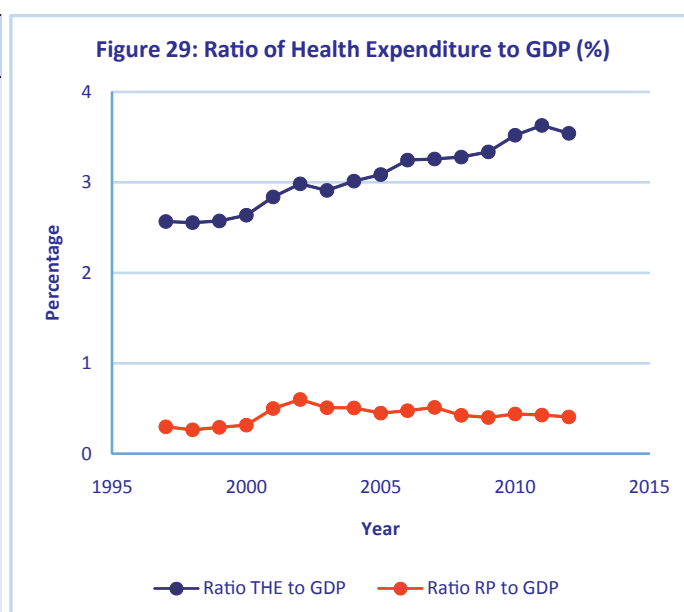
Year	THE	MCH, FP & RPH	RPH as a share of THE
1997			5.305407
1998	10.2	-1.677	4.981691
1999	10.6	21.55745	5.729069
2000	10.5	16.86719	6.171052
2001	15.2	69.17976	9.140872
2002	13.2	29.32874	10.85227
2003	7.3	-6.86221	9.83996
2004	14.7	10.20207	9.852364
2005	14.1	-0.98827	9.048373
2006	18	19.00667	9.547654
2007	14.1	22.17057	10.90998
2008	16.3	-4.22663	9.781874
2009	14.6	5.946109	9.630519
2010	19.1	23.83941	10.66053
2011	18.3	12.2005	10.87342
2012	12.5	9.468775	11.47945



Source (Table 10 & Figure 28): BNHA 1997-2012

The above figure includes a trend in the share of MCH, FP and RPH in the THE. It is evident that the share which was around 5 percent in late 90s increased twice in 15 years to become around 11 per cent during 2012. However, it has only started picking up in the early years of last decade. Thus only one tenth of total health expenditure is spent for reproductive and maternal health.

Year	Ratio THE to GDP	Ratio RP to GDP
1997	2.565338	0.296334
1998	2.552796	0.263018
1999	2.573041	0.29131
2000	2.635082	0.315477
2001	2.8381	0.499072
2002	2.982712	0.59901
2003	2.908676	0.507086
2004	3.010784	0.504455
2005	3.084323	0.448629
2006	3.244261	0.476081
2007	3.257027	0.511771
2008	3.278411	0.424277
2009	3.336396	0.399076
2010	3.518975	0.437605
2011	3.627658	0.4279
2012	3.540784	0.406462

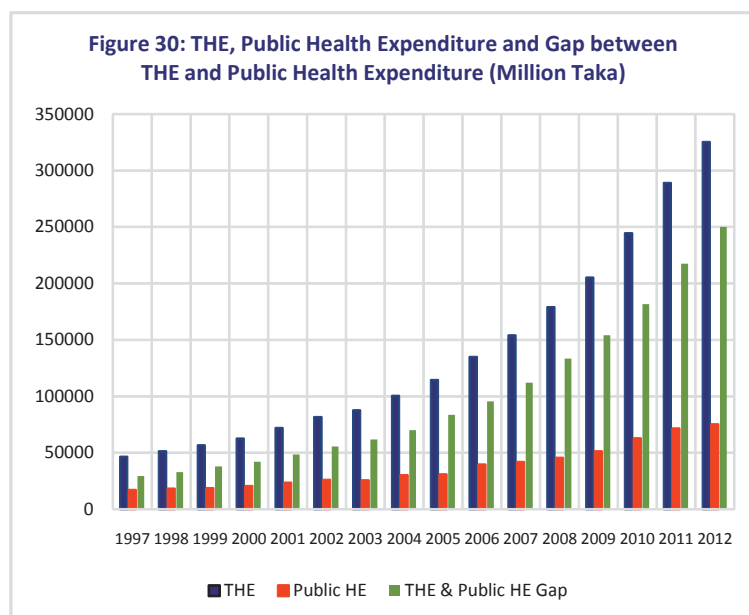


Source: BNHA 1997-2012

In this stage it would be important to have an idea about the expenditure on THE and RPH in relation the income of the country as a whole and as well as the role of government in this regard. Following Figure 29 contains the trend in share of THE and RPH to GDP for Bangladesh since 1997. It can be observed that during last 15 years the share of THE in GDP has increased by only 1 per cent to become 3.5 per cent only in 2012. The share of expenditure on RPH to GDP has been even more alarming as it has remained constantly less than 1 per cent. More specifically Bangladesh had spent only 0.40 per cent of her GDP for RPH in 2012.

Figure provides an overtime scenario of role of govt. regarding health care expenditure in Bangladesh. It is evident that following the trend of THE public expenditure for health care is also increasing. However, the increase was not sufficient enough to reduce the gap between them. Hence the difference was found to be increasing. More specifically from 1997 to 2012 the difference has increased by more than 8 times to become 250077 million taka in the year 2102. Thus the share of public expenditure for health care in the total health care expenditure could be an important indicator which drives the increasing trend in expenditure gap between the two aforementioned indicators.

Year	THE	Public HE	THE & Public HE Gap
1997	46356	17064	29292
1998	51101	18247	32854
1999	56529	18714	37815
2000	62474	20539	41935
2001	71959	23390	48569
2002	81488	25838	55650
2003	87429	25570	61859
2004	100251	30182	70069
2005	114338	30683	83655
2006	134873	39449	95424
2007	153887	41899	111988
2008	178943	45580	133363
2009	205120	51133	153987
2010	244331	62737	181594
2011	289017	71530	217487
2012	325094	75017	250077

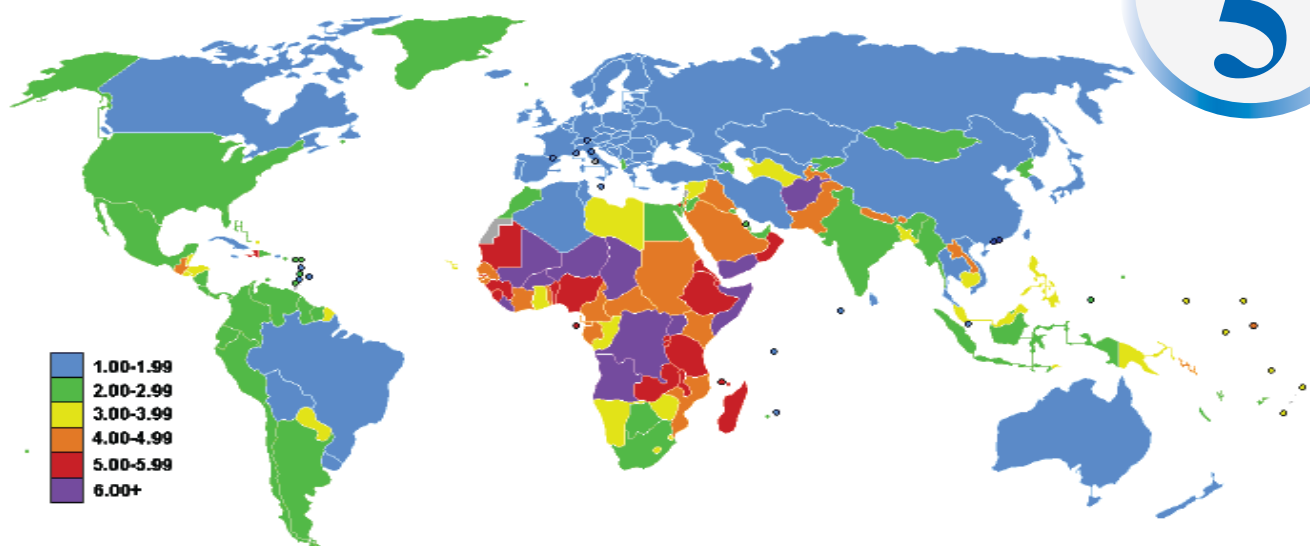


Source: BNHA 1997-2012

Fertility Rates Worldwide

CHAPTER

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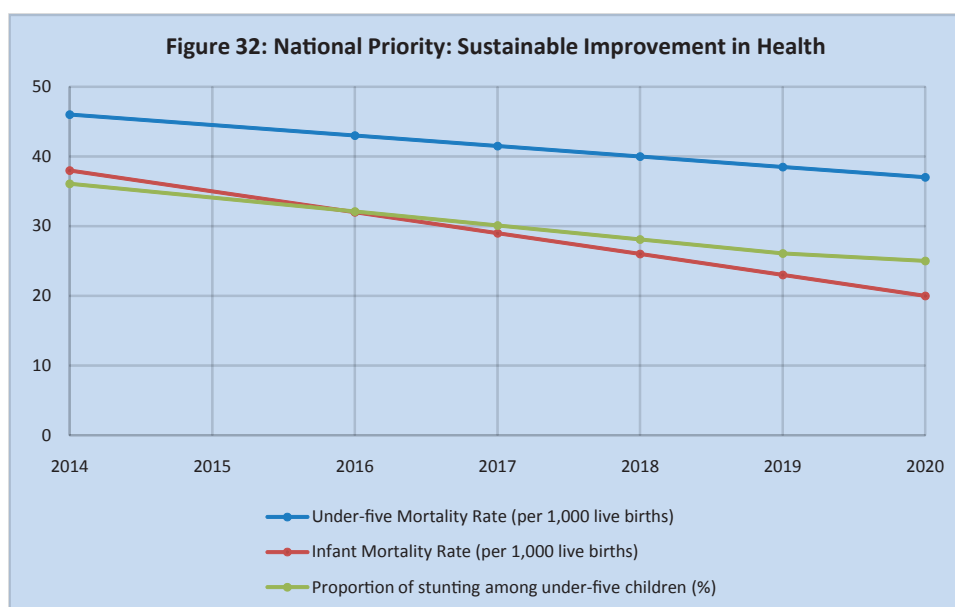
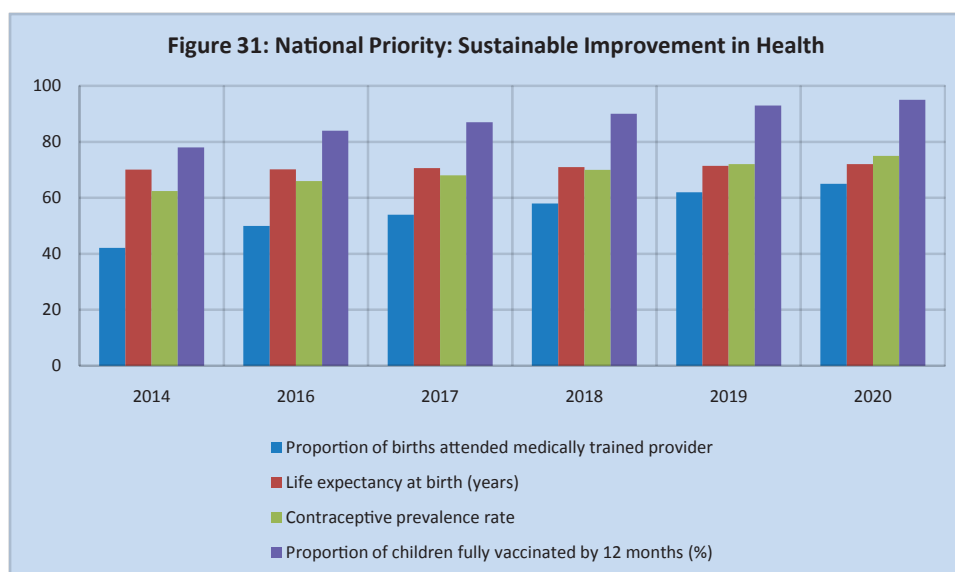


Source: Fertility Rate World Map, Wikipedia, 2007.

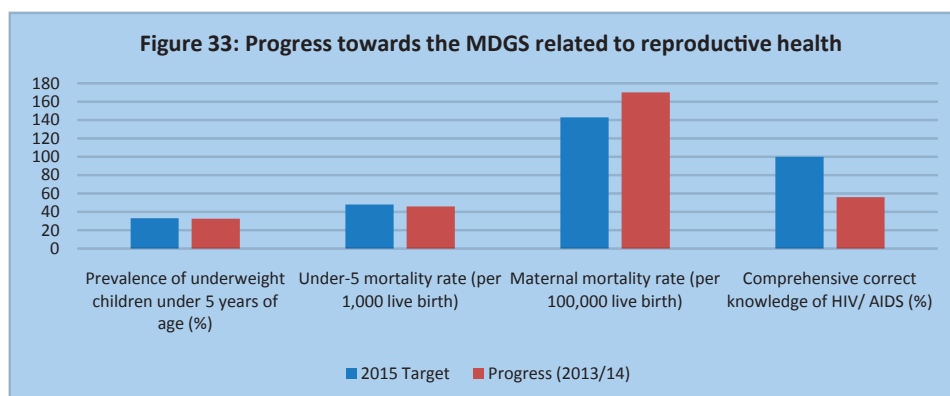
Progress Achieved in 6th FYP (3rd SWAp) and Proposed Plan and Financing in 7th FYP (4th SWAp)

During 6th FYP and 3rd SWAp, Bangladesh has made a good progress in achieving a better state of reproductive health. Due to favorable policies along with other factors, use of skilled attendance to birth is currently stood at more than 50%. Though it is not much better than even from some of the African Countries, the state was much worse before 6th FYP period. Current life expectance at birth in Bangladesh is around 71 years whereas few decades earlier, it was near about 50 years. In few decades Bangladesh has made a great progress to add nearly 20 years expected life and working time to each person. In a Muslim dominated country like Bangladesh, use of contraceptive is now almost 60% which is also a real good success. And more than 80% of the children are now fully vaccinated before 12 months.

After the 6th FYP and 3rd SWAp of the health sector, current child mortality rate is 43 per 1000 live births and infant mortality rate is 32.1 per 1000 live births. Both of these are achievements for which the nation can be proud for. However, about 36% of the children are still stunted and/ or wasted which is a major area of concern.

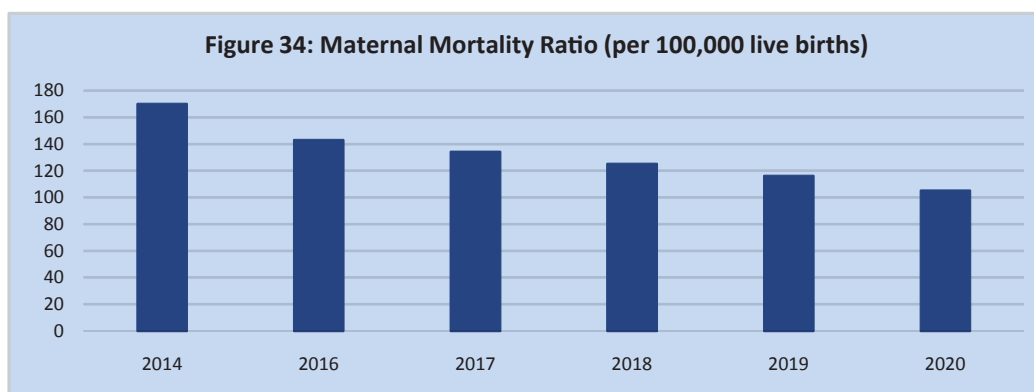


Source: 7th FYP, Bangladesh (Figure 31 and 32)



Source: MTR of 6th FYP, Bangladesh

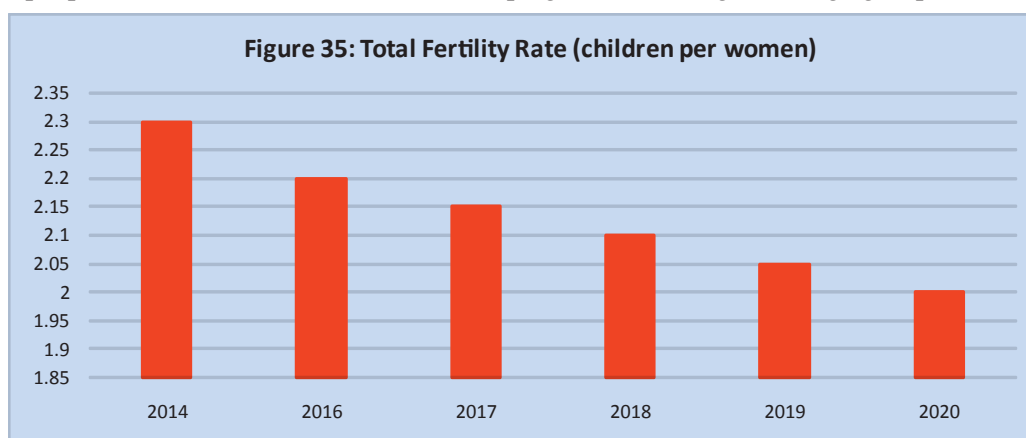
During 6th FYP and 3rd SWAp, Bangladesh has achieved remarkable success in achieving MDGs. 32.6% children are currently underweight while the target was to reduce the proportion of underweight to 33%. Under-5 mortality rate is 46 per 1000 live births. In MDGs the target was to reduce under-5 mortality rate to 48 per 1000 live births. Current maternal mortality rate is 170 per 100,000 live birth, a good progress is made since the inception of MDG targets. However, MDG target in maternal mortality rate is yet to reach, 143 per 100,000 live births. Only 56% of the total population has comprehensive correct knowledge of HIV/ AIDS. For a country like Bangladesh HIV/AIDS and non-communicable diseases are great threats and it is important that young people have comprehensive correct knowledge about the occurrence of such diseases and how to prevent them. But the mid-term review of 6th FYP indicates that in the areas of providing correct knowledge about such diseases, Bangladesh is lagging behind.



Source: 7th FYP, Bangladesh

In 7th FYP, Bangladesh has a target to reduce the maternal mortality rate to 105 per 100,000 live births. Currently maternal mortality rate is 170 per 100,000 live births. 7th FYP and 4th SWAP set a steady progress to be achieved by the end of 2020. This requires MCH and FP related policies to be strengthened further and more financing targeting reproductive health. Government has the target to reduce fertility rate to the replacement level by the end of 7th FYP. Currently the fertility rate is 2.2. To achieve the target of replacement level of fertility, three areas should be prioritized:

- Universal coverage of family planning
- Addressing regional disparities
- To make people aware about the adverse effect of pregnancies during 15-19 age group.



Source: 4th SWAp, Bangladesh

Milestones for Vision 2021 in HNP Sector

- 85% of the population has standard nutritional food.
- A minimum of 2122 kilo calories of food for all

- elimination of contagious diseases
- Infant mortality comes down to 15 per thousand
- Contraceptive use rate to increase to 80%.

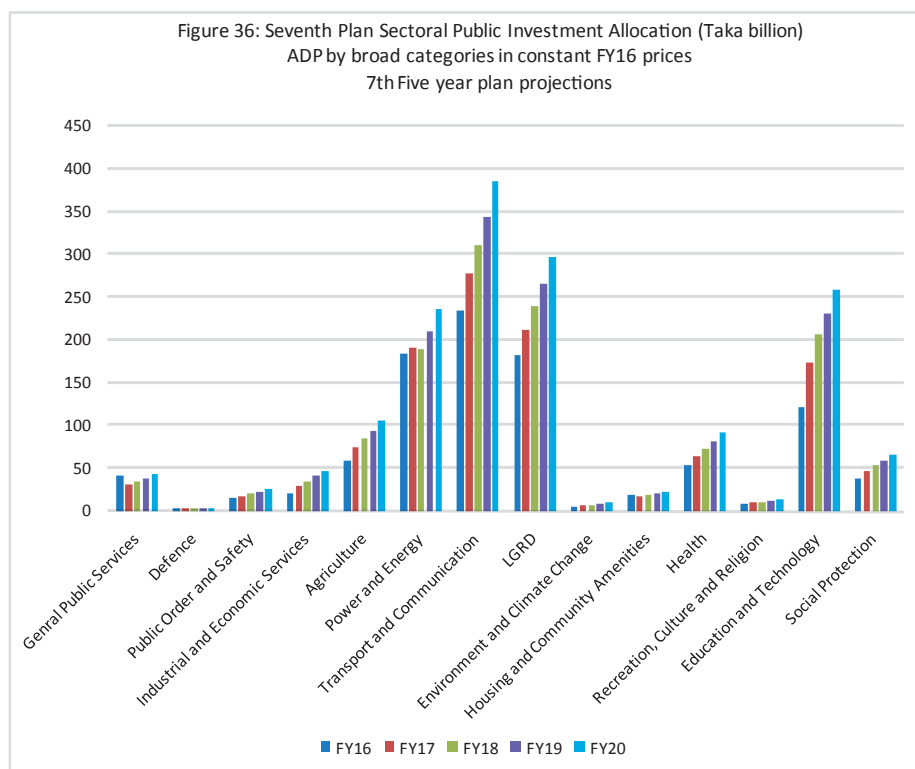
Source: Perspective Plan of Bangladesh 2010-2021

To realize that vision, the Government has set certain objectives and targets towards achieving Universal Health Coverage (UHC) in the HNP sector, which include the following:

- To ensure access and utilization of HNP services by elderly, women, children, poor and disadvantaged
- To reduce total fertility rate
- To ensure adolescent and reproductive health care
- To decentralize and to strengthen local level planning
- To ensure nutrition to children and women

Gender equality will be particularly ensured during the 7th FYP period in family planning. Increasing the average age at marriage is likely to reduce fertility. It will open other potential roles for women, and will reduce unwanted pregnancies. Newly-wed couples, especially adolescents, will be targeted to delay the first birth. Steps will be taken to ensure women's decision making over reproductive health through proper education and information. Services for women beyond reproductive age will be addressed to ensure a more equitable and gender-friendly access to health services.

To achieve these goals, and thereby to ensure a better reproductive health status, government has a plan to increase investment allocation for health. Currently the amount of public investment allocation for health sector 45 Billion Taka. In 7th FYP the goal is to increase public investment allocation for health to increase to 64 billion in 2017, 72 billion in 2018, 81.6 billion in 2019, and 92.8 billion in 2020.



Source: 7th FYP, Bangladesh

The plan of the government is to increase public health investment steadily over the period of 7th FYP and 4th SWAp. However, from some other sectors, for example transport and communication, LGRP, Education and power and energy sectors health sector is less prioritized. In these sectors, government's plan is to increase expenditure sharply starting from a significant amount, whereas in the health sector, the proposed plan is to increase financing steadily.

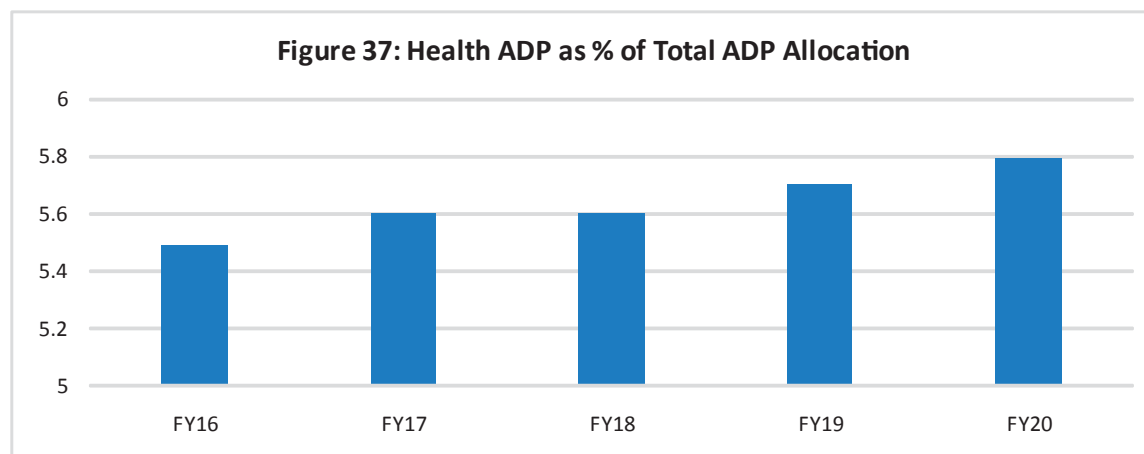
Table 11: Projected Health ADP as Percentage of total ADP

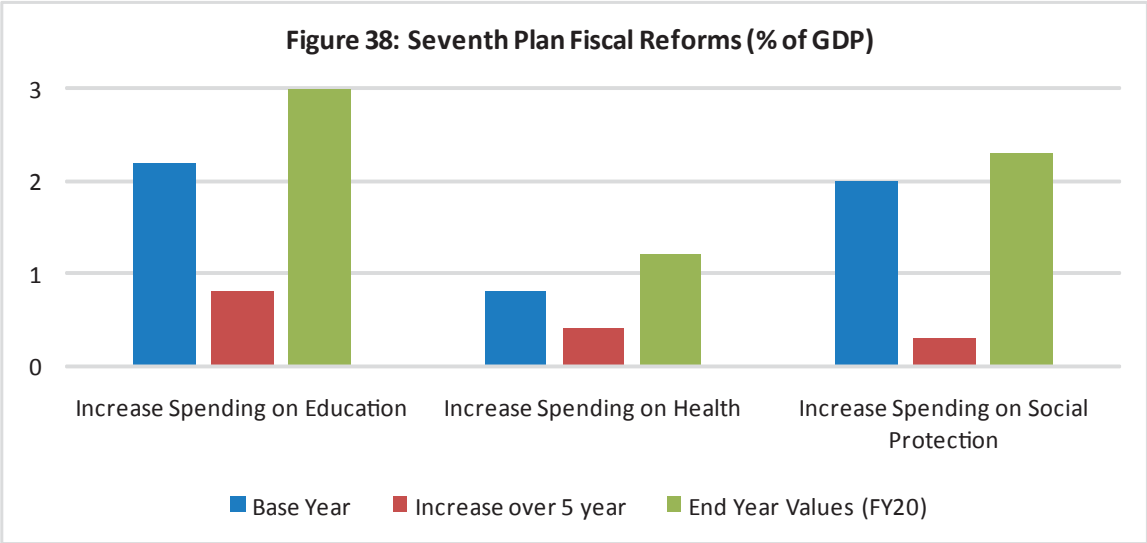
	2016	2017	2018	2019	2020
Genral Public Services	41.8	30.9	34.9	38.8	43.4
Defence	4.2	3	3.4	3.8	4.2
Public Order and Safety	15.3	18	20.3	22.5	25.2
Industrial and Economic Services	21	29.9	35.2	41	47.7
Agriculture	59	75.2	84.8	94.2	105.6
Power and Energy	184.8	191.5	189.9	211.1	236.1
Transport and Communication	234.3	278.2	310.5	343.3	385.5
LGRD	181.8	212.6	239.6	266.2	297.8
Environment and Climate Change	4.8	6.8	7.7	8.6	9.6
Housing and Community Amenities	18.9	16.6	18.7	20.8	23.2
Health	53.3	64	72.2	81.6	92.8
Recreation, Culture and Religion	8.3	10.1	11.1	12.3	13.8
Education and Technology	121.1	173.7	207	230.6	258.3
Social Protection	37.5	47.1	53.3	59.4	66.6
Total	970.4	1141.6	1287.8	1431	1600.7
Health ADP as % of Total ADP	0.054926	0.056062	0.056065	0.057023	0.057975

Source: 7th FYP, Bangladesh

In 7th FYP, the government plan is to increase health ADP as a % of total ADP allocation to 5.8% from around 5.5% in 2016. Though the plan is to increase the public investment for health steadily, it should be mentioned here that the existing level of public investment for health, in both relative and absolute terms, are way less than many countries which have very good health status as well as reproductive health, more focus and emphasis are essential and more financing must be done.

Source: 7th FYP, Bangladesh







Chapter 6: The scale of investments in reproductive health that are necessary to harness the demographic dividend

Falling dependency ratios do not guarantee more rapid economic growth: it should be accompanied with providing quality education, employment generation, good governance and the health policies.

Declining family sizes is important for demographic dividend. Positive correlations are found between large household sizes (usually comprising many children) and poverty (Lipton 1983). Declining family sizes give more opportunities for education and to increase savings at household level. Parents will invest more in each child when family size is small. Children from smaller families on average attain better education and health (Van Bavel et. Al. 2011). Therefore, policies targeting fertility reduction should be strengthened and investment should be increased in countries where fertility is greater than replacement fertility rate. Spacing of births is more important for child health and survival than the number of children. Fertility reduction has a large, direct effect on maternal mortality and enables women to participate more fully in the job sector (Ahmed et al. 2012).

Demographic transition leads to a decrease in dependency ratio and to increase the workforce initially. However, to ensure the demographic dividend, investment on education, reproductive health and employment generation are important. Quality education and a good state of reproductive health are important to increase productivity, life expectancy and capital accumulation.

Of course, integrated policies like the East Asian Countries are important to achieve the demographic dividend, especially the second dividend, so as the policies related to reproductive health. Bangladesh has achieved a great success in last few decades to improve reproductive health: lower fertility rate, decreasing infant mortality rate and maternal mortality rate and increasing use of contraceptive etc. Health related spending has been also increasing day by day. However, there are scopes to improve these indicators further, to reduce infant and maternal mortality rate further, and to ensure universal use of contraception. Moreover, regional disparities in mortality rate and fertility rate should be address strongly. To ensure the reduction of malnutrition of the children should be given the highest priority as in this indicator Bangladesh is lagging behind from many countries.

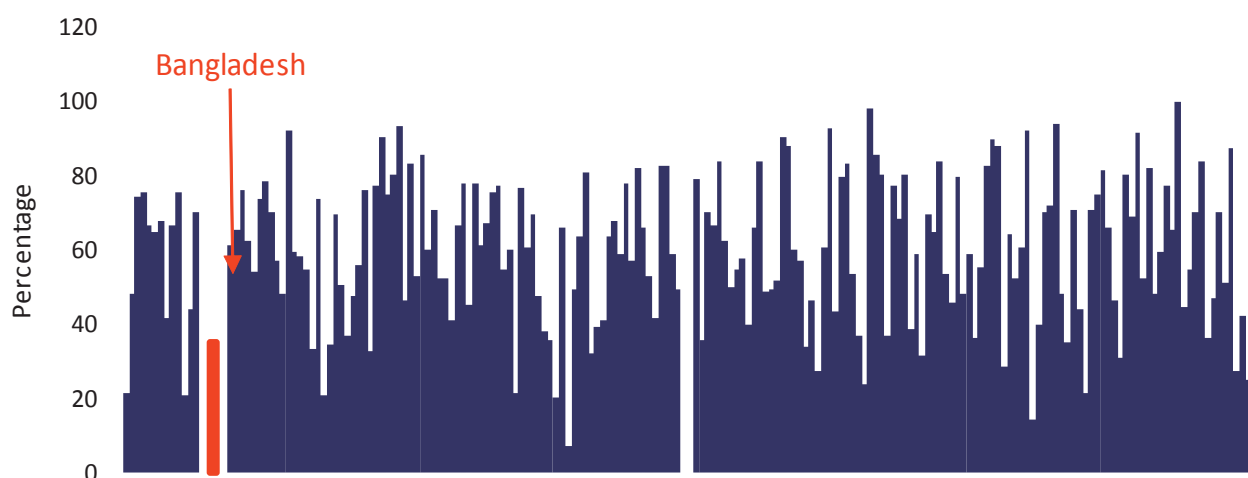
Bangladesh has acknowledged the importance of reproductive health to achieve demographic dividend in its 7th FYP and 4th SWAp. Targets are set to improve the reproductive health further to ensure a productive workforce as well as participation of the female workers. More public health investment is also proposed for the health sector.

However, the targets related to reproductive set by the Bangladesh to be achieved by 2020 should be more prioritized. Investment to reduce fertility rate, maternal mortality rate, use of contraception and to fight against communicable diseases will return more benefit in the form of higher GDP growth by ensuring a very productive workforce, women participation and generating savings by the households. So the investment proposed for the sector should be revised and more investment through public sector is essential. It should be mentioned here that though the health expenditure is not that bad in Bangladesh, but the public health expenditure is quite low. Public health expenditure can increase the benefit of health expenditure more than the private health expenditure as public health expenditure can be spent in a more systematic way and can target the disadvantaged groups from which the return would be higher. Therefore, to achieve the demographic dividend this study proposes more health investment targeting the youth and adolescent through public expenditure.

Public Health Expenditure is comparatively Low in Bangladesh:

In Bangladesh total health expenditure as percentage of GDP is only around 3.5% which is much lower than the countries which received the demographic dividend. To develop an integrated health system, public expenditure on health is important. Public health expenditure is one-third of the total health expenditure in Bangladesh whereas in countries where health system is efficient and effective, public health expenditure contributes the major expenditure in health.

Figure 39: General government expenditure on health as a percentage of total expenditure on health 2013 in Bangladesh is Relation to other countries



Source: WHO 2013

Table 12: Progress and Proposed Target in Different Health Indicators

Indicator	Base Year (2010)	Progress under 6 th FYP 2015	7 th FYP 2020	Proposed Target
Population	150.5 million (2011)		167-171 million	167-171 Million
Population growth rate	1.4	1.37	1	1
Sex ratio	102.3			
Life expectancy at birth	70.4 (2013)		72	76
TFR	2.7	2.11	2.0	2.0
Infant Mortality rate (per 1,000 live birth)	50.73	38 (2014)	20	<15
Maternal Mortality rate (per 100,000 live births)	194	170 (2014)	105	<100
Contraceptive Prevalence rate	60	62	75	>80
Unmet need for contraception	17	12 (2014)	10	<10
Percentage of children received full immunization	87	84	100	100
GNI per capita (in US\$)	843	1314	2009	>2500
HDI ^a	.469			
Head Count Poverty (%)	31.5	24.8	18.6	<10
Adult Literacy Rate	55	57.2	100	100
Employment to population ratio (Percentage of population age 15-64)	67.9		75	>80

Source: BNHA 1997-2012, 6th FYP, 7th FYP of Bangladesh

Family Planning

By 2020 the target of Bangladesh is to increase the contraceptive use rate to 75% and to increase the percentage of those using long term method. In fact for a better reproductive health, especially for girls and women, it is important to invest as much as required to ensure contraceptive use rate to increase to 100% and use of long term method to the same. Unless DG-FP successfully increases LAPM users contraceptive dropout rate will remain high and thereby it will be very difficult to sustain the achievement of increased CPR and reduced TFR.

Maternal Mortality Rate

By 2020, the target is to reduce maternal mortality rate to 105. Currently the maternal mortality rate is 170 and the country still loses 14 mothers a day due to complication of pregnancy delivery and post-partum period and largely due to delivery by unskilled birth attendants at home and lack of appropriate care for obstetric complication from a skilled provider at facility. The increase in facility delivery is mostly at the private sector. Notably, 23 percent of all deliveries are conducted through caesarean section. Effective coverage of 24/7 C-EmOC¹ is crucial to address maternal deaths resulting from pregnancy-related complications, provision of which relies on the availability of skilled human resources such as anaesthesiologists and obstetricians, equipment and infrastructure.

To improve the scenario, more public investment targeting maternal care is important. It is important to ensure that very good public health system will be available for providing maternal health care services. The modern public hospitals offering maternal care services should be established in the remote areas so that large number of mothers can get access to it.

Moreover, Bangladesh should set a target of maternal mortality rate less than 100 by the end of year 2020. This will ensure a very good reproductive health status of women and children which will result higher productivity and higher income. Coupled with lower fertility rate this will result more savings by the households and families and will create opportunities for more investment and capital accumulation.

To sum up, the proposed level of public investment in 7 FYP should be revised and must be increased further. More facilities should be established in the rural areas and more doctors and nurses should be available in all facilities. If necessary, nationwide voucher system should be offered by the government to encourage use of skilled attendants by all mothers.

Adolescent sexual and reproductive health

Adolescent pregnancy and child bearing entail a high risk of maternal death among adolescents, and the children of the young mother have a higher level of morbidity and mortality². Birth rate among Bangladeshi adolescent is one of the highest in world with around 569,000 births annually among 15-19 year adolescent girls³. This leads to a number of health risks arising out of early pregnancies, violence and inadequate nutrition. Adolescents giving births are subject to higher level of morbidity and lower level of productivity.

Public health investment targeting adolescent sexual and reproductive health should be increased further, especially targeting the unmet need of contraception. Universal coverage of contraception, increase in age of marriage etc. will result a better adolescent sexual and reproductive health. If the age at first birth can be delayed this will give the adolescents a better state of reproductive health as well as give them opportunities to be in the productive force. This will also decrease the fertility rate and the babies will be healthier.

Neonatal health

Progress on neonatal mortality has been slow and more attention is needed. More than 80 percent of the neonatal deaths occur within 7 days, 50 percent within first 24 hours of life and most of these deaths are at home without the care by a skilled birth attendants and are often unregistered¹. These are largely preventable and treatable conditions – complications due to prematurity, intrapartum-related deaths (including birth asphyxia) and neonatal infections (sepsis, meningitis and pneumonia). Care during labour, around birth and the first week of life; and care for the small and sick newborn- have the greatest impact on ending preventable neonatal deaths and stillbirths⁴.

Nutrition

The health and economic consequences of the DBM are too great to be ignored. Maternal and child under nutrition (MCU) is of greatest concern as constrained growth of the fetus and infant has lifelong consequences among those that survive. The consequences of MCU include increased risks of child mortality and morbidity, and—in those that survive—decreased learning capacity and school performance, and decreased work capacity, productivity, and lifelong earnings (Victoria et al. 2008). Maternal and child under nutrition in the aggregate is a cause of 3.1 million global child deaths annually or 45 percent of all child deaths in 2011.

⁷CEmOC is defined if any facility performs 6 Signal Functions for BEmOC (Parenteral Antibiotics, Parenteral sedatives, Parenteral Oxytocic, Manual removal of placenta, removal of retained products, Assisted vaginal delivery) plus Blood Transfusion, Caesarian Section

⁸UN World Population Monitoring 2002- Reproductive rights and reproductive health : selected aspects.

⁹United Nations, Department of Economic and Social Affairs, Population Division (2013). World Population Prospects: The 2012 Revision, DVD Edition

The health consequences of overweight and obesity in children and adults are many, including increased risk of nutrition related NCDs, all of which are increasing in the EAP region. These conditions include diabetes, high blood pressure, stroke, and cancer. The metabolic syndrome, which comprises a group of risk factors for cardiovascular diseases (CVD) including abdominal obesity, dyslipidemia, hypertension, and impaired glucose tolerance, increases the risk of developing CVD twofold and type 2 diabetes threefold. Therefore, if unmitigated, the economic burden of obesity and NCDs in Bangladesh could be catastrophic.

More investment is essential to Promoting Healthy Lifestyles, Healthy environment, Healthy diet and exercise, to reduce Gender based violence, suicide and mental health etc.

Overall Bangladesh should target the reproductive health of youth to harness the demographic dividend. It must ensure that quality of MCH is very good, and that the mothers are using maternal health care services properly. To ensure that the youth has a very good health status, policies should have more focus on the adolescents' health as well. Public investment must be increased further to decrease the infant mortality rate, child mortality rate and to improve the nutritional status of the children.

Reduction in infant mortality rate to 15 or less and maternal mortality rate to less than 100 will result higher productivity but will require further investment. A very good comprehensive MCH and FP services are essential and the services should be offered by the government to ensure that it will reach to all irrespective of income levels. Use of antenatal care and skilled attendant at births should be increased to 100% for which more public health expenditure is essential. Comparing with developed countries, it can be said that the proposed public investment in health should be more than double to ensure universal access to maternal care services.

Prevalence of underweight is 32% in Bangladesh whereas the average in high income countries is 1.5%. Bangladesh has the potential to reduce the level of malnutrition further, but more investment is essential.

Table 13: Comparison of Bangladesh with High Income Country Average in Different Health Indicators

Indicators	Country	2000	2013
Fertility Rate (Births Per Women)	Bangladesh	3.1	2.2
	High Income Country Average	1.7	1.7
Life Expectancy (in Years)	Bangladesh	65.3	70.7
	High Income Country Average	76	79.1
Infant Mortality Rate (Per 1000 Live Births)	Bangladesh	64.4	33.5
	High Income Country Average	9	6.1
Maternal Mortality Rate(Per 100000 Live Births)	Bangladesh	399	201
	High Income Country Average	22	18
Prevalence of underweight, weight for age (% of children under 5)	Bangladesh	42.3	31.9
	High Income Country Average	1.5	
Health expenditure as % of GDP	Bangladesh	2.6	3.7
	High Income Country Average	9.9	11.9

Public Health Expenditure as % of GDP	Bangladesh	1.1	1.3
	High Income Country Average	5.9	7.3
Contraceptive prevalence (% of women ages 15-49)	Bangladesh	53.8	62
	High Income Country Average	83 (UK, 2002)	
Births attended by skilled health staff (% of total)	Bangladesh	12.1	34.4
	High Income Country Average	98.3 (Canada)	
Morbidity (DALYs, Thousands)	Bangladesh	65824.4	51230.8 (2012)
	High Income Country Average	386820	388668 (2012)
Immunization, DPT (% of children ages 12-23 months)	Bangladesh	82	95
	High Income Country Average	91.9	95.2
Prevalence of HIV, total (% of population ages 15-49)	Bangladesh	0.1	0.1
	High Income Country Average	--	--

Source: World Bank

Table 14: Health Investment Projection from 2016 to 2020

	2016	2017	2018	2019	2020
Health (Proposed in 7 th FYP)	53.3	64	72.2	81.6	92.8
Health ADP as % of Total ADP	0.054926	0.056062	0.056065	0.057023	0.057975
Health (Investment necessary to harness demographic dividend)	106.6	128	144.4	163.2	185.6
Health ADP as % of Total ADP	>10%	>10%	>10%	9%	8%

Source: Estimated Using Data from BNHA 1997 – 2012.

GDP of Bangladesh is not that big and only 3.5% of the GDP is devoted to health expenditure. The proposed investment in 7th FYP will not change the scenario more. In fact the health expenditure should be doubled by the end of 2020, and it should be more than 5% of the GDP. More importantly, the major share of the health expenditure should belong to the government, which means the public expenditure on health should be increased more than 200%. All of these will definitely create a pressure on the provision other public services, but the return from good health and high productivity will ensure that more funds will be available for other public services in absolute terms as demographic dividend will ensure a very high growth rate of the GDP as well.

The target of Bangladesh is to ensure universal coverage of contraception and to increase the use of long-term method. These are the tasks of the government to ensure these services, and will require more investment.

To ensure second demographic dividend Bangladesh should ensure that the share of health expenditure is 5%-6% of the GDP, and the share public expenditure is the major share of total health expenditure. The additional

expenditure must be devoted to providing MCH and RPH services as well as family planning. A large amount of public health investment in the target areas of reproductive health will be helpful to harness the demographic dividend and the return in the form of GDP growth will be higher than the investment.

Challenges and issues in health sector financing

In a vast majority of low and middle income countries, national health systems face financial sustainability challenges as donor funding declines⁵. In Bangladesh, households constitute a major financing source of the Total Health Expenditure at 63.3%, which is unacceptable high, followed by Government contribution at 23%, Development Partners at 8.4%, while voluntary health insurance payment is 5.25% of THE in 2012. The HCFS (2012) aims to reduce the OOP to 32% by the year 2032, which requires OOP to reduce by 1.5% annually. However, in reality, the achievement is much slower; OOP decreased from 64% of THE in 2007 to only 63.3% in 2012. As oppose to HCFS (2012), which suggests to increase government contribution in THE to 30% by 2032, it declined from 26% in 2007 to 23% in 2012 (BNHA, 2015).

Inadequate pre - payment mechanisms to protect the population from catastrophic spending is a major challenge. Taxation is the main source of public revenue in Bangladesh, with very little revenue raised through pre-payment of insurance contributions (0.2% of total health expenditure). The vast population operating in the informal sector makes it difficult to bring them under insurance/health protection scheme coverage. There has been slower than expected progress in SSK implementation and little progress has been made in other pilot initiatives. The experience of Demand side financing is also not very satisfactory.

Health sector receives inadequate resources to finance a minimum benefit package. Health expenditure from public sources in absolute terms has increased in the past two decades, however, as a percentage of the total Government spending, has actually decreased. The budget of Ministry of Health and Family Welfare (MOHFW) as percentage of national budget is on a continuous decline, it decreased from 6.1% in 2010/11 to 4.1% in 2015/16. It thus remains below the HNPSP target (10%) and Sixth Five Year Plan target (12%). A number of development partners are leaving the sector, such as EU and AusAID, and others either planning to leave or reducing their contribution, such as KfW and the Netherlands. There has also been a shift in the priority at post-MDG era moving from health towards the new international targets focusing more on sustainable systems, climate change and environment.

Health spending disparities across wealth quintiles persists, with the health care consumption per capita decreasing as we go from the highest to the lowest quintile (e.g. concentration index for inpatient utilization being 0.3361 for inpatient care; the poorest to richest ration for institutional delivery was 1:6 in 2011). Geographic disparities are also evident across districts and sub-districts, and between rural and urban populations⁶; under-served areas include remote and hard-to-reach areas, including and especially, the tribal populations living in the Chittagong Hill Tracts. Gender differentials in health status and health care access persist, though reduced over the past decades.

The gap between PIP projections and budget allocation along with actual expenditure continues to widen during the course of implementation of the HPNSDP. The continuous under funding of PIP through annual budget and consequently underutilization against the original PIP adversely affect programme's performance. Several development partners channel resources through budget support, however, a large portion of external funds remains off budget. The number of projects funded by donors that fall outside the HPNSDP also increased over the period of the programme.

⁵ Katz et al. (2010)

⁶ Bangladesh Health facility Survey, 2014

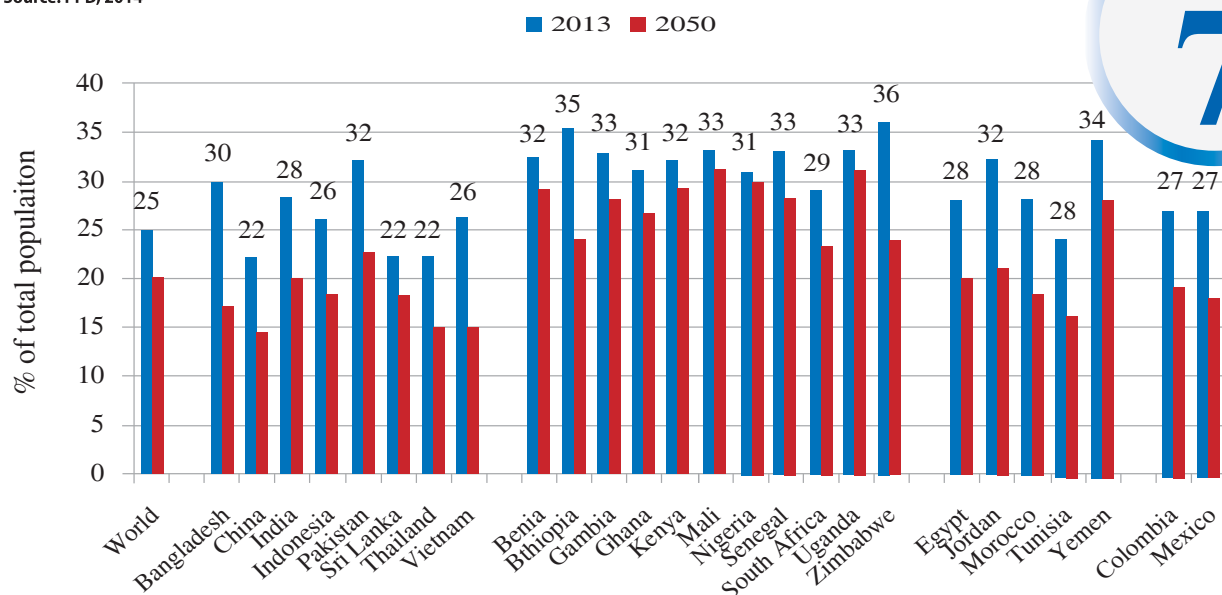
It is crucial to use available resources efficiently so that maximum health care benefits are achieved from the investments in the Health Sector. However, the government budget provided to public hospitals is allocated on the basis of number of beds and staff employed which leads to inefficiency and inequity in resource use as important factors such as the case mix and severity, quality of services and other cost factors are not sufficiently considered. The allocation is not linked to performance or results achieved. An analysis of revenue budget by line item shows that the major share of the revenue budget is allocated for salary and allowances, which increased from 55% in 2005/06 to 64% in 2014/15, mainly for recruitment of health personnel and introducing new pay scale in 2010/11. Allocation for medical and surgical requisites (MSR) increased to 11% in 2014/15 from 6% in 2005/06. However, proportion of allocation for repair and maintenance in revenue budget declined over time, and was only 4% in the current year's budget. This indicates inefficiency in resource use with low spending on repair and maintenance and MSR, while allocating 3% of resources for grants-in aid⁷.

Inappropriate procurement of medical and surgical requisites and equipment, construction of infrastructure through both the revenue and development budgets (about 25% of total HPNSDP budget), inadequate attention to future liabilities arising from investing in infrastructure development and leakages of drugs and equipment are some of the areas observed as inefficiency in resource use. In addition, weak capacity in budget planning (often inflated budgeting) and poor procurement planning result in under spending of resources. In general, delay in disbursement of fund, the complex procurement process, and delay in settlement of claims (bills) in the CAO (Health) office and at District and Upazilla account offices result in low utilization of resources.

Budget and expenditure tracking remains a challenge. MPIR (2014) reports that the OP has been slow in producing the Public Expenditure Review of the Health Sector (the last issue covered FY 2008-09). MTR (2014) also emphasizes on the importance of preparing annual PER to contribute in presenting more robust arguments in budget proposals linking budgets to health outcomes.

⁷ Budget documents, IBAS, August, 2015

Source: PPD, 2014



Concluding Remarks

- Bangladesh has been going through rapid demographic changes.
- Demographic transition in Bangladesh can be utilized to harness the demographic dividend.
- Demographic dividend is not automatic, policies are to be taken to achieve the benefit of demographic dividend.
- A good state of reproductive health can lead to a more productive workforce as well as can increase the number of workers leading to the path of achieving the demographic dividend in economic growth.
- About 1%-3% GDP growth can be ensured through the optimum level of demographic dividend.
- Reproductive health and demographic dividend are important for vision 2021 and 2041 and to attain SDGs
- Achievements of Bangladesh in the areas of health and reproductive health is praiseworthy
- Government's 6th FYP, 3rd SWAp, other health policies have played great roles in achieving these success.
- But there are areas remaining to be addressed: regional disparities in fertility rate, universal use of contraception yet to be achieved, maternal and child mortality rates are still high compared to the developed countries, use of maternal and child care services are not up to the mark, complications of the youth during pregnancies are still very alarming.
- 7th FYP and 4th SWAp are under processing and addressing many of these key issues including the demographic changes.
- However, to achieve a potential 1-3% additional growth through demographic dividend requires more focused policies in several areas including reproductive health.
- More priorities should be given and goal based policies should be adopted through 7th FYP and 4th SWAp and to be included in the consecutive FYPs and SWAps.
- South-East Asian countries and other developed countries which went through demographic transition, took the benefit of second dividend by taking integrated policies including education, health and employment.
- Reproductive health indicators in Bangladesh are praiseworthy, and in many areas of health achievement of Bangladesh is better than middle income countries.
- However, comparing with developed countries huge scopes for further improvement is evident in those areas where the progress of Bangladesh is highly satisfactory. For example, life expectancy at birth in Bangladesh

is 70.6, fertility rate is 2.2, child mortality rate is 44, and maternal mortality rate is 170. Compare to the middle income countries and South Asian Countries, these are very praiseworthy achievement. However, in developed countries, life expectancy is more than 75, fertility rate is close to 1.5, child mortality rate and maternal mortality rate are very low. So, Bangladesh has rooms for improvement in these areas.

- Moreover, some success may be misleading as the average is very good but the regional disparities are still remaining. For example, in some parts of the country, the fertility rate is close to 3.0. Furthermore, pregnancy rate of the adolescent girls in Bangladesh are one of the highest in the world.
- In some areas achievement of Bangladesh is in fact very poor. For example, more than one-third of the children in Bangladesh are either wasted or stunted or both.
- To improve the reproductive health scenario further and to achieve the demographic dividend, especially the second dividend, it is really important to ensure a very good reproductive health status of the youth.
- To ensure a very good reproductive health status, the targets mentioned in the 7th FYP should be revised, so as the proposed financing for the health sector.
- In Bangladesh only one-fourth of the total health expenditure is from public sources which is a major area of concern. As out-of-pocket expenditure is the dominant source of health care financing, the poor, and the disadvantaged, get less access to health care services.
- Only 10% of the total budget for health is allocated for the reproductive health services including MCH and FP services.
- To achieve the demographic dividend, the financing mechanism must go through rapid changes. The share of total health expenditure in GDP must increase by 100% at least to match with the other countries.
- Public health expenditure must be increased by 200-300% from its proposed level and major share of the public health expenditure is required to be allocated for the reproductive health services, especially to provide FP and MCH for all.
- Higher level of allocation in health sector will not create a pressure on the financing of other sectors as health sector allocation will accelerate the growth through demographic dividend and more revenues will be available to be spent in other sectors.

Scopes for future Studies

- The study is based on literature review and secondary data
- The study proposes to do further analysis of data from different countries, especially collecting their health care financing data and data about reproductive health status over the years. Regression analysis using health care financing data and health outcomes over the years for developed countries will estimate the price elasticity of reproductive health. This will be helpful to suggest the actual amount of investment necessary in our country to harness the demographic dividend.
- The study also suggests to collect primary data using structured questionnaire, especially about the reproductive health behavior of the youth and the disadvantaged groups of the society. Such analysis will be helpful to estimate the needs of the youth more commendably. The study also proposes to collect financing and service delivery related data using structured questionnaire. However, such rigorous studies require more time and budget.
- The study suggests to arrange focus group discussions in future studies and arrange seminars, workshops and discussion sessions in different parts of the country to collect the feedback of the target groups directly. Financing for such focus group discussion and seminars and allowing more time for such a study will be effective for policy formulation to achieve the demographic dividend and GDP growth.

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Report on

Policy Dialogue on “Assessing the need of sexual and reproductive health services for the youth population and the scale of investments that are necessary to harness the demographic dividend”

Venue: NEC Conference Room, Sher-e-Bangla Nagar, Dhaka-1207

Date: December 28, 2015

Organized by:
**‘Strengthening Capacity of the General Economics Division (GED) to
Integrate Population Issues into Development Plans’ Project**
General Economics Division
Planning Commission
Government of the People’s Republic of Bangladesh

A. INTRODUCTION

1. Background of the workshop

With the support of ‘Strengthening Capacity of the General Economics Division (GED) to Integrate Population Issues into Development Plans’ a Policy Dialogue on **“Assessing the need of sexual and reproductive health services for the youth population and the scale of investments that are necessary to harness the demographic dividend”** was held on December 28, 2015. The workshop was organized by the General Economics Division of Planning Commission, Government of the People’s Republic of Bangladesh in collaboration with UNFPA, Bangladesh at the NEC Conference Room, Sher-e-Bangla Nagar, Dhaka. Respected Member (Senior Secretary), GED Dr. Shamsul Alam graced the occasion as the Chief Guest, Dr. Sathya Doraiswamy, Chief-Health, UNFPA, Bangladesh was the special guest and Dr. Md. Abdur Rob Howlader, Member, Socio-economic Infrastructure Division of the Planning Commission was the Guest of Honor.

2. Objective(s) of the workshop

The overall objective of the workshop was to exchange knowledge and views among various stakeholders in integrating population issues into national development plans of Bangladesh. This policy dialogue with the key stakeholders was helpful in identifying the areas where more research will be needed and to generate a set of policy recommendations to fulfill the needs of sexual and reproductive health services for the youth population and the scale of investments that are necessary to harness the demographic dividend from this age cohort for ensuring human resource development facilitating the achievement of the Sustainable Development Goals.

The dialogue enabled the participants to see the current situation critically, identify the gaps in the existing policies, programs, interventions as well as to find the problems in the implementation of the plans/programs regarding population management.

Briefly, the understanding of the participants of various issues of population dynamics and its link to the development of Bangladesh in the context of current challenges was enhanced.

3. Participants

The workshop was attended by around 75 participants including representatives from relevant organs of the government including Planning Commission, Civil Society Organizations (CSOs), Community based Organizations (CBOs) and Academician. In addition, delegates of the United Nations Population Fund (UNFPA) also attended. A list of attendees is attached in **Annex-1**.

B. INAUGURAL SESSION

4. Welcome Address

The session was commenced with a welcome address from Mr. Mohammad Shahjahan, Project Director & Joint Chief, General Economics Division, Planning Commission. In his address, he briefed the participants about the project. He informed that the project focused on building the capacity of government personnel, particularly the in-house capacity of GED officials to integrate population issues and gender concerns into national planning and policy formulation. He rationalized the endeavor mentioning that despite the

remarkable achievement in most of the MDG goals, Bangladesh is facing huge challenges of booming population, climate change, gender and development issues.

He emphasized on the necessity of the discussed project being implemented to take the initiative to highlight the importance of managing the population trends and behaviors and gender concerns for the analysis, design, and implementation of medium and long term social or poverty reduction policies, plans and strategies, particularly against the backdrop of the MDGs (and SDGs), with due regards for human rights.

The Project Director told that this Policy dialogue is not only to introduce the project but also to ensure the stakeholders' support in implementing the project. One of the major purposes of the workshop was to provide an opportunity for all the stakeholders to understand their roles, functions, and responsibilities and accumulating their valuable suggestions/comments to guide the project in a successful trajectory. He gave special thanks to the Chief Guest for sparing his valuable time. He thanked all other guests and participants especially the key paper presenter and the principal discussant. He also appreciated the participants from the Government, NGOs, CBOs, CSOs, esteemed friends from the press and electronic media for their meaningful participation. Special thanks also went to the UNFPA Bangladesh team for their effort to make the workshop a successful one.

5. Address by the Chair of the Inaugural Session

By welcoming the respected guests and the participants, the chair told that Bangladesh has been currently facing the most important phase of economic transformation since the independence. The success of this transformation largely depends on the policies based on the demographic transition which is underway in Bangladesh. In the process of demographic transition, Bangladesh has been experiencing a rapid change in the growth and structure of population. Next five years will be the most important phase in determining the policies and strategies to face crucial challenge of transforming demographic window of opportunity to demographic dividend. In this context, the Seventh Five Year Plan can provide the most important policy guideline with a clear vision to lead the country toward a transition to optimum economic growth with high priorities to improvement in human resources.

He also told that Bangladesh has acknowledged the importance of reproductive health to achieve demographic dividend in the Seventh Five Year Plan. Targets are set to improve the reproductive health further to ensure a productive workforce as well as participation of the female workers. However, the targets related to reproductive set by the Bangladesh to be achieved by 2020 should be more prioritized and revised further. About 1%-3% GDP growth can be ensured through the optimum level of demographic dividend, so reproductive health and demographic dividend are important for vision 2021 and 2040 as well as to attain SDGs.

Lastly, he requested the participants to come-up with suggestions and recommendations that will create scope for effective, efficient and sustainable development of Population sector in line with the commitment of the Government.

SESSION II: BUSINESS SESSION

6. Dr. Shamsul Alam, Member, GED, Planning Commission chaired of the business session.

7. A Key Note Paper was presented by Dr. Rumana Huque, Associate Professor, Department of Economics, University of Dhaka on behalf of her team from Bureau of Economics Research, University of Dhaka on

‘Assessing the need of sexual and reproductive health services for the youth population and the scale of investments that are necessary to harness the demographic dividend’.

In her presentation, Dr. Rumana highlighted the whole issue by categorizing them into seven different sections which are summarized as follows:

Bangladesh has made a remarkable progress in improving people's health and achieving Millennium Development Goals related indicators. Under Health, Population and Nutrition Sector Development Programme (HPNSDP, 2011-16) mortality rates have been declined further and health services have been improved considerably (MTR, 2014). However, in comparison with the developed countries the state of reproductive health in Bangladesh is quite poor. Economic growth is a function of several factors and technological aspects, but no doubt that number of healthy and skilled workers does also matter greatly. A better state of reproductive health of youth will ensure more productive workforce as well as more workers, which in turn will accelerate the savings, investment and growth, *ceteris paribus*.

She also mentioned that the boost in economic development resulting from increase in number of working population relative to the number of dependent could be referred as demographic dividend. A country like Bangladesh who is trying heart and soul to stimulate the economic growth to a magic level of 7 or 8 percent, and graduate from the level of Least Developed Country (LDC) to Developed one, harnessing demographic dividend is vital. It is especially because of two reasons. First the country has already achieved a huge stock of young population through demographic transition, so transferring them into economically active work group would help to increase the overall production of the economy and hence economic growth. Secondly since the country already has shortage of resources and low investment - GDP ratio, decrease in dependency ratio which is a result of demographic transition will open the window of increasing private saving that can in turn be transferred into investment to achieve a higher economic growth. Developed countries reaped the benefit of demographic transition, especially in the form of higher productivity, more savings and more capital formation. By ensuring a very good state of reproductive health of youth, along with other policies, for example education and employment creation, a country can ensure a very productive workforce as well as more participation of the women in economic activities.

She stated that, initially demographic dividend arises in the form of first dividend: more resources can be released from child care to education and employment generation. Eventually, the first dividend disappears as within few decades old-age dependency ration increases, so more resources are required for the care of older people. However, in the process of demographic transition and first dividend, proper policies in the areas of education, health and employment lead to savings generation and capital accumulation. Higher capital increases the marginal product of the labour, so as the economic growth. Capital accumulation due to demographic transition leads to the second dividend of demographic changes.

She highlighted that, a very good status of reproductive health is essential to reap the benefit of demographic dividend. Youth population with a better state of reproductive health in turn become a highly productive workforce. Reproductive health can be measured using some indicators such as life expectancy, fertility rate, lower maternal and child mortality rates etc. A very good state of reproductive health can ensure the effective participation of the women in economic activities. Thus, reproductive health is essential to accumulate the benefit of demographic dividend.

She told that, Bangladesh has been experiencing rapid demographic transition in last few decades. Dependency ratio has been decreasing, number of youth has been increasing, and currently number of older people has been increasing as well. So Bangladesh is in the second stage of demographic transition now, and Bangladesh should set plans to achieve the second dividend. To achieve the second dividend of

demographic transition, policies should target quality education for all, employment generation and reproductive health of youth etc. In some context the reproductive health of Bangladesh is satisfactory. Current fertility rate is 2.2, life expectancy is 71, maternal mortality rate is 170 and child mortality rate is 46. In terms of these indicators Bangladesh is better than its South Asian counterparts, and even from middle income countries, though Bangladesh itself is a lower-middle income country. However, there are some areas of concern as well: regional disparities are present, there are places where fertility rate and mortality rate are higher. Rural-urban differences prevail in life expectancy in favour of the urban people. There are rooms for improvement in the areas of child and maternal mortality rates, contraception use, unwanted pregnancy and delivery etc. Moreover, malnutrition in Bangladesh in many cases are worse than some African Countries.

She also identified that, total health expenditure in Bangladesh is only 3.5% of its GDP which is much worse than many countries. Out of total health expenditure only 10-15% is used for reproductive health services. Out-of-pocket expenditure for health is two-third of the total health expenditure, and public health expenditure is only one-fourth of the total health expenditure. Donors and NGOs have been increasing their contribution over the years. The areas of concern are: total health expenditure is relatively at very low level, and the contribution of the public sector is not at the desired level. In fact, to ensure a very good reproductive health status of the youth, public health expenditure should play the key role. Public health expenditure on reproductive health and maternal and child care can be spent in an efficient way and disadvantaged groups can get access to these services easily. As long as allocation for the health related ADP will not be the dominant source of financing health care, it will be difficult to deal with the regional disparities in reproductive health services and to ensure the reproductive health of youth, especially the women's reproductive health.

She also told that in 7th Five Year Plan, 4th Swaps and Sustainable Development Goals, achieving the goals of reproductive health is prioritised. Target is set to increase the life expectancy to 71, fertility rate to decrease to 2.0, maternal mortality rate to decrease to 105 from 170 and malnutrition to decrease to a satisfactory level. Public health expenditure is also proposed to increase over the years. However, evidence suggest that proper health related policies could increase the life expectancy to 76, and fertility rate can be decreased to a level which is less than the replacement level. Reducing child mortality rate to less than 15 and maternal mortality rate to less than 100 are important to ensure proper reproductive health. Under nutrition must be decreased substantially. Therefore, it is important to revise the targets set in the 7th FYP related to reproductive health services to ensure a higher life expectancy, lower fertility rate and lower maternal and child mortality rate to the levels in line with the developed countries. These can be done by ensuring access to maternal and child care services by all mothers and children, by ensuring that all mothers using antenatal care and skilled attendants and that they give births in health facilities. It is also important to ensure universal coverage of contraception and increasing use of long-term methods. Moe funds must be available publicly to fight against communicable diseases.

She suggested that to improve the reproductive health in order to harness the demographic dividend, public health expenditure must be increased 2/3 times than its proposed level at 7th FYP. She expected that huge investment by the Ministry of Health and Family Welfare to improve the reproductive health of youth will effectively improve the health of the youth to the desired level and the country will be able to achieve the benefit in the form of demographic dividend.

She suggested that countries invested for reproductive health to get the benefit of demographic dividend enjoyed huge growth. Huge GDP growth will make more revenues available for the government to spend in other public sectors. Investing in health is not only the right, it is also a very good investment in countries where demographic transition have been going on.

Lastly she concluded that Bangladesh has the potential to be a middle income country if it can accumulate the benefit of demographic dividend. To ensure the growth which may arise due to second dividend of demographic transition, a comprehensive policy including huge investment on reproductive health, especially by the government, are important. Experiences from developed countries suggest that health investment in Bangladesh is low and the scale of public investment is extremely low. Proper investment by the public sector on health care services can make the sector efficient and can effectively ensure a very good reproductive health of youth. In fact, public investment on reproductive health should be increased by two to three times to ensure the demographic dividend and to faster the economic growth of Bangladesh

The Chair of the session then opened the floor for discussion on the presentation. The comments and queries raised are noted below.

8. Open Discussion

It was discussed in the session that a separate section may be added in study as the review of the literature regarding to find out the causal relationship among the reproductive health, productivity and GDP growth both from Bangladesh as well as World perspectives and based on that draw a conclusion. It was also discussed in the session that an econometrics analysis may be added taking parameters of Population Growth, GDP Growth and Reproductive Health in order to realize how much invest will be required for reproductive health to lead the GDP growth and productivity. It was stated that it would be even better if regional disparity in the area of reproductive indicators may be added as a separate subsection of the study. It was also stated that it would be much better to say the scope of first demographic dividend is ‘disappear’ rather than ‘negative’ in the figure 1 of page 9 of the study because negative is not proper word for description and also would better if table 7 of page 29 of the study is more elaborative because it is not clear from that table that how the figure of investment requirement have been derived. There may be an indication of low cost solution model in terms of reproductive health that have been exercised in Bangladesh in achieving health related problems. Apart from that, it was recommended that a cost benefit analysis is needed before the conclusion in order to measure the output in terms of expenditure.

It was discussed in the session that rather citing examples from East Asian countries it would have been better if comparison of Bangladesh with East Asian countries in different health indicators have been given. It was also stated that how changes in dependency ration changes in GDP growth that can be showed in regression analysis and how changes in reproductive health, maternal mortality, infant mortality can translates in participation of female labour force.

9. Address by Guest of Honor Dr. Md. Abdur Rob Howlader, Member, SEI Division, Planning Commission

Mr. Howlader specifically pin pointed that Population of Bangladesh is increasing and will continue to grow at least next three to four decades even after achieving the replacement level of fertility due to in-built effect of population momentum. The changes in population have wide range of consequences on the lives of people in general and on sustainable development in particular. As a result, Bangladesh faces various population challenges for sustainable development such as population ageing, eradication of poverty, improvement in health care services, unmet need of family planning, employment opportunities, and human resources development.

Recognizing the significance of the population problem, the Government has initiated updating the population policy to reflect recent realities and ensure effective delivery of population control and reproductive health services. Population problem needs to be re-emphasized and it is imperative to update appropriate multi-sectoral programs to address the issues of population dynamics for development.

Despite of high population density and low per capita income, Bangladesh has achieved considerable improvements in demographic and socio-economic indicators owing to some promising policies, strategies and interventions taken by the governments and other stakeholders.

Next five years will be the most important phase in determining the policies and strategies to face crucial challenge of transforming demographic window of opportunity to demographic dividend. This will require quality investment on the young population who will be entering into the workforce in growing numbers. The growth rate of population is still above (1.00) and the total fertility rate is yet to reach the replacement level, however, the country is going through a rapid transition due to underlying impact of population dynamics with an enormous increase in the base population. In other words, the population size after the completion of demographic transition and after being stabilized will be much higher than the current size of the population in Bangladesh. In this context, the Seventh Five Year Plan can provide the most important policy guideline with a clear vision to lead the country toward a transition to optimum economic growth with high priorities to improvement in human resources.

10. Closing Remarks by the Chair

Dr. Shamsul Alam, Member, General Economics Division, Planning Commission thanked all the speakers for their brief but valuable speech. He said that most of the key issues were addressed in the speeches related to population and its link to the development of Bangladesh. With respect to some indicators, he requested to use the figure of latest Bangladesh Bureau of Statistics (BBS) and other government data sources. He also requested Dr. Rumana Huque to update the information and based on the discussion and rewrite the paper and submit the same to the General Economics Division of the Planning Commission to include this in the workshop proceeding.

The workshop was officially called off by thanking all the participants from the Chair.

Policy Paper on

Projection of Youth and Adolescent Needs for Human Resource Development in Bangladesh

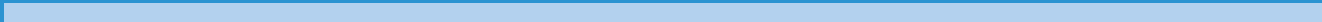
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PAPER 2



General Economics Division (GED)
Planning Commission

Ministry of Planning, Dhaka, Bangladesh
March 2016



Background :

Bangladesh, with a current population of 159.86 million, is expected to have 223.39 million population by 2061 indicating that despite substantial decline in fertility rates the total population will continue to increase at least for few decades partly due to the effect of population momentum. Thus, by 2051 Bangladesh will have about 134.30 million working-age population (15-59) (BBS, 2015). According to the population projection done by BBS, youth population would grow from 41.22 million in 2011 to 50.79 million in 2026, implying growth of 22.3 percent over the period. Similar projections were also reported in a recent demographic impact study conducted by the UNFPA (Jones and Hayes, 2015). The large number of youth and adolescent population can bring the opportunity of rapid economic development if appropriate policy interventions are taken to ensure human resource development. However, despite achieving remarkable success in meeting many of the MDGs it will be a daunting challenge for Bangladesh to achieve the Sustainable Development Goals (SDGs) due to several resource constraints in one hand and the existence of large number of youth and adolescent population without adequate training and skills. Thus achieving the SDGs will depend on the extent to which Bangladesh can fulfill the needs of youth and adolescent population for translating them into human resources. For instance, it is very essential to ensure adequate employment opportunities for the large number of youth population in order to get rid of poverty in the one hand and to ensure sustainable development on the other. However, ensuring adequate employment opportunities for large number of population requires long-term planning and investment in appropriate sectors to develop a skilled labour force so that they can compete globally and take the opportunities of employment in abroad. To generate effective intervention programs for translating youth and adolescents into human resources it is worthwhile to assess their needs in greater detail.

Objectives of the Study

The purpose of this study is to assess the needs of youths and adolescents for transforming them into human resources so that they can become more productive and can compete in the global labour market as well. More specifically,

1. To provide updated projection of youth and adolescent population for ensuring human resource development;
2. To review current status of the needs of youth and adolescent population and identify the gaps where greater attention should be given for ensuring human resource development;
3. To identify the needs of youth and adolescent population in general and their needs on quality education, training and professional development, employment, healthcare, and capacity building for disaster risk reduction in particular for ensuring human resource development;
4. To generate a set of policy recommendations to fulfil the needs of youth and adolescent population for ensuring human resource development facilitating the achievement of the Sustainable Development Goals.

Data and Methods

In this study, both primary and secondary data were used to assess the needs of youths and adolescents for human resource development in Bangladesh. Secondary data were collected from scholarly journals, census reports, surveys reports, and annual reports of the Government and international organizations. Updated projections of youth and adolescent population were provided to identify youth and adolescent needs in areas of education, healthcare, employment, training and professional development, and capacity building for disaster risk reduction for facilitating long-term policy formulation as well human resource development.

The primary data were collected through Key Informant Interviews (KII) with relevant stakeholders, policy makers and actors in the field of youth and adolescents in the country. Thus, in this study both qualitative and quantitative analysis were carried out to generate credible policy recommendations.

Definition of Concepts and Terms

WHO identifies *adolescence* as the period in human growth and development that occurs after childhood and before adulthood, from ages 10 to 19. Adolescents depend on their families, their communities, schools, health services and their workplaces to learn a wide range of important skills that can help them to cope with the pressures they face and make the transition from childhood to adulthood successfully (WHO, 2014). “*Youth*” is best understood as a period of transition from the dependence of childhood to adulthood’s independence and awareness of our interdependence as members of a community. The UN, for statistical consistency across regions, defines ‘youth’, as those persons between the ages of 15 and 24 years, without prejudice to other definitions by Member States (UNESCO, 2015). However, in Bangladesh in most cases the Government uses 15-29 years as the youth population. Consistent with this, *Bangladesh Bureau of Statistics*, in their recent projection of Bangladesh Population, has used age 15-29 to define youth population. For this reason, to keep consistent with earlier works in Bangladesh ages 15-29 has been used to define youth population. Generally *human resource development* is considered as a set of systematic and planned activities designed by an organization in order to provide its members with the necessary skills to meet current and future job demands (Foster & Akdere, 2007). However, from a broader perspective and demographic point of view, human Resource Development indicates providing quality education and skill training to large number of working and youth population to increase their productivity and to make them more compatible in the global labour market. The major components of human resource development include providing quality education, professional development training, ensuring human rights, women empowerment, equality and equity, and reducing vulnerabilities and building resilience for sustained human progress. Ensuring human resource development has wide range of consequences on increased productivity, reduced unemployment and underemployment, increased flow of international migration, sustained capacity to compete in the global world, and effective population management.

Review of Previous Research Findings and Policy Documents

This section presents review of literature related to various aspects of youth and adolescent population. Particular focus was given on reviewing findings of previous research on problems and vulnerabilities of youths and adolescents in Bangladesh to assess their needs, reviewing of annual reports of the Government and NGOs to illuminate current situation of youths and adolescents in areas of child marriage, early childbearing, education, healthcare including reproductive health, employment, poverty and gender inequality. In addition, policy documents (e.g., national education policy) and Governments five-year plans and long-term plans were also reviewed to identify gaps where further policy interventions are needed for human resource development.

Earlier research shows that for sustained economic growth it is worthwhile to invest in increasing quality of human capital through investing in early schooling, health and employment (Lee and mason 2010; Lee and Mason, 2012). Investing in human capital will contribute to increasing age at marriage and higher rate of contraceptive use, thus leading to decline in fertility rate (Bongaarts and Sinding, 2012). Researchers argue that expanding secondary schooling, employment opportunities, and universal access to reproductive health care, as well as large-scale maternal and child health and nutrition programs are essential to accelerating fertility transitions (Gates Institute, 2014). They conclude that government investment in women’s human capital will increase per capita income, and shifting from high to low fertility will add work years to female labor supply, raise household incomes, and increase tax revenues.

A country's possibility of capturing demographic dividend also depends on the extent to which gender inequality exists in that society since fifty percent of the labour force are women. Gender inequality in education and employment opportunities will hurt economic growth. For this reason concern has been raised that countries which ignore the female half of their population will not realize their demographic dividends (Desai, 2010; Gates Institute, 2014). Dollar and Gatti (1999) find that a one percent increase in the percent of females with secondary schooling can increase per capita income growth by 0.3 percentage points. Educated mothers not only raise more highly educated children but they contribute to the labor supply and household income by participating in the labor force (Schultz, 1995, 2002). In connection with this Reher (2011) predicts that the demographic dividend's window of opportunity is limited, and for many low-income countries where fertility transitions are underway, the window will close over the next 10 to 20 years.

The importance of investing in human capital for reaping the benefits of demographic dividend has also been emphasized by Hayes and Jones (2015). In their study, Hayes and Jones (2015) mention that for Bangladesh a much greater effort by the government and its development partners are needed to ensure that young people complete a full course of secondary education, and if possible to go beyond secondary school to technical and vocational training. Considering the current state of education and employment scenario they argue that Bangladesh's education system has yet to reflect the fact that modern economic growth is "science-based"; higher value added jobs require a greater understanding of science and technology and technical training.

Similarly Haider (2015) mention that Bangladesh will not be able to take the advantage of demographic dividend unless we invest massively in education, health and nutrition, infrastructure, and create favourable environment for local and foreign investment. He argued that because only new and enhanced infrastructure will provide jobs, increase attractiveness for foreign direct investment (FDI), improve productivity and urbanisation, and ultimately, connect us to the global economic markets which Bangladesh desperately needs to access. For this reason, Bangladesh should adopt an expansionary economic policy to increase production, productivity and consequent employment generation for future workforce through higher investment in various sectors.

An important obstacle in ensuring human resource development in Bangladesh is the higher prevalence of child marriage. Child marriage has wide range of consequences in the lives of women such as denial of education, domestic violence and abuse, less labour force participation, perpetuation of gender inequality, higher prevalence of divorce, abandonment, and separation, perpetuation of poverty, bad quality of marital life, and facilitating sexual exploitation. Hence UNFPA (2012:4) argued that "child marriage robs girls of their girlhood, entrenching them and their future families in poverty, limiting their life choices, and generating high development costs for communities." In addition, earlier studies showed a strong association between child marriage and early pregnancy, partly because girls are pressured to prove their fertility soon after marrying and have little access to information on reproductive health. These women are less able to carry their pregnancy to a successful ending (Kamal and Hassan, 2013; Doskoch, 2013). In addition, UNFPA (2014) argues that lower age at marriage and higher rate of unplanned pregnancy in Bangladesh would certainly work as barriers for translating millions of young females into human resources. Hence they recommended to ensure quality education, better health services, opportunities for jobs or self-employment, nutritious food, honest and responsive government.

Population Council conducted a survey in 2015 among 3,585 boys and girls ages 12-19 to assess needs of urban adolescents in Bangladesh. They found that early marriage among urban adolescent girls was high and about 20.0 percent of girls aged 12-19 were married. They noticed that knowledge levels on sexual and reproductive health were poor for unmarried adolescents and boys. The study revealed elevated levels of risk of moderate to severe depression associated with orphanhood, past experience of violence, poor school

performance, and traumatic experiences in childhood. More striking was the higher levels of depression associated with pregnancy and childbearing among girls relative to girls who had not yet experienced those lifecycle transitions. Urban adolescent girls were more likely to work than rural girls, and nearly one in four adolescent girls were engaged in income-earning activities (Population Council, 2015).

The Government of Bangladesh has taken various policy initiatives to fulfil the needs of youth and adolescent population for translating them into human resources. For instance, The 2003 national Youth Policy of Bangladesh was designed with an aim to empower youths and create appropriate opportunities for employment and entrepreneurship development through proper practical education and skill developing training, and to encourage youths especially the unemployed youths towards self-employment through proper utilization of local resources and by providing credit and create favorable situation with a view to bringing out all the dormant potentialities of the youth. To achieve these goals emphasis was given on the following implementation strategies:

- To establish network of training and technical advice centre for the youth from national to grass root level with a view to imparting skill development training to youths for human resource development under the initiatives of government and private sectors.
- To make the process of self-employment easier the trained youth will be given micro credit easily at low rate of interest. For this purpose a suitable credit manual will be followed too.
- Logical framework will be made to empower Department of Youth Development for registering youth organizations
- Realistic and updated training centers will be established throughout the country including supply of modern training equipments in the existing training centers. Proper training on entrepreneurship development will be given to youths from these centers.

The *National Education Policy 2010 of Bangladesh* also emphasized on quality education for producing a generation of skilled human resource development. For this reason, the 2010 National Education Policy was designed with a view to evolve an education process that is oriented to creativity, practicability and productivity to achieve advancement in the economic and social fields of the country; to create a scientific mindset of the students and to develop in them the qualities of leadership; to ensure skills of high standard at different areas and levels of education so that learners can successfully compete at the global context; to attach substantial importance to information and communication technology (ICT) along with mathematics, science and English in order to build up a digital Bangladesh based on knowledge-orientation and cultivation of ICT; 13; to put special emphasis on the extension of education; to give priority to primary and secondary education; and to motivate the students to show dignity of labour; to enable students to acquire skills in vocational education to facilitate self-employment, irrespective of levels of education. Moreover, the education policy also aims to build students as skilled human resources to fight the challenges of the world threatened by climate change and other natural disasters and to create in them a social awareness about environment.

The 'Bangladesh Vision 2021' focuses on meeting the skill training needs of the youth and the skilled labour force requirement of the country by increasing skill development rate by 10-15% per annum; building partnership with development agencies to reduce poverty with sustainable development by 15-20% per year; reforming the skill development system to empower all individuals and ensure Bangladesh's competitiveness in the global market to be recognized globally by 2025; and minimizing skills mismatch (Quality and Quantity) across industries --targeting 25% by 2015 and 50% by 2020.

The 2011 National Skills Development Policy of Bangladesh has been designed to provide a clear statement of the reform agenda and strategy for skills development, to improve the quality and relevance of skills development, and to establish more flexible and responsive delivery mechanisms that better service the needs of labour markets, individuals and the community in Bangladesh. In this policy document, emphasis has been given on the following aspects to ensure decent employment opportunity for adolescents:

- Working adolescents entry pathways into formal TVET courses, including apprenticeships;
- Courses specifically designed to cater for the needs of working adolescents to gain meaningful employment;
- Flexible shifts for the delivery of courses for working adolescents ;
- Assessment and Recognition of Prior Learning (RPL) procedures that allow for reasonable accommodation;
- A structured industry work placement component for each course (where practical);
- A safe learning environment and a workplace free from child labour;
- Training to instructors, trainers and managers in the special needs for training working children; and
- Courses for working adolescents that include a support mechanism during and after training, including counselling services.

(National Skills Development Policy 2011, Ministry of Education, GOB).

The 2011 National Women Development Policy of Bangladesh was introduced to ensure overall wellbeing of women through ensuring their socio-economic, political, administrative and legal empowerment, providing full and equal participation of women in the mainstream socio-economic development, and bringing up women as educated and skilled human resources. In this policy document, greater emphasis has been given on the following four aspects to translate women into human resources:

- To increase education of women, to eliminate discrimination in education rate and opportunities between man and woman and to follow the Education Policy 2010 aimed at mainstreaming women in the development.
- To continue all out efforts to eliminate illiteracy of the women and in particular, to give utmost importance to educate and train the female children and women in technical, technological and scientific pursuits.
- 21.3. To continue with stipends for the female students to ensure participation in education of the female children.
- To take steps to make female education free up to honors level.

(National Women Development Policy 2011, Ministry of Women and Children Affairs, GOB)

By adopting a core theme of "Accelerating Growth, Empowering Citizens", the 7th Five Year Plan of Bangladesh (2016-2020) emphasized on developing a knowledge based economy through development of human capital by investing more in education and health sectors to ensure higher productivity. To achieve the desired goals of the 7th Five Year Plan following targets have been set for ensuring human resource development in Bangladesh:

- Achieving 100 percent net enrolment rate for primary and secondary education

- Percentage of cohort reaching grade 5 to be increased to 100 from current 80 percent
- Under 5 mortality rate to be reduced to 37 per 1000 live birth
- Maternal Mortality Ratio to be reduced to 105 per 100,000 live births
- Immunization, measles (percent of children under 12 months) to be increased to 100 percent
- Reduce proportion of underweight children among under-five children to 20 percent
- Births attended by skilled health staff to be increased to 65 percent
- Reduction of Total Fertility Rate to 2.0
- Increasing Contraceptive Prevalence Rate to 75 percent

(7th Five Year Plan, FY2016-FY2020: Accelerating Growth, Empowering Citizens, Planning Commission, GOB)

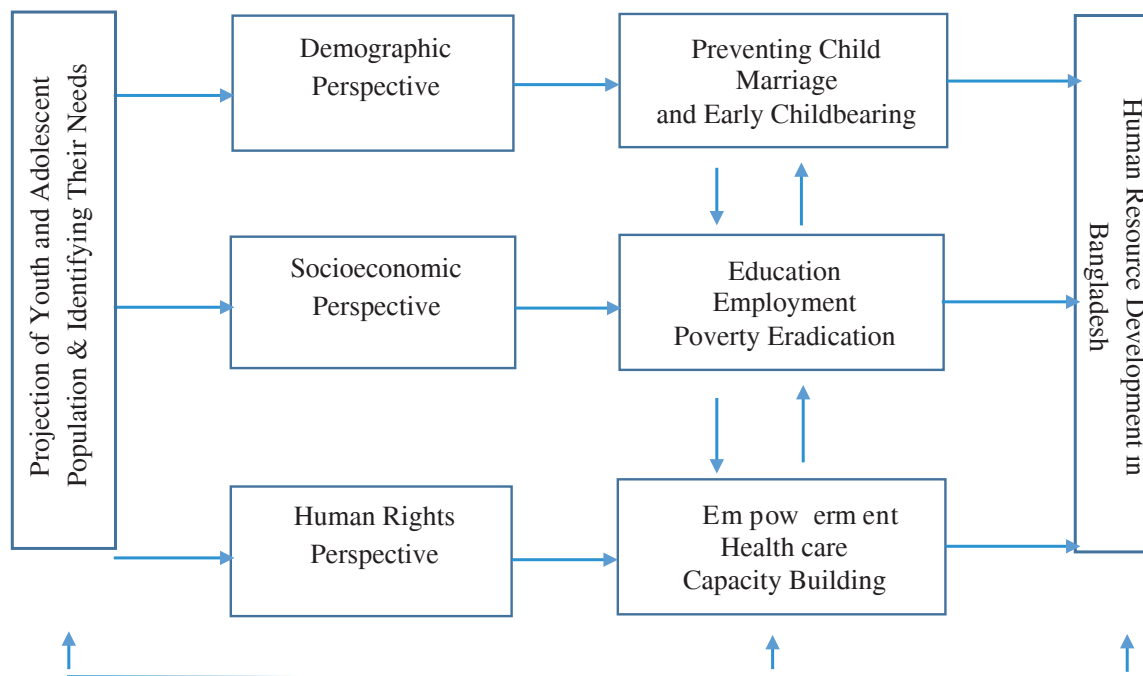
Among developing countries Bangladesh has shown remarkable progress in achieving the Millennium Development Goals setting the stage for achieving the Sustainable Development Goals (SDGs) by 2030. Among the 17 goals of the SDGs, eradication of poverty, quality education, gender equality, decent work and economic growth, and reduced inequality have received utmost importance. To ensure human resource development targets have been set in SDGs to ensure equal access for all women and men to affordable and quality technical, vocational and tertiary education, including university; to substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship by 2030. In addition, targets have been set for achieving higher levels of economic productivity through diversification, technological upgrading and innovation, including through a focus on high-value added and labor-intensive sectors; and to achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value by 2030 (United Nations, 2015).

Conceptual Framework of Human Resource Development in Bangladesh

Review of earlier research and policy documents clearly show that addressing the needs of youth and adolescent population is the key to ensure human resource development in Bangladesh. However, the needs of youth and adolescent population are multifarious ranging from demographic, and socioeconomic to human rights issues. Hence, a multi-dimensional approach is needed in designing policy interventions that are comprehensive and effective as well. Thus in this study, in assessing the needs of youth and adolescent population, a multi-dimensional conceptual framework comprised of demographic, socioeconomic and human rights perspectives has been developed (Figure 1). According to the framework, the first step of human resource development is the projection of youth and adolescent population. Although there are several areas that should be considered in assessing youth and adolescent needs emphasis has been given on demographic, socioeconomic and human rights issues which have wide range of direct and indirect impacts on other areas as well. For example, preventing child marriage will eliminate the problem of lower contraceptive prevalence and higher unmet need of family planning among adolescents.

In assessing the needs of youths and adolescents two factors have been considered from *demographic perspective*: preventing child marriage and early childbearing (Figure 1). According to the 2011 Bangladesh Demographic Health Survey, two-third women got married before age 18 in Bangladesh. Marrying before 18 is a severe obstacle in transforming adolescent population into human resources because of the wide range of negative consequences of child marriage on education, health, and employment. Hence emphasis has been given on preventing early childbearing which will not only have significant impact on health of adolescents but also will facilitate continuation of education and getting engaged in the labour market.

Figure 1: Conceptual framework of human resource development in Bangladesh



From socioeconomic perspective, in the conceptual framework of human resource development emphasis has been given on ensuring quality education, adequate employment opportunities and consequently poverty eradication. Ensuring quality education for all will make our workforce more productive and competitive in the global market. Creating adequate employment opportunities along required support services for self-employment will exert strong impact on rapid economic growth and consequently poverty eradication from our society. Moreover, poverty eradication is important for ensuring human resource development because it will be difficult for poor people to invest in human capital. Thus poverty eradication will promote human resource development in a society along ensuring vibrant economic growth.

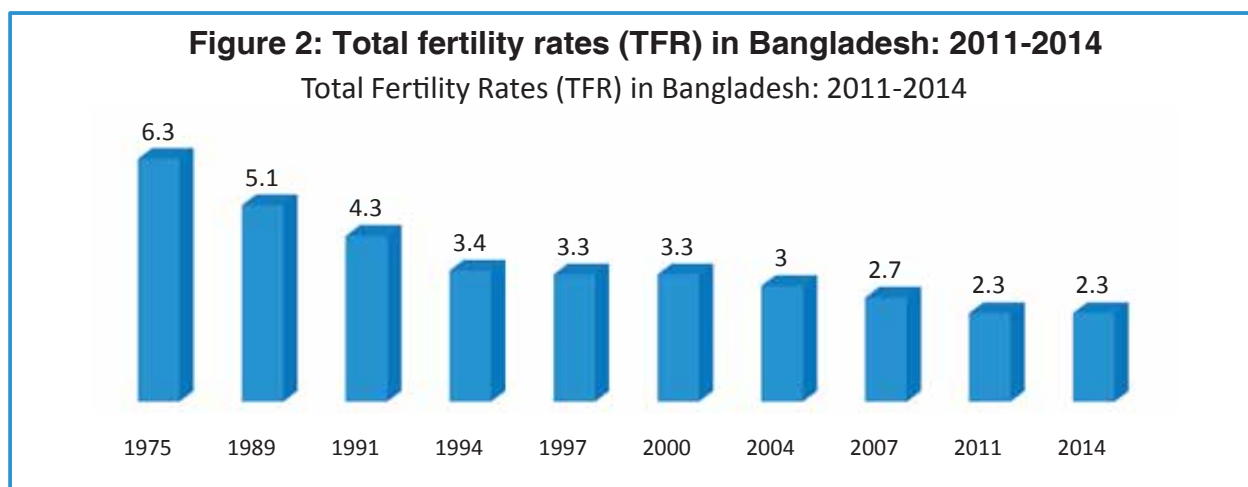
Finally, human rights perspective in the conceptual framework (Figure 1) argues that ensuring empowerment of youths and adolescents through their participation in decision making process and providing quality healthcare services are the keys for human resource development in Bangladesh. In addition, providing skill-building and professional development training is essential to maintain higher productivity of workers and making them more resilient to disasters, which is particularly important in the context of Bangladesh, which is one of the most disaster prone country in the world.

Trends of Population Change in Bangladesh

Historically Bangladesh was characterized as high fertility country. In 1974, the average number of children per woman (TFR) was 6.3 which has declined to 4.3 children in 1991, 3.3 children in 2000, and 2.3 children in 2014 (Figure 2). The substantial decline in fertility was associated with decreasing trend in death rates and consequently increasing trend in life expectancy. In 2011, the life expectancy has increased to 69.0 years from that of 46.2 years in 1974. The changing patterns of birth rate, death rates and increasing life expectancy led to change in age composition in Bangladesh population. Thus Bangladesh exhibited a decreasing trend in young population (0-14 years) and increasing trend in elderly population (60+). The percentage of young population has decreased to 34.7 percent in 2011 from that of 48.0 percent in 1974. On the other hand, the percentage of elderly population (60+) has increased to 7.5 percent in 2011 from that of 5.7 percent in 1974. During the period of 1974-2011 Bangladesh has also experienced an increasing trend in

its working population (15-59) due to sustained high fertility since 1974. The proportion of working population surpassed 50.0 percent after 1991 indicating higher proportion of working population in relation to dependent population (0-14 years and 60+) (Table 1). Thus Bangladesh entered into demographic dividend after 1991, a situation when a country has greater number of working population as compared to dependent population.

Figure 2: Total fertility rates (TFR) in Bangladesh: 2011-2014



Source: Bangladesh Demographic and Health Survey 2014, NIPORT

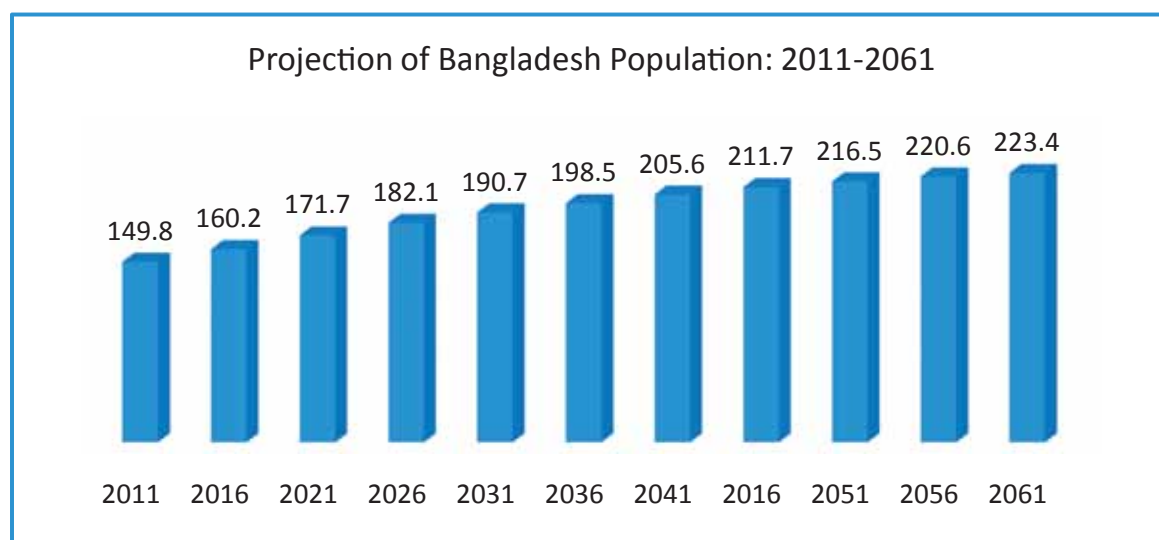
Table 1: Percentage Distribution of Population by age groups, 1911-2011

Census year	Major age groups			Dependency Ratio
	0-14	15-59	60+	
1974	48.0	46.3	5.7	116.0
1981	46.7	47.8	5.5	109.2
1991	45.1	49.5	5.4	102.0
2001	39.1	54.7	6.2	82.8
2011	34.7	59.1	7.5	71.4

Sources: 1911-1974, Rahim (1969); 1974 Bangladesh Population Census Report, BBS 1977; 1981-2011, Bangladesh Population Census Reports, BBS

A recent projection of Bangladesh population by Bangladesh Bureau of Statistics (2015) shows that under medium variant, a scenario most likely to happen, the total population of Bangladesh increase from 149.8 million in 2011 to 190.7 million in 2031, 216.5 million in 2051, and 223.4 million in 2061 (Figure 3). Percentage distribution of the projected population by age group shows that by 2061 the percentage of young population (0-14 years) will declined to 17.1 percent from 34.6 percent in 2011, and the proportion of elderly population (60+) will increase to 24.4 percent. In addition, the percentage of working population will be the highest in 2036 (65.7%) and will start to decline thereafter reaching 58.6 percent in 2061 (Table 2).

Figure 3: Projection of Bangladesh Population under medium variant: 2011-2061



Source: Author's own construction using BBS Projection Data

Table 2: Projection of total population and percentage of population by age group: 2011-2061

Year/Age	Population (in million)				Percentage of Total Population		
	0-14	15-59	60+	Total	0-14	15-59	60+
2011	51.87	86.71	11.19	149.77	34.6	57.9	7.5
2016	48.99	99.42	11.82	160.22	30.6	62.1	7.4
2021	45.82	111.71	14.16	171.69	26.7	65.1	8.2
2026	45.96	119.38	16.76	182.10	25.2	65.6	9.2
2031	45.11	124.93	20.70	190.73	23.7	65.5	10.9
2036	42.94	130.41	25.15	198.50	21.6	65.7	12.7
2041	41.17	134.53	29.94	205.64	20.0	65.4	14.6
2046	40.58	134.44	36.65	211.66	19.2	63.5	17.3
2051	39.86	134.30	42.30	216.46	18.4	62.0	19.5
2056	39.05	134.50	47.01	220.56	17.7	61.0	21.3
2061	38.12	130.82	54.45	223.39	17.1	58.6	24.4

Source: BBS 2015

Thus the opportunity of demographic dividend that started after 1991 will start to disappear after 2036 with the declining trend in the proportion of working population indicating that Bangladesh will have additional 20 years to reap the benefits of demographic dividend through investing in human resources and establishing enabling environment for rapid economic development. The opportunity of demographic dividend will come to end due to the increasing share of dependent population in relation to the working population. At this stage the share of working population will decline, however, the size of total population in Bangladesh will continue to increase at least another two decades indicating that Bangladesh need to invest more on increasing workers' productivity so that they can contribute to the economy to a greater extent to share the burden of huge dependent population.

The projected population of Bangladesh shows that there are some challenges ahead due to the changing pattern of age composition of Bangladesh population. Almost one in every four people will be elderly by 2061 which will require huge investment for their housing, healthcare, transport and daily living. For this reason, to address the future challenges the workforce need to be highly productive so that they can ensure adequate savings for their older ages along with meeting their current needs. However, to make our labour force more productive emphasis should be given on addressing youth and adolescent needs for human resource development in Bangladesh. The subsequent sections present projection of adolescent and youth population in Bangladesh up to 2061 and identify adolescent and youth needs for human resource development in Bangladesh. Finally policy recommendations are provided for translating youth and adolescent population into human resources.

Projection of Adolescent Population in Bangladesh

Table 3 presents projection of adolescent population under medium variant for the period of 2011-2061. According to the projection the total number of adolescents will increase to 32.28 million in 2036 from 30.69 million in 2011, 32.86 million in 2051, and 33.83 million in 2061. Among these adolescents, adolescent females are 17.75 million by 2036, 16.03 million by 2061 and 16.49 million by 2061. The percentage of adolescents to the total population will be 22.53 percent by 2016, 16.19 percent by 2036 and 15.04 percent by 2051.

Table 3: Projection of adolescent population (10-19) under medium variant (in million)

Adolescent Population (10-19) under medium variant

Year	Adolescents (in million)			Adolescents (%)			Total Population
	Female	Male	Total	Female	Male	Total	
2011	14.96	15.73	30.69	9.99	10.50	20.49	149.76
2016	17.50	18.60	36.10	10.92	11.61	22.53	160.22
2021	16.50	17.22	33.72	9.61	10.03	19.64	171.68
2026	14.42	15.02	29.44	7.92	8.25	16.16	182.10
2031	14.72	15.47	30.19	7.72	8.11	15.83	190.74
2036	15.75	16.53	32.28	7.93	8.33	16.26	198.50
2041	16.27	17.02	33.29	7.91	8.28	16.19	205.64
2046	16.18	16.93	33.12	7.65	8.00	15.65	211.66
2051	16.03	16.83	32.86	7.40	7.78	15.18	216.47
2056	16.14	16.98	33.12	7.32	7.70	15.02	220.56
2061	16.49	17.34	33.83	7.38	7.76	15.14	223.39

Source: BBS

Projection of Youth Population in Bangladesh

Table 4 presents projection of youth population in Bangladesh under medium variant for the period of 2011-2061. The number of youth population is projected to be 50.79 million in 2026 from 41.22 million in 2011, and thereafter will start declining. There will be 44.96 million youth population by 2036, 42.44 million by 2051 and 40.20 million by 2061. The share of female youth to the total projected population will be 24.74 million in 2026, 21.99 million in 2036, 20.73 million in 2051 and 19.60 million in 2061. Percentage distribution of youth population to the total population shows that in 2011 27.52 percent of the total population were youths which will increase to 27.89 percent in 2026, 22.65 percent in 2036, 19.60 percent in 2051 and 17.99 percent in 2061. The distribution of projected youth population by sex is also presented in

Figure 6. The percentage of youths to the working population (15-59) was 47.54 in 2011 which will decrease to 42.55 percent in 2026, 34.48 percent in 2036, 31.60 percent in 2051, and 30.73 percent in 2061 (Table 5).

Table 4: Projection of youth population (15-29) under medium variant (2011-2061)

Year	Youth Population (in million)			Youth Population (%)			Total Population
	Female	Male	Total	Female	Male	Total	
2011	21.97	19.25	41.22	14.67	12.85	27.52	149.76
2016	22.70	21.66	44.37	14.17	13.52	27.69	160.22
2021	24.01	25.27	49.28	13.99	14.72	28.70	171.68
2026	24.74	26.06	50.79	13.58	14.31	27.89	182.10
2031	23.49	24.56	48.05	12.32	12.88	25.19	190.74
2036	21.99	22.97	44.96	11.08	11.57	22.65	198.50
2041	22.07	23.17	45.23	10.73	11.26	22.00	205.64
2046	21.73	22.77	44.51	10.27	10.76	21.03	211.66
2051	20.73	21.70	42.44	9.58	10.03	19.60	216.47
2056	19.88	20.84	40.73	9.01	9.45	18.46	220.56
2061	19.60	20.60	40.20	8.77	9.22	17.99	223.39

Source: BBS

Table 5: Percent distribution of the projected youth population to the working population

Year	Youth Population (15-29) (in million)	Working Population (15-59) (in million)	Percentage of youths to the working population
2011	41.22	86.71	47.54
2016	44.37	99.42	44.62
2021	49.28	111.71	44.11
2026	50.79	119.38	42.55
2031	48.05	124.93	38.46
2036	44.96	130.41	34.48
2041	45.23	134.53	33.62
2046	44.51	134.44	33.10
2051	42.44	134.30	31.60
2056	40.73	134.50	30.28
2061	40.20	130.82	30.73

Source: BBS

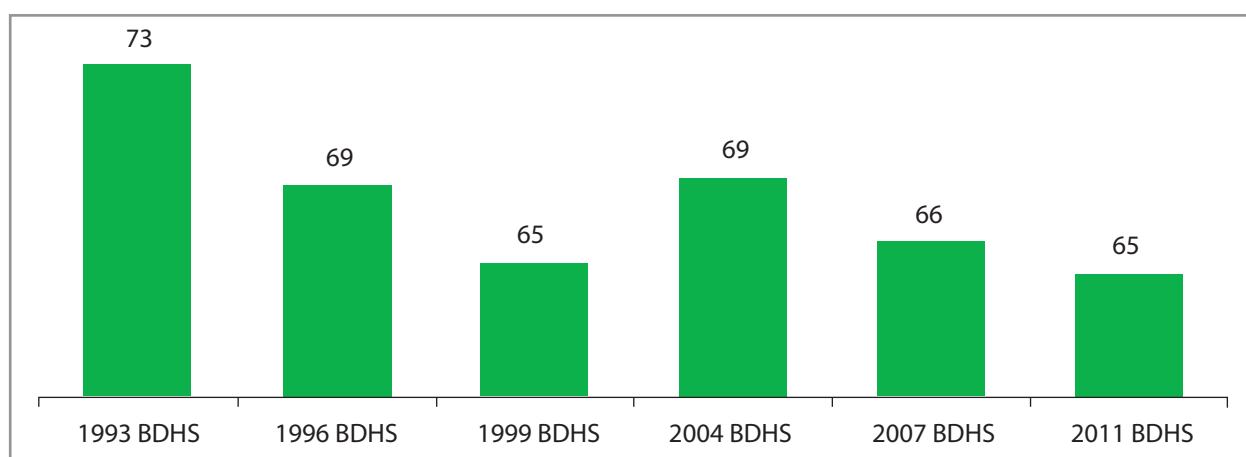
Assessing Adolescent and Youth Needs in Bangladesh

This section presents current status of adolescent and youth needs in Bangladesh and assesses their future needs as well. In general, review of earlier research and policy documents show that areas where policy intervention should be taken to address adolescent and youth needs include prevention of child marriage, preventing of early child bearing, addressing unmet need of family planning, reducing dropout rate from education and ensuring quality education, providing adequate employment opportunities, increasing international migration through development of skilled labour force, reducing poverty, ensuring equality, and capacity building for establishing a resilient society. These aspects are discussed in greater detail below.

Early Marriage

Bangladesh is one of the countries that have very high prevalence of child marriage. In 1993, 73 percent women in Bangladesh were married before reaching age 18 which has declined to a very slower pace reaching 69 percent in 2004 and 65 percent in 2011. During the period of 1993-2011 there were fluctuations in the rates of child marriage indicating that the declining trend is not consistent over time. For instance, the prevalence of child marriage did not change from 1999 to 2011 (65% in both cases) (Figure 4). If the current trend of declining in the rate of child marriage continues then the prevalence of child marriage will be 56.12 percent in Bangladesh in 2031 (Scenario I in Table 6). However, if the declining trend continues at twice the rate of annual average change from 1973 to 2011 then the prevalence of child marriage will be 47.22 percent by 2031 (Scenario II in Table 6). In addition, if the declining trend continues at triple the rate of annual average change then 38.33 percent will be the prevalence of child marriage in Bangladesh by 2031 (Scenario III in Table 6). The projected numbers of married adolescent females aged in 20-24 shown in Table 6 are derived through applying proportion of marriage rate among females aged 20-24 in census data (1991 to 2011). Thus the projection shows that millions of young females will be married before age 18 even after substantial decline in the rate of child marriage (Figure 5). For this reason, two approaches should be taken: first to prevent child marriage and second, to minimize the negative consequences of child marriage for those who will be married as children.

Figure 4: Trends in proportion of women aged 20-24 who were first married by age 18



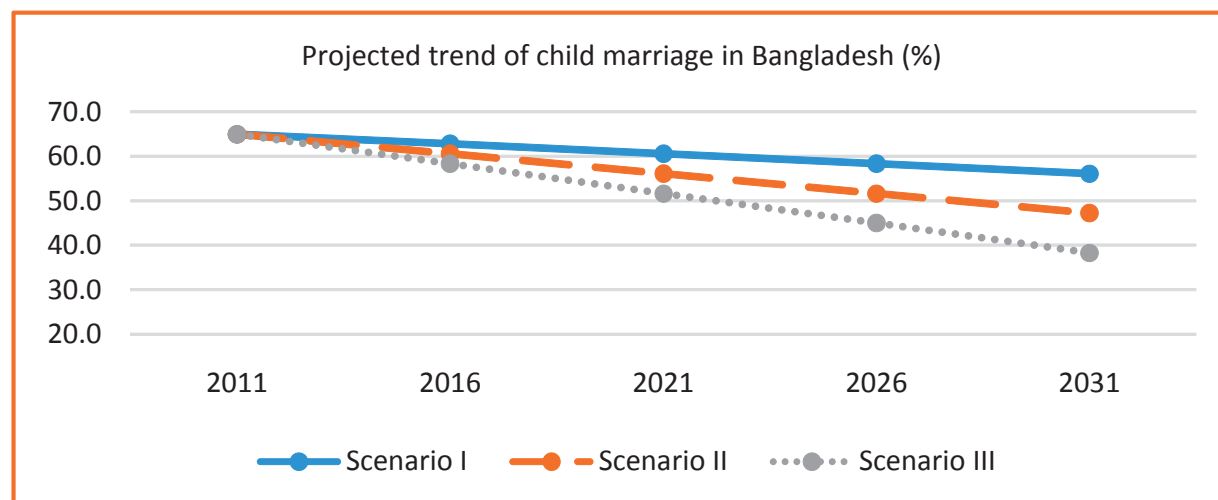
Source: BDHS Reports, 1993-94, 1996-97, 2000, 2004, 2007, and 2011, NIPORT

Table 6: Projected trend of child marriage in Bangladesh (%): 2011-2031

Year	Projected trend of child marriage (%)			Projected number of married adolescent females aged 20-24 (in million)
	Scenario I	Scenario II	Scenario III	
2011	65.00	65.00	65.00	6.352
2016	62.78	60.56	58.33	5.255
2021	60.56	56.11	51.67	6.521
2026	58.34	51.67	45.00	7.038
2031	56.12	47.22	38.33	5.546

Source: Author's projection

Figure 5: Projected trend of child marriage in Bangladesh: 2011-2031



Source: Author's projection

Adolescent fertility

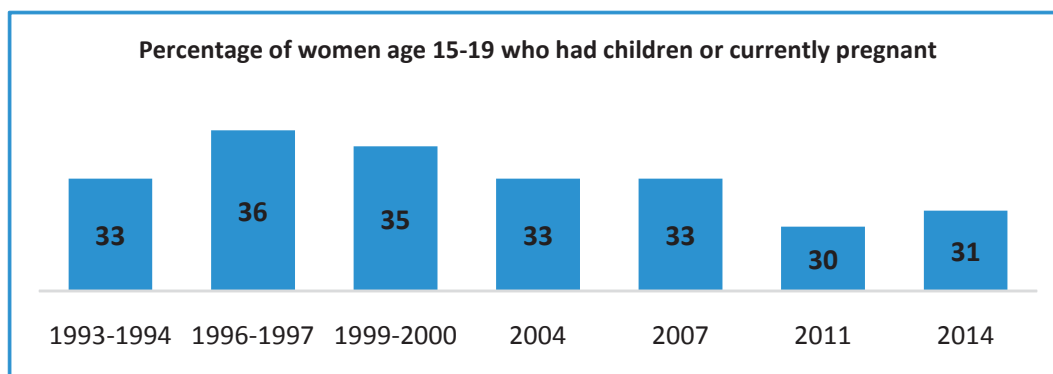
Table 7 presents age-specific and total fertility rates among women age 15-49 for the period of 1975-2014. Analysis of age-specific fertility shows that in 1975, the number of births per 1000 adolescents aged 15-19 were 109 which has increased 182 in 1989 and declined thereafter to 113 in 2014 but still the rate is very high because this is not appropriate time for adolescents to have children due to wide range of negative consequences of early childbearing on health, education and career. Figure 6 shows that 33.0 percent women age 15-19 had children or were pregnant in 1993-94 which has declined at a very slower pace reaching 30.0 percent in 2011. In addition, the 2011 BDHS shows that in 2011, 8.0 percent women started childbearing before age 8. Thus 38.0 percent of the adolescent females (age 10-19) either had children or were pregnant in 2011. The recently published 2014 BDHS report shows that the percentage of women age 15-19 who had children or currently pregnant has even increased to 31.0 percent.

Table 7: Age-specific and total fertility rates (TFR) among women age 15-49 in Bangladesh

Age Group	1975 B FS	1989 B FS	1996-97 B D HS	2004 B D HS	2011 B D HS	2014 B D HS
15-19	109	182	147	135	118	113
20-24	289	260	192	192	153	143
25-29	291	225	150	135	107	110
30-34	250	169	96	83	56	57
35-39	185	114	44	41	21	25
40-44	107	56	18	16	6	4
45-49	35	18	6	3	3	5
TFR	6.3	5.1	3.3	3.0	2.3	2.3

Source: Bangladesh Demographic and Health Survey Report, 2014 NIPORT

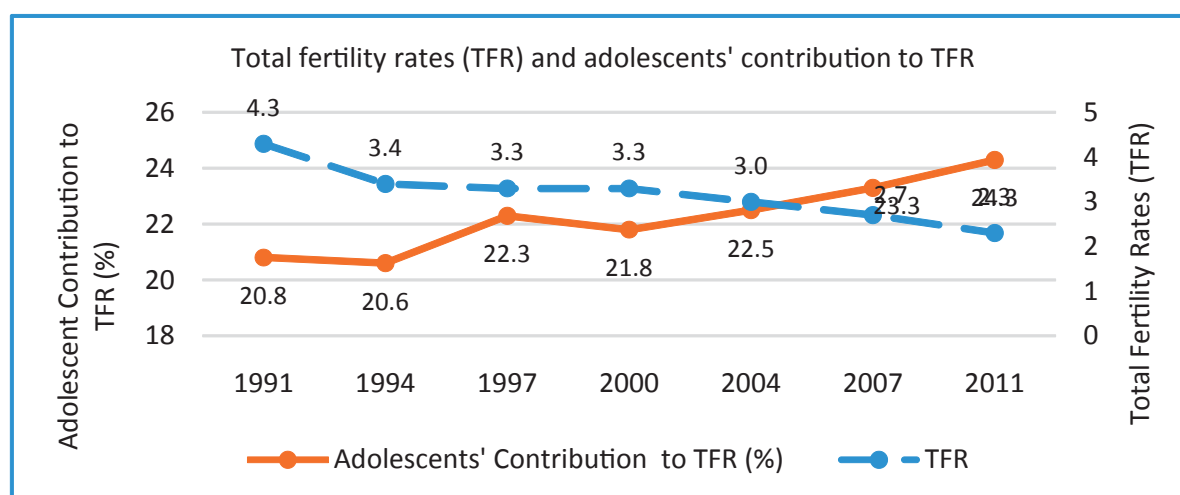
Figure 6: Percentage of women age 15-19 who had children or currently pregnant



Source: Bangladesh Demographic and Health Survey Report, 2014 NIPORT

Thus the contribution of adolescent fertility to the total fertility rates (TFR) has in fact increased over time (20.8% in 1991 to 24.3% in 2011) despite a substantial decline in fertility rates during the same period (4.3 TFR in 1991 to 2.3 TFR in 2011) (Figure 7). Projection of the trend of adolescent childbearing in Table 8 shows that if the current declining trend of adolescent fertility continue then by 2031, 36.18 percent adolescent females (10-19) will start childbearing. However, if the declining rate becomes double from the current annual average declining rate then 28.91 percent adolescents will start childbearing by 2031. In addition, if the declining rate becomes triple from that of current annual average declining rate then 19.82 percent adolescent will start childbearing by 2031 indicating that even after faster decline in adolescent childbearing one-fifth adolescents still will be mothers by 2031 (Figure 8). Part of the reason for higher adolescent fertility in Bangladesh is that adolescents have lower rate of contraceptive use and higher rate of unmet need for family planning. For instance, in 2011 Contraceptive use among women age 15-19 is 47% in comparison to 72% among women age 35-39. The unmet need for family planning among adolescent women age 15-19 in 2011 was 17.0 percent as compared to 13.5 percent unmet need among women age 15-49.

Figure 7: Total fertility rates (TFR) and adolescents' contribution to TFR in Bangladesh

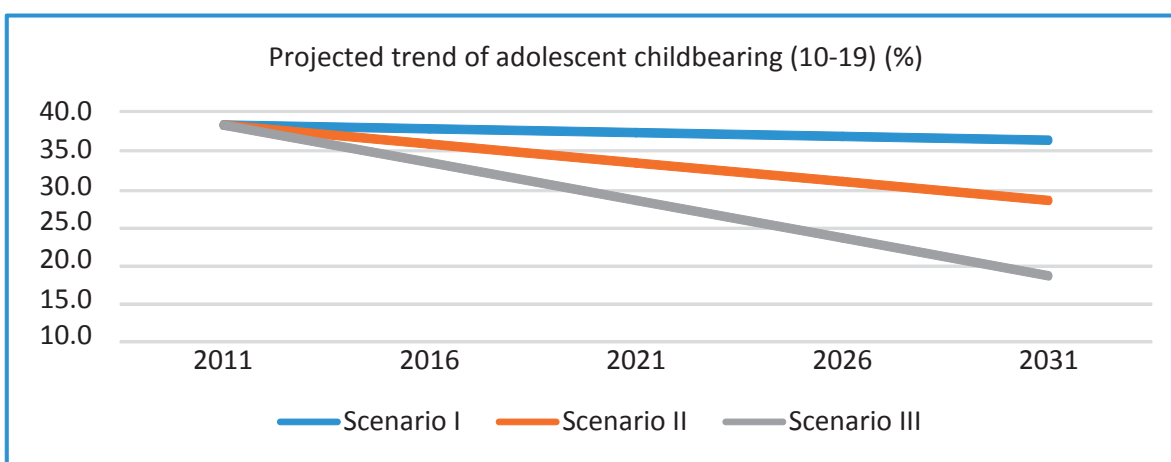


Source: Bangladesh Demographic and Health Survey Report, 2014 NIPORT

Table 8: Projected trend of adolescent childbearing (10-19) in Bangladesh

Year	Projected trend of adolescent childbearing (10-19) (%)			Projected number of married adolescent females (10-19) (in million)
	Scenario I	Scenario II	Scenario III	
2011	38.00	38.00	38.00	2.259
2016	37.55	35.73	33.46	2.433
2021	37.09	33.45	28.91	2.095
2026	36.64	31.18	24.37	1.658
2031	36.18	28.91	19.82	1.516

Source: Author's projection

Figure 8: Projected trend of adolescent childbearing (10-19) in Bangladesh

Source: Author's projection

Education

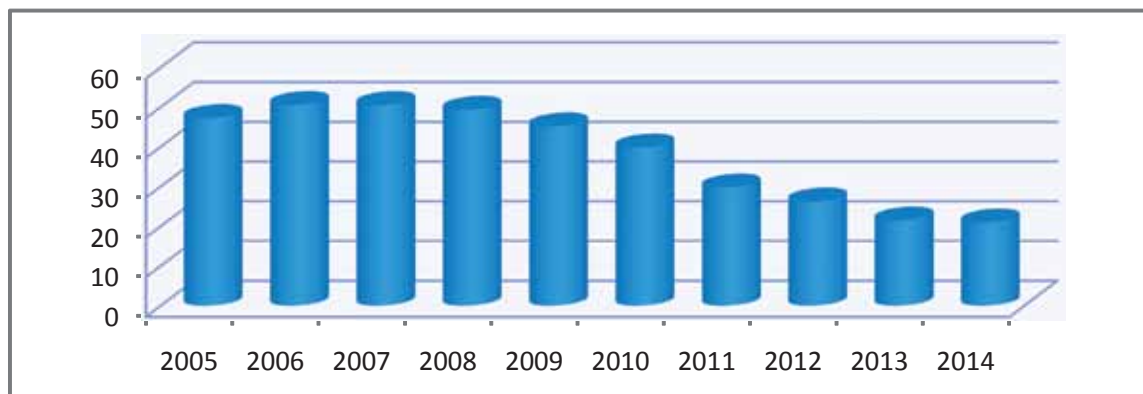
Bangladesh has achieved remarkable progress in equitable access to education and reducing dropouts. The net enrollment rate in primary school was 97.7 percent in 2014. The biggest achievement of the government in this sector is bringing girls into school though providing various services including distribution of free text books among students up to secondary level, creation of the Education Assistance Trust Fund for the poor and meritorious students, food for education, stipends for primary school children and thus setting a stage for creating a generation of skilled labour force. Thus the adult literacy rate of 15+ years old population in Bangladesh has increased to 61.0 percent in 2013 (65.1% for males and 56.9% for females) from 37.2 percent in 1991 (43.3% for males and 25.8% for females) (SVRS, BBS 2015).

However, there are some challenges ahead for Bangladesh in education sectors in the case of ensuring quality education and ensuring education for all to capture the benefits of demographic dividend. For example, despite the progress mentioned above of the 56.7 million labour force, 40.8 percent have no education and only 23.0 percent have up to a primary education. In addition, the major limitation in educational attainment is illustrated by a low share of workers with vocational education. The low attainment of education among the workforce will lead to lower productivity and deficient human capital, stressing the employment challenge (7th Five Year Plan, GOB).

Another important aspect of our education system is that various types of education are provided at primary level. There is no harmonized course-curriculum system in these educational institutions which has wider impact in the learning outcomes. Whatever the type of educational institution there should be some common course curriculum to ensure that students are receiving education and training on basic mathematic, sciences and like skills.

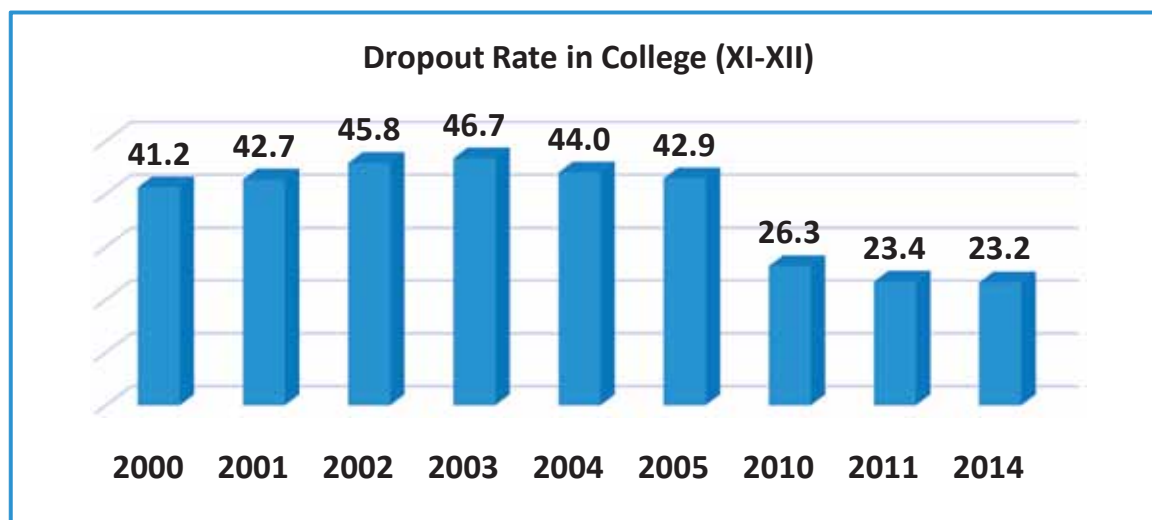
Dropout both at primary and secondary level is another important concern for human resource development in Bangladesh. Figure 8 shows that dropout rate at primary level was 47.2 percent which has consistently decreased to 20.9 percent in 2014. However, this is still high because it indicates that one-fifth of the children are leaving education before receiving secondary education even. In addition, the percentage of dropout in college education was 41.2 percent in 2005 which has gradually declined to 23.2 percent in 2014 indicating that further improvement is needed to ensure higher education for the large number of workforce in Bangladesh (Figure 9). Moreover, university enrolment in 2012 by sex shows that in public universities 65.74 percent enrolment were males and only 34.26 percent were females. Similarly, in private universities 74.73 percent were males and 25.27 percent were female enrolment (Figure 10). Concerning quality indicators of education Figure 11 shows that emphasis should be given on increasing number of teachers, computer facilities, internet and electricity connections in educational institutions to ensure quality education.

Figure 8: Year wise Dropout Rate at primary level 2005-2014



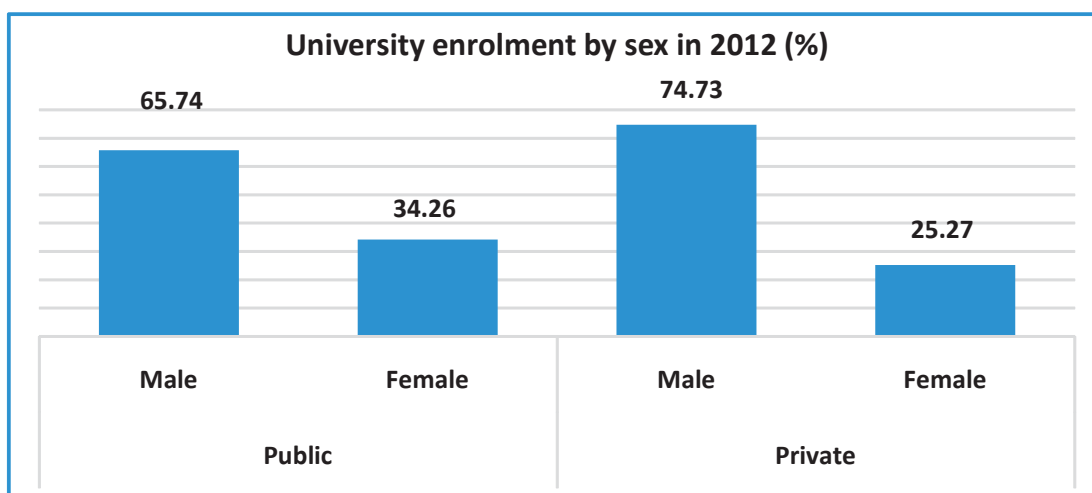
Source: BANBEIS 2015

Figure 9: Year wise Dropout Rate at college level 2005-2014



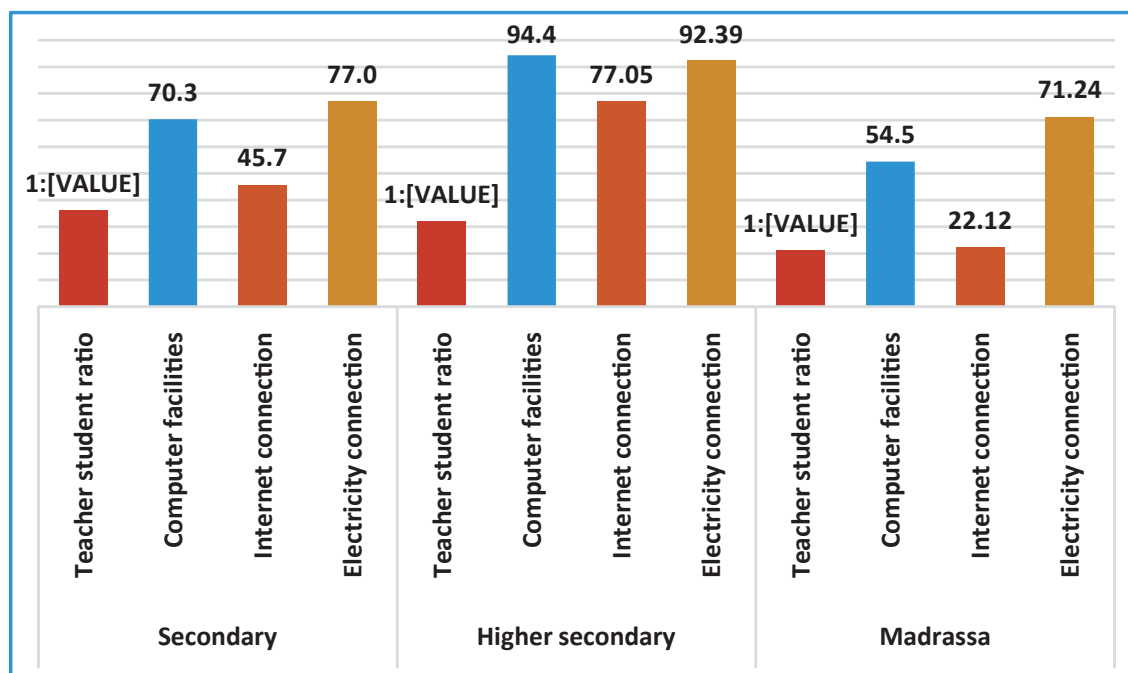
Source: BANBEIS 2015

Figure 10: University enrollment by sex in 2012



Source: BANBEIS 2015

Figure 11: Quality Indicators in secondary, higher secondary and Madrassa education in 2012



Source: BANBEIS 2015

Therefore, to translate youth population into human resource development emphasis should be given on ensuring quality education, providing more technical and vocational education at all levels of education. Good news is that BBS and National Skill Development Council jointly secretariat are jointly conducting the 2015 TVET Census to assess current status of technical and vocational education and training institutions. In addition, equal attention should be given for professional learning for teachers, increasing Teacher competence and school efficiency, ongoing professional development, continuing support for student-centered learning, teacher feedback mechanisms, administrative support and leadership, and using formative assessment to improve achievement outcomes.

Projection of youths equipped with technical education

Providing technical education to youths is an important step forward in implementing Government's "Vision 2021". Currently, the rate of technical education in the country is 10.0 percent (Financial Express, December 27, 2015). The Government of Bangladesh has set the target of increasing students' access to technical education to 20 percent by 2020 and 30 percent by 2030. The following projection provides the number of youth that should have access to technical education at a constant rate of 10.0 percent until 2031 (Scenario I). Scenario II provides projected number of youth that should have access to technical education to ensure 20 percent technical education by 2021 and 30 percent by 2031. Under the second scenario, 9.86 million youths will be required to have technical education which will increase to 14.42 million by 2030 to ensure 30 percent access to technical education.

Table 9: Projection of technical education for youth population

Year	Scenario I (in million)	Scenario II (in million)	Total Youth Population (in Million)
2011	4.12	4.12	41.22
2016	4.44	6.66	44.37
2021	4.93	9.86	49.28
2026	5.08	12.70	50.79
2031	4.81	14.42	48.05

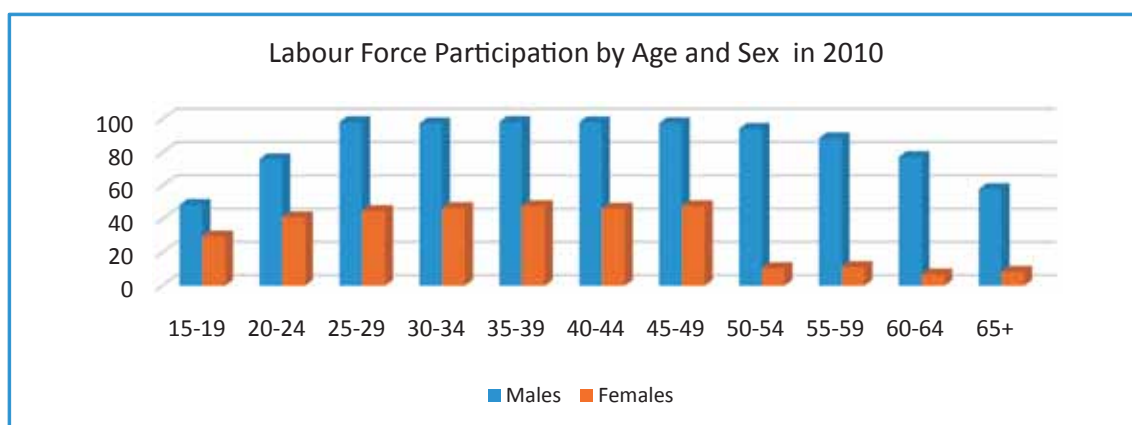
Source: Author's projection

Employment

Bangladesh has made significant progress in creating employment opportunities for its labour force in general and for women in particular. Overall, labour force participation rate has increased to 59.3 percent in 2010 from 47.0 percent in 1989. During this period, females' labour force participation rate has increased to more than three times and males' labour force participation rate has been consistently above 80.0 percent. However, about two-third of women are not still out of the labour market. In addition, there are issues of underemployment and unemployment (20.31% and 4.53% respectively) which requires urgent attention (Hayes and Jones, 2015).

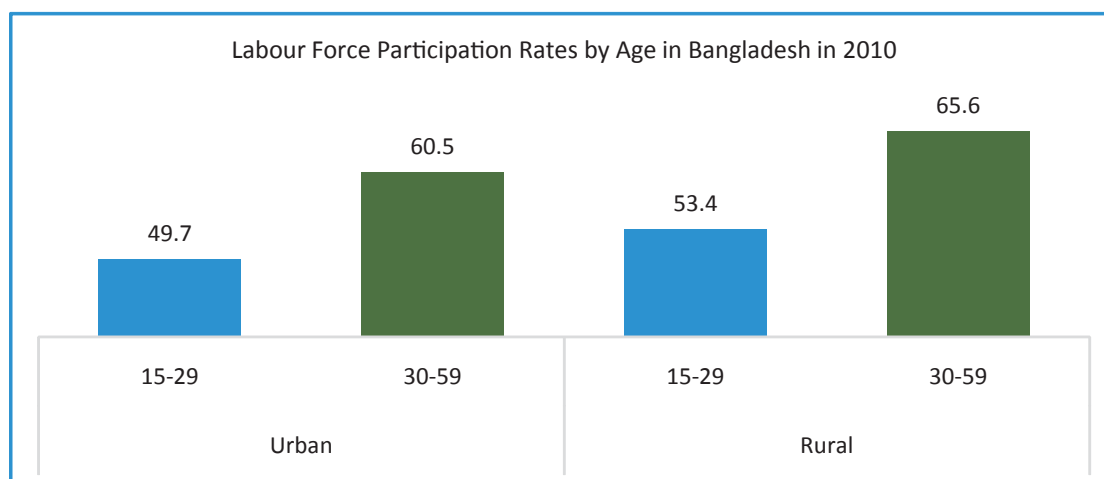
Analysis of labour force participation by age and sex in 2010 shows that females consistently have lower rate of labour force participation than their male counterparts. In addition, labour force participation rates both for males and females are lower among your age groups (15-29) than older age groups (30-49) (Figure 12). There are also variations in labour force participation rates by place of residence. For instance, in urban area labour force participation rate of youths is 49.7 percent compared to 60.5 percent for workers ages 30-59. In rural area, youths also have lower rate of labour force participation than adult workers (53.4% and 65.6% respectively) (Figure 13).

Figure 12: Labour force participation by age and sex in 2010



Sources: BBS (2002; 2004; 2008; 2011)

Figure 13: Labour force participation rate by age and place of residence in 2010



Source: Labour Force Survey (LFS), 2010

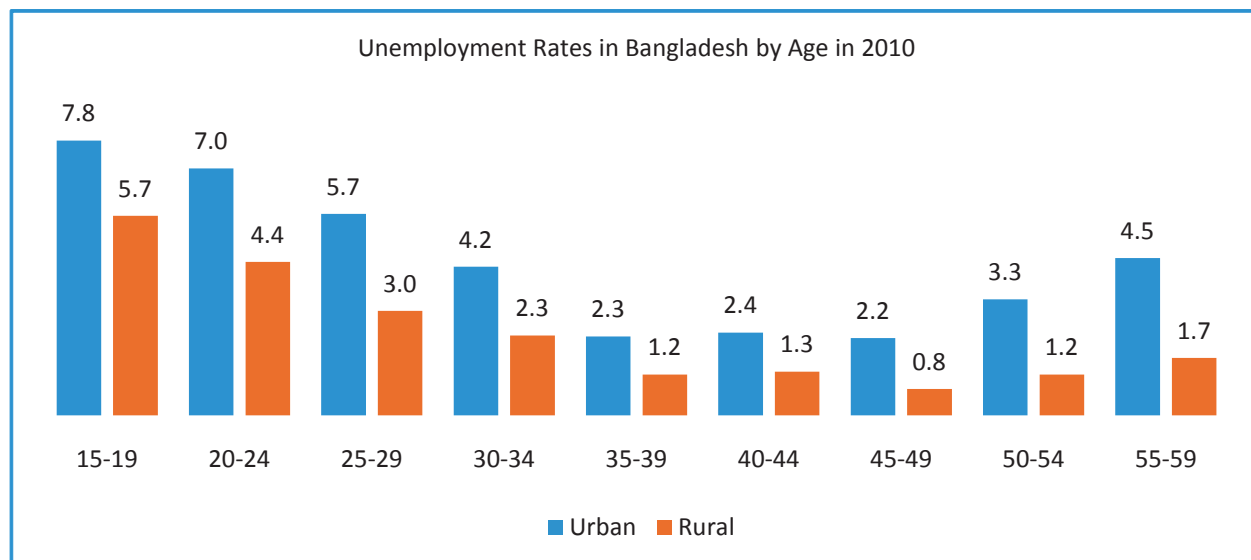
Table 10: Economically active youths aged 15-29 years by age group, sex and area in 2010

Age Group	Bangladesh			Urban			Rural		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
15-19	27.24	27.98	26.01	27.72	26.25	29.97	27.11	28.51	24.66
20-24	35.77	37.11	34.36	38.12	36.44	35.70	37.58	35.55	33.94
25-29	36.99	37.66	35.85	35.84	38.05	32.44	37.39	37.54	37.02

The rate of unemployment is also higher among youth population compared to other age groups both in rural and urban area. For example, in urban area, youths ages 15-19 have the highest rate of unemployment (7.8%) followed by youths ages 20-24 (7.0%) and 25-29 (5.7%). On the other hand, the rate of unemployment among adult age groups (30+) was less than 2.0 percent. This pattern is also true in the case of rural areas (Figure 14). This is clearly visible in Figure 15 which shows that youths' (15-29) unemployment rate is more than double both in rural and urban areas compared to adult population (30-59). Distribution of youth labour force (15-19) by division shows that Dhaka has the highest proportion (32.3%) followed by Rajshahi

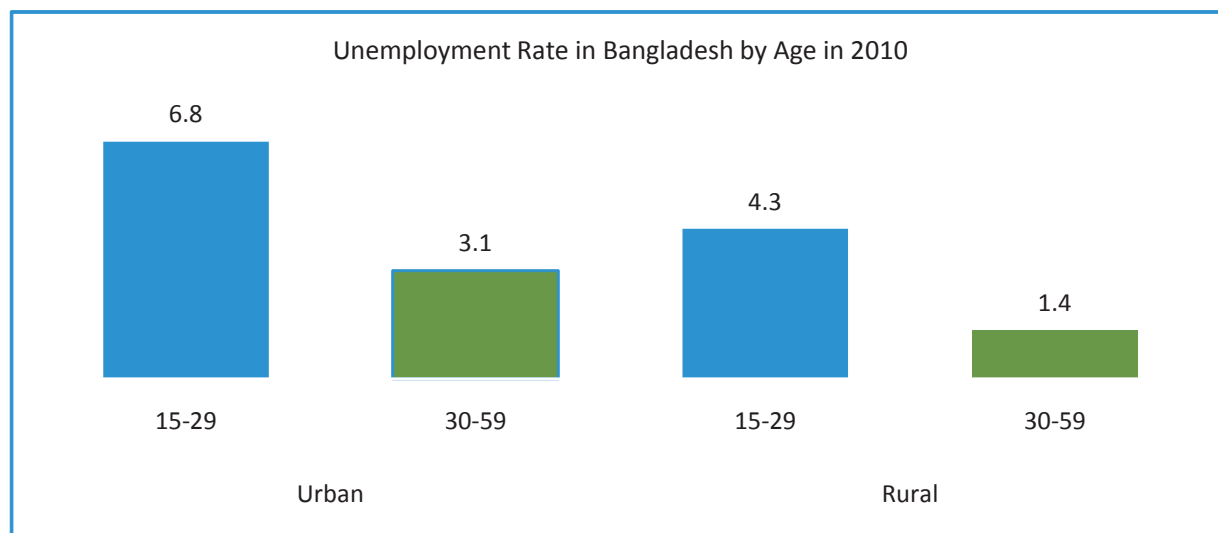
(26.5%), Chittagong (18.4%), Khulna (11.2%), Sylhet (6.2%), and Barisal (5.5%) (Figure 16) indicating that budget for youths should be distributed proportionate to the size of youth population across divisions. It should be mentioned that distribution of labour force by education in Bangladesh in 2010 shows that 40.0 percent of our labour force have no education and about one fourth of the total labour force have only primary education. The proportion of labour force with technical/vocational education was only 0.15 percent (Table 11). Highest percentage of youth were employed in agriculture, forestry and fisheries (51.5%), 14.6% in manufacturing and 9.2% in wholesale and trade in 2010.

Figure 14: Unemployment rate in Bangladesh by age and place of residence.



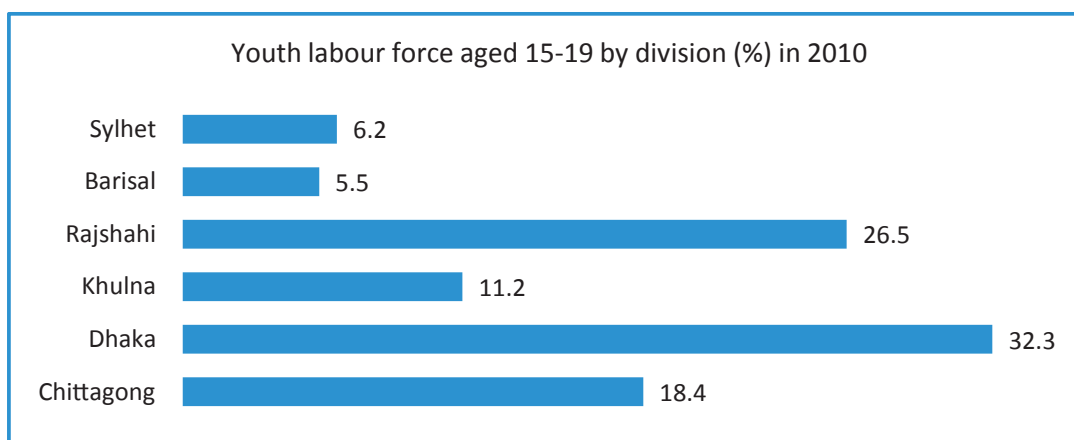
Source: Labour Force Survey (LFS), 2010

Figure 15: Unemployment rate in Bangladesh by age and place of residence in 2010



Source: Labour Force Survey (LFS), 2010

Figure 16: Youth labour force aged 15-19 by division in 2010



Source: Labour Force Survey (LFS), 2010

Table 11: Labour force by level of education in Bangladesh in 2010

Level of education	Male	Female
No Education	39.9	40.6
Class I-V	22.9	22.7
Class VI-VIII	13.8	15.3
Class IX-X	8.3	10.5
SSC/Equivalent	6.5	5.6
HSC/Equivalent	4.0	3.0
Bachelor/Equivalent	2.5	1.2
Master/Equivalent	1.7	0.8
Medical/Engineering	0.2	0.1
Technical/Vocational	0.2	0.1

Source: Labour Force Survey (LFS), 2010

Projected Number of Unemployed Youths

The rate of unemployment has increased in Bangladesh from 1999 to 2010 according to the labour force survey estimates. According to Labour Force Survey, 2010 the rate of unemployment stood at 4.5 percent in 2010 which was 4.3 percent in 1999-2000. The scenario I presented below shows the projected number of unemployed youth at a current 5.5 percent rate of unemployment assuming it remains constant until 2031. Under this scenario 2.71 million youth will remain unemployed in 2021 the number of unemployed youth will stood at 2.64 million by 2031. Assuming 1.0 percent decline in youth unemployment rate in every five years scenario II shows that the number of unemployed youths will be 1.75 million in 2021 and 0.72 million in 2031.

Table 11: Projected number of unemployed youths in Bangladesh

Year	Scenario I (in million)	Scenario II (in million)	Total Youth Population (in Million)
2011	2.27	2.27	41.22
2016	2.44	2.02	44.37
2021	2.71	1.75	49.28
2026	2.79	1.30	50.79
2031	2.64	0.72	48.05

Source: Author's projection

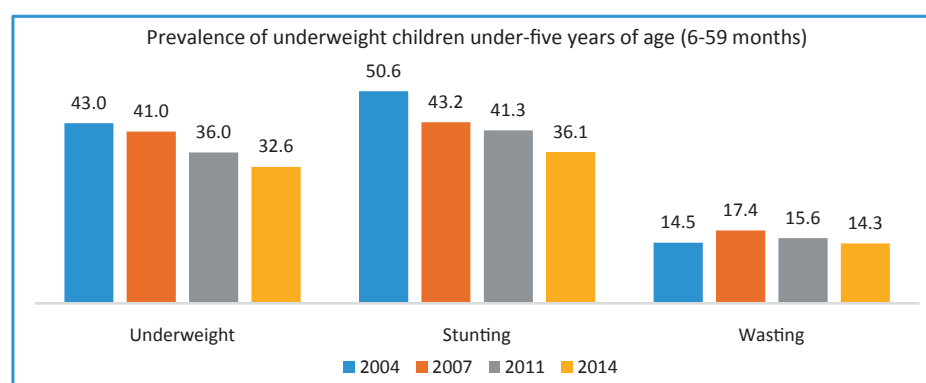
HEALTH

Despite several resource constraints the empowerment of women and the reach of NGOs have contributed to Bangladesh's remarkable success in healthcare, which has included significant improvements in the survival of under-fives, immunization coverage and tuberculosis control. Bangladesh's life expectancy is superior to that of other countries in the region, except Nepal. Bangladesh's infant mortality, under-fives mortality and maternal mortality rates are also better than other countries in the region. Progress in infant, child and maternal mortality has been particularly striking, with an unprecedented reversal in the number of deaths among girls compared with boys. Maternal mortality was reduced from 574 deaths per 100,000 livebirths in 1991 to 194 deaths in 2010. Tuberculosis treatment is another success. Through mass deployment of community health workers, the number of people cured rose from less than 50% to more than 90% – among the highest in the world (Das and Horton, 2013).

Despite improved survival rates, nearly half of children in the country have chronic malnutrition.

Figure 17 shows that still one-third of the children were underweight, more than one-third children were stunting (low height for age) and 14.3 percent children were suffering from wasting (low weight for height) in 2014. The data underlines the complexity of malnutrition, where factors range from poverty and hunger, low rates of breastfeeding, inadequate care and complementary feeding, and recurrent infections. In addition, rapid urbanisation, with about a third of city dwellers living in slums without basic infrastructure and social services, and changes to lifestyle are increasing the risk of non-communicable diseases, including cardiovascular and metabolic diseases such as diabetes and cancers. Climate change might increase the frequency, severity and effect of natural disasters, threatening the health and resilience of society (Das and Horton, 2013).

Figure 17: Prevalence of underweight children under-five years of age in Bangladesh

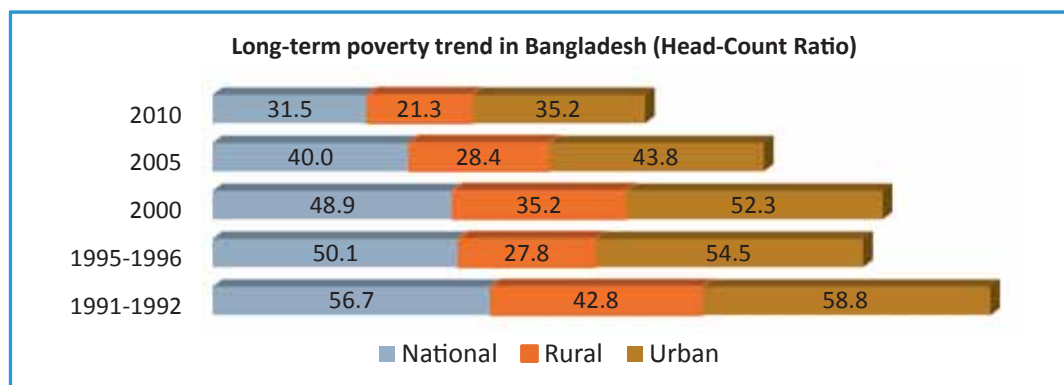


Source: BDHS for 2004, 2007, 2011 and 2014; MICS for 2013, BBS cited from Planning Commission (2015)

Poverty

To ensure quality of life through a balanced and equitable growth the Government of Bangladesh a number of planned strategies to eradicate poverty and from the country. To reduce extreme poverty Bangladesh has enlarged social protection strategies through a series of direct and indirect channels. For instance, the government has launched a new National Social Security Strategy (NSSS) that will bring more than three crore poor people under various social safety net programmes for their entire life. The goal of the NSSS over the next five years is to ensure more efficient use of resources, strengthen delivery system and progress towards a more inclusive form of social security that tackles life cycle risks, prioritises the poorest and most vulnerable members of the society.

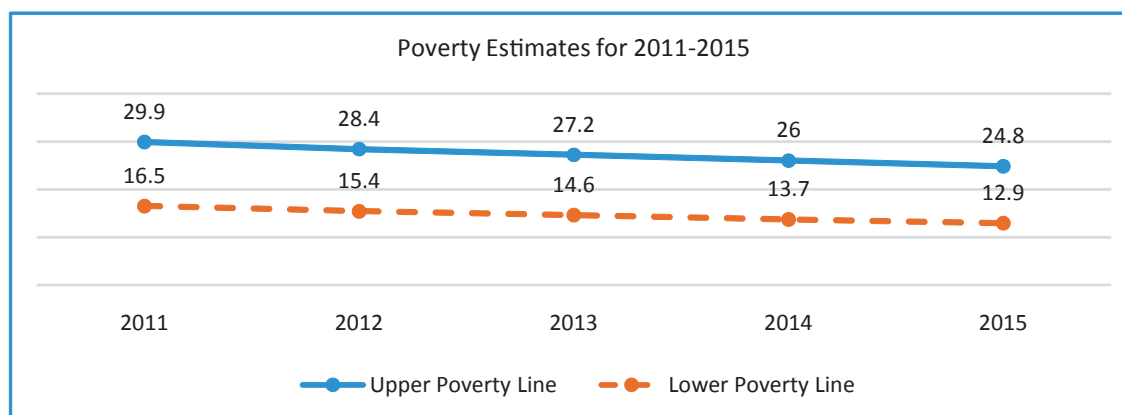
Figure 18: Long-term poverty Ratio



Source: HES1991-92 and HIES, various years, BBS

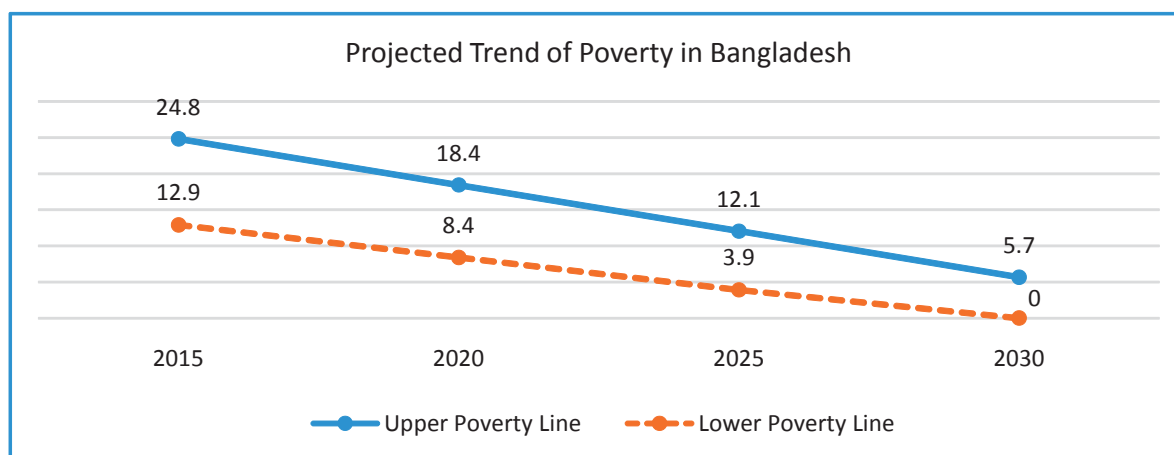
The rate of poverty has declined significantly in Bangladesh during the period of 1991 to 2015 due to consistent economic growth, employment generation, wage hike in the farm sector and social safety net programmes have played the key role in reducing poverty rates steadily. Figure 18 shows that in 1995-96 the rate of poverty was 50.1 percent which has decline to 31.5 percent in 2010. Poverty has declined both in rural and urban areas. However, the rate of poverty has been consistently higher in urban areas. For instance, in 2010, the rate of poverty was 21.3 percent as compared to 35.2 percent in urban area. Recent estimates of poverty by Bangladesh Planning Commission shows that in 2015 24.8 percent people live below the upper poverty line and 12.9 percent live below the lower poverty line (Figure 19). If the current trend of declining poverty continues then the percentage of people living below the lower poverty line will come to zero by 2030 but still 5.7 percent people will remain below the upper poverty line (Figure 20).

Figure 19: Trend of poverty decline in Bangladesh: 2011-2015



Source: GED Estimates (2015), Bangladesh Planning Commission

Figure 20: Projected trend of poverty in Bangladesh



Source: Author's projection

Most of the earlier research on the relationship between poverty and human resource development strongly support that human resource development has significant impact on reducing poverty both in developed and developing countries. Development of human resources should focus not on only increasing years of education, improving health status and participating in training programmes, but also increasing mobility for economic purposes and enlarging the proportion of working time spent on non-agricultural activities. In connection with this Li (1994) finds that enhancement of education levels, improvement of health status, the gaining of skills and experience, increasing time away from home and choosing suitable occupations, all can contribute greatly to the reduction and alleviation of poverty. While this is true, the other side of the relationship between poverty and human resource development should deserve equal attention: reduction of poverty will facilitate human resource development in a country. Because to address adolescent needs and to translate youth into human resources requires investment in education, healthcare and skilled training. But poor people are not in a position to provide adequate investment in this sector for their children. For this reason, Bangladesh should give equal importance in poverty reduction along with human resource development initiatives for producing a generation of skilled labour force.

Empowerment of Youths

Bangladesh has made commendable progress in reducing gender inequality in areas of education and employment. For instance, Bangladesh has already achieved the targets of gender parity in primary and secondary education at the national level. The increasing trend in female labour force participation has been much higher which has contributed to reduce gender gaps in employment sector to some extent. However, income inequality has worsened over the past two decades. The share of the poorest quintile in national income declined from 6.5 percent in 1991-92 to 5.2 in 2010 and a similar decline is evident in both rural and urban areas. Figure 27 shows that Gini coefficients of income and expenditure have increased during 1991 to 2010 indicating widening inequality in our society. In addition Figure 28 shows that people in the poorest quintile had lower attendance rate at secondary and post-secondary levels, and lower average years of schooling. These inequalities are serious barriers for addressing adolescent and youth needs and ensuring human resource development in Bangladesh (UNDP, 2011). In consistent with the UNDP's youth strategy, the 2003 National Youth Policy of Bangladesh outlined various strategies for empowerment of youths including making the process of self-employment easier through providing micro credit easily at low rate of interest; developing self-confidence and sense of respect to personal working capacity and labor among youths with the help of documentary film, short film, reporting and interview etc; and extending cooperation towards youth cooperative societies, voluntary youth organizations and self-employed youths for marketing

their products. However, a critical review of the 2003 National Youth Policy of Bangladesh reveals that limited attention has been given in ensuring greater participation of youth in social, economic, and political sectors for ensuring empowerment of youth in Bangladesh. For instance, Figure 21 and Figure 22 shows that there are substantial inequality in educational attainment and income distribution among various categories of wealth quintile in Bangladesh. There should be clear strategy for reducing inequality in Bangladesh which is also one of the sustainable goals.

Figure 21: Inequality in Educational Attainment by Wealth Quintile in Bangladesh in 2011

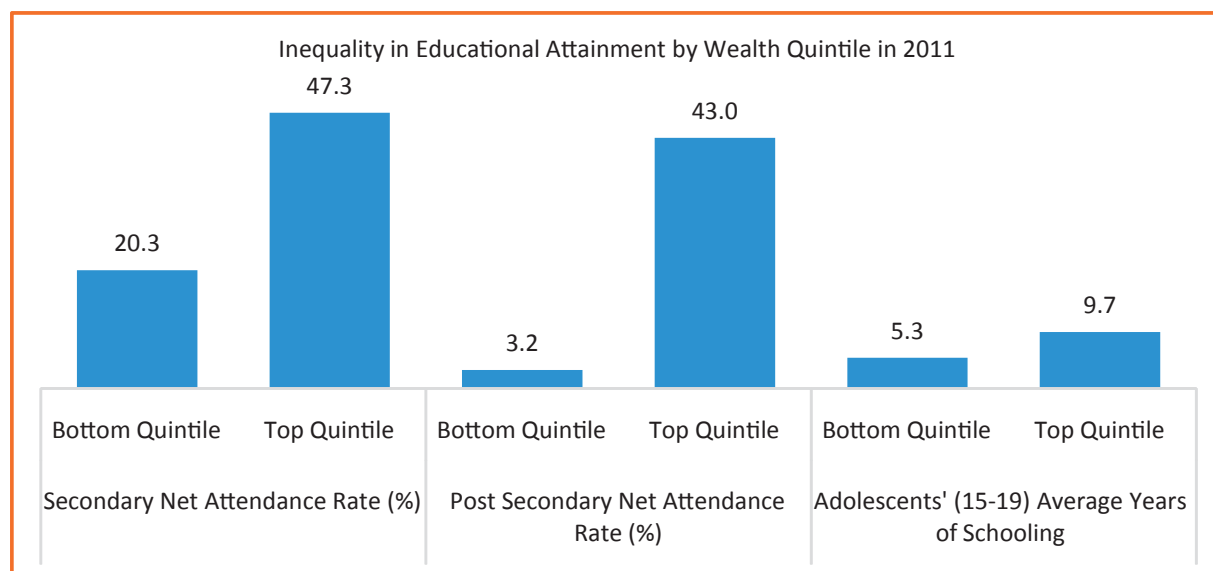
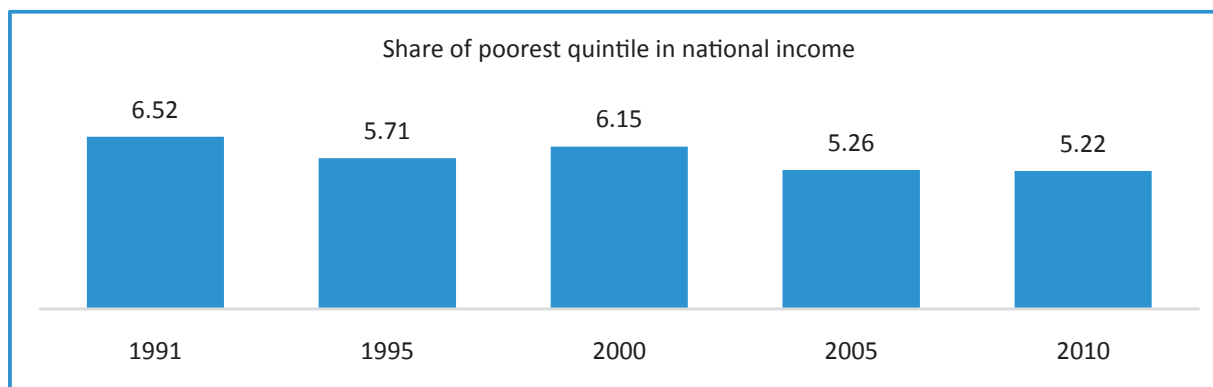


Figure 22: Share of Poorest Quintile in National Income, 1991-2010



Source: 1991-92 HES; 2000, 2005 and 2010 HIES, BBS.

Capacity Building through Professional Development Training

An important component of human resource development is to provide professional development training to the youth population. Professional development refers to many types of educational experiences related to an individual's work. Doctors, lawyers, educators, accountants, engineers, and people in a wide variety of professions and businesses participate in professional development to learn and apply new knowledge and skills that will improve their performance on the job. In education, research has shown that teaching quality and school leadership are the most important factors in raising student achievement. This can be done by providing opportunities for them to develop the knowledge, skills, abilities, tools, resources, and opportunities to be successful in their job and career.

Examples include providing on-the-job training and coaching, giving them performance goals and feedback, asking about and supporting their development goals, and helping them write an individual development plan. Although the primary responsibility for an individual's development rests with the individual, the Government can play an important role in encouraging, supporting, removing obstacles, and providing resources for their development. Moreover, being one of the most disaster prone countries in the world, youth and adolescents should receive disaster risk reduction training.

Policy Recommendations for Human Resource Development in Bangladesh

- Ensure empowerment of youths through social, economic and political participation and greater role in decision making process.
- Create social awareness about the negative consequences of child marriage among boys, girls, parents, teachers, local representatives, and other community people
- Create awareness about the negative consequences of early childbearing and having more children and provide quality reproductive health care and other health services to those married as children
- Ensure higher than secondary education for all by eliminating dropouts both at primary and secondary levels. Ensure Quality and inclusive education at all levels.
- Provide more technical and vocational education at all levels. Good news is that BBS and National Skill Development Council jointly secretariat are jointly conducting the 2015 TVET Census to assess current status of technical and vocational education and training institutions.
- Professional learning for teachers and increasing Teacher competence and school efficiency through ongoing professional development; and continuing support for student-centred learning and active, standards-based participation methods
- Create more employment opportunities for youths by providing diversified technical and vocational education in areas of fish Production, leather, textile, mechatronics, mining & mine survey, Construction, Environmental, Garments Design & Pattern Making, Electro-Medical and the ICT sector.
- Address the problem of underemployment among youths population both in rural and urban areas and Develop a database of graduates with their skills and capabilities
- Provide skilled training for becoming an entrepreneur/small business/handicrafts
- Adolescent pregnancy is still high in Bangladesh which has wide range of health consequences. To reduce these negative health consequences emphasis should be given on reducing their unmet need for family planning and increasing contraceptive rate.
- Ensure increasing antenatal care coverage (at least one visit) and antenatal care coverage (at least four visits), increasing proportion of births attended by skilled health personnel.
- Banking institutions - Bangladesh Bank to craft youth friendly financial inclusion policy, youth credit initiatives while commercial banks to recognize youth as a bankable client segment and undertake youth credit initiatives.
- Reduce inequality in income, education and employment sectors based gender and economic status.
- Skill training based on skill demand of local industries and overseas job market; and Life skills and entrepreneurship education in the educational curriculum at the primary level
- Ensure full implementation of National Skill Development Policy (NSDP 2011)

Conclusion

Bangladesh has made remarkable progress in various sectors including education, health and ICT. However, further improvement is needed in areas of providing quality education, health care and skill building training to millions of youths and adolescents. Moreover, empowerment of youths need to be ensured through making development social inclusive and ensuring higher participation of youth in decision making process which will facilitate reflection of youth needs and adequate implementation of policy interventions. National Youth Policy (NYP) needs to be demand driven along with a well-crafted strategy and time bound action plan with adequate resource allocation. It should be more clearly connected to broader national policy framework including Five Year Plan, National education policy, industrial policy, SME policy so that mainstreaming youth issues in all policies of public and private sector initiatives can be ensured. To strengthen institutional mechanism private sector should be actively involved in the government's effort to address the problem of youth unemployment in the country. Finally, creation of a National Youth Council to ensure youth participation in youth development programmes, and establishing *University of Technical and Vocational Education and Training* (TVET University) to ensure quality education along with reducing negative mindset of our society about TVET will address youths' needs to a large extent.

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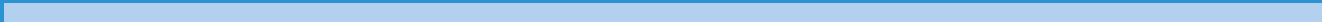
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Report on Policy Dialogue on “Projection of Youth and Adolescent Needs for Human Resource development in Bangladesh”

Venue: NEC Conference Room, Sher-e-Bangla Nagar, Dhaka-1207

Date: December 31, 2015

Organized by:
**‘Strengthening Capacity of the General Economics Division (GED) to
Integrate Population Issues into Development Plans’ Project**
General Economics Division
Planning Commission
Government of the People’s Republic of Bangladesh



A. Introduction

1. Background of the workshop

Under the auspices of ‘Strengthening Capacity of the General Economics Division (GED) to Integrate Population Issues into Development Plans’ a Policy Dialogue on “Projection of youth and Adolescent Needs for Human Resource Development in Bangladesh” was held on December 31, 2015. The workshop was organized by the General Economics Division of Planning Commission, Government of the People’s Republic of Bangladesh in collaboration with UNFPA Bangladesh at the NEC Conference Room, Sher-e-Bangla Nagar, Dhaka. Respected Member (Senior Secretary), GED Dr. Shamsul Alam graced the occasion as the Chief Guest, Dr. Shantana R Halder, Chief-Population Planning and Research (PPR), UNFPA, Bangladesh was the special guest and Dr. Md. Abdur Rob Howlader, Member, Socio-economic Infrastructure Division was the Guest of Honor.

2. Objective(s) of the workshop

The overall objective of the workshop was to exchange knowledge and views among various stakeholders in integrating population issues into national development plans of Bangladesh. This policy dialogue with the key stakeholders was helpful in identifying the areas where more research will be needed and to generate a set of policy recommendations to fulfill the needs of youth and adolescent segment of populations for ensuring human resource development facilitating the achievement of the Sustainable Development Goals.

The dialogue enabled the participants to see the current situation critically, identify the gaps in the existing policies and the problems in the implementation of the plans/ programs regarding population management.

In a nutshell, the understanding of the participants of various issues of population dynamics and its link to the development of Bangladesh in the context of current challenges was enhanced.

3. Participants

The workshop was attended by around 75 participants including representatives from relevant organs of the government including Planning Commission, civil society organizations (CSOs), community based organizations (CBOs) and academicians. In addition, delegates of the United Nations Population Fund (UNFPA) also attended. A list of attendees is attached in **Annex-1**.

B. Inaugural session

4. Welcome Address

The session was commenced with a welcome address from Mr. Mohammad Shahjahan, Project Director & Joint Chief, General Economics Division, Planning Commission. In his address, he briefed the participants about the project. He informed that the project focused on building the capacity of government personnel, particularly the in-house capacity of GED officials to integrate population issues and gender concerns into national planning and policy formulation. He rationalized the endeavor mentioning that despite the remarkable achievement in most of the MDG goals, Bangladesh is facing huge challenges of booming population, climate change, gender and development issues.

He emphasized on the necessity of the discussed project being implemented to take the initiative to highlight the importance of managing the population trends and behaviors and gender concerns for the analysis, design, and implementation of medium and long term social or poverty reduction policies, plans and strategies, particularly against the backdrop of the MDGs (and SDGs), with due regards for human rights.

The Project Director told that this Policy dialogue is not only to introduce the project but also to ensure the stakeholders’ support in implementing the project. One of the major purposes of the workshop was to provide an opportunity for all the stakeholders to understand their roles, functions, and responsibilities and accumulating their valuable suggestions/comments to guide the project in a successful trajectory. He gave special thanks to the Chief Guest for sparing his valuable time. He thanked all other guests and participants especially the key paper presenter and the principal discussant. He also appreciated the participants from the

Government, NGOs, CBOs, CSOs, esteemed friends from the press and electronic media for their meaningful participation. Special thanks also went to the UNFPA Bangladesh team for their effort to make the workshop a successful one.

Session II: Business Session

5. Dr. Shamsul Alam, Member, GED, Planning Commission chaired the business session.

6. A Key Note Paper was presented by Dr. kamrul Islam, Assistant Professor, Department of Population Sciences, University of Dhaka on '**Projection of Youth and Adolescent Needs for Human Resource Development in Bangladesh**'. He explained that By 2051 Bangladesh will have 134.30 million working-age populations (15-59) (BBS, 2015). Youth population would grow from 41.22 million in 2011 to 50.79 million in 2026, implying growth of 22.3 percent over the period. Similar projections were also reported in a recent demographic impact study conducted by the UNFPA (Jones and Hayes, 2015).

In his presentation, Dr. Kamrul highlighted the Present Situation in different sectors of Bangladesh:

- Bangladesh has at present 158 million people (2014) and its growth rate is 1.34%
- TFR- 2.3; 2014
- Working age Population about 78 million
- Skill development increasing rate by 10-15% per annum
- Percentage of adolescent population compared to total population is 22.53% (2016)
- Percentage of working population will be highest in 2036 (65.7%)

He mentioned that **Human Resource Development** refers to providing quality education and training to large number of working and youth population to increase their productivity and to make them more compatible in the global labor market. Ensuring human resource development has a wide range of consequences on increased productivity, reduced unemployment and underemployment, increased flow of international migration, sustained capacity to compete in the global world, and effective population management. He also opined that for sustained economic growth it is worthwhile to invest in increasing quality of human capital through investing in early schooling, health and employment. Investing in human capital will contribute to increasing age at marriage and higher rate of contraceptive use, thus leading to decline in fertility rate and expanding secondary schooling, employment opportunities, and universal access to reproductive health care, as well as large-scale maternal and child health and nutrition programs are essential to accelerating fertility transitions and sustained economic development.

He also mentioned that an important component of human resource development is to provide professional development training to the youth population. In education, research has shown that teaching quality and school leadership are the most important factors in raising student achievement. This can be done by providing opportunities for them to develop the knowledge, skills, abilities, tools, resources, and opportunities to be successful in their job and career. Examples include providing on-the-job training and coaching, giving them performance goals and feedback, asking about and supporting their development goals, and helping them write an individual development plan. Moreover, being one of the most disaster prone countries in the world, youth and adolescents should receive training on disaster risk reduction.

Dr. Kamrul, however, suggested following policies for population management:

- Create awareness about the negative consequences of early childbearing
- Balanced distribution of urban-rural population
- Provide quality reproductive health care and other health services to those married as children.
- Address unmet need of family planning among adolescent married women
- Ensure smooth transition to labour force participation and self-employment after completing education
- Explore new sectors for creating employment opportunities within country and in abroad

- Address the problem of underemployment among youths population both in rural and urban areas
- Provide skilled training for becoming an entrepreneur/small business
- Increase social safety net programs for vulnerable populations
- Skill training based on skill demand of local industries and overseas job market
- Life skills and entrepreneurship education in the educational curriculum at the primary level
- More investment should be given on education and skill building

Dr. Kamrul concluded saying that National Youth Policy (NYP) needs to be demand driven along with a well-crafted strategy and time bound action plan with adequate resource allocation. It should be more clearly connected to broader national policy frame work including Five Year Plan, PRSP, National education policy, industrial policy, SME policy so that mainstreaming youth issues in all policies of public and private sector initiatives can be ensured. To strengthen institutional mechanism private sector should be actively involved in the government's effort to address the problem of youth unemployment in the country.

Finally, creation of a National Youth Council to ensure youth participation in youth development programmes, and establishing *University of Technical and Vocational Education and Training* (TVET University) to ensure quality education along with reducing negative mindset of our society about TVET will address youths' needs to a large extent.

The Chair of the session then opened the floor for discussion on the presentation. The comments and queries raised are noted below.

7. Open Discussion

It was discussed in the session that Bangladesh achieved remarkable progress in many of the MDG targets; it time to look forward to achieving the SDGs which will depend to a great extent on the country's fulfillment of the needs of youth and adolescent population and translating them into human resources. The critical questions that arise are how far those achievable, given that: (i) only around 6 percent of the GDP is spent on education and health care, considerably lower than that in most similar countries; (ii) despite achievement of education-related MDGs, drop-out rate remains high, and worse still, the quality of education is not up to the desired level; (iii) despite improvements in most health indicators, undernourishment continues to remain a major problem, with its known effect on impaired cognitive development and eventually on labor productivity; (iv) the female age at marriage is the lowest and teenage fertility highest in South Asia, thereby standing in the way of adolescent mothers to participate in the labor market, and hence, not being able to contribute to increased labor supply, and thus not being able to reap the benefits of demographic dividend; (v) considerable under-utilization of labor force, measured in terms of un-employment and under-employment, especially in rural areas and among females; (vi) dominance of low-productivity, low-wage informal sector, and hence, the absence of "decent work" for the vast majority of those in the labor force; (vii) high unemployment among the educated youth, raising the question of how much of demographic dividend Bangladesh is currently being able to achieve. The above questions need to be considered in the context of less than desired level of economic growth (lower than what has been targeted in the Sixth Plan and the corresponding budgets), which then, raises the issue of lack of an enabling environment for investment, including infrastructure deficits, lack of good governance and related issues.

The extent to which the above issues and challenges can be addressed holds the key to achieving the desired level of human resource development among the adolescent and youth in Bangladesh. Have adequate provision been made in the Seventh Plan and more importantly, how the implementation bottlenecks will be addressed? If Bangladesh is able to adequately address the above issues and challenges, the country can attain the SDGs.

It was stated referring the paper and the subsequent presentation, that some of the aspects of youth and adolescents needs were missing there. One such important issue is empowerment. Quality education has been highlighted in the presentation but needs elaboration. For each stage of education system, that is primary, secondary and tertiary, there should be clear targets and indicators in terms of quality education. For

instance, the major focus of primary education may be numeracy and literacy, for secondary stage it may be written and verbal idea generation capacity and in case of tertiary education there come understanding the laws and theories of specialized fields. When it comes to training for the teachers or curricula, there arises the question of relevance. Are they need based?

It was highlighted that in a “labor surplus” economy like Bangladesh, the development in the labor market is crucial to bring desirable changes in growth possibilities and meeting the poverty reduction goals. To achieve such process of growth, public policies and investments need to ensure that economic growth is inclusive such that it generates more income and employment for the poor. In particular, a key challenge is to expand decent employment opportunities through both wage and self-employment to absorb the growing labor force. Consequently, an important agenda is to address one of the key issues in the country’s labor market which is skill development. Enhancement of skills can be achieved through education and training. Technical and vocational education and training (TVET) can have a significant contribution in providing skills for employment opportunities. It provides practical job skills specifically to those who dropped out of school early and are already of employable age, as well as to the unemployed and underemployed adults.

It was also discussed that the TVET is sometimes perceived as a second-class form of education and training compared to general education. Furthermore, a major weakness of the current TVET system is its lack of linkages and relevance to the labor market, i.e. the formal industry subsector, informal self-employment subsector, and international employment. The system’s capacity to meet the needs of the labor market is relatively small. Employers are looking for more workers who can meet their semi-skilled and skilled requirements. The outputs of the TVET system and the needs of the employment sectors are mismatched in at least three areas: trades or occupations where programs are offered, competencies acquired do not meet industry or self-employment requirements, and practical experience opportunities for students. The practical component of the curriculum is not effectively instructed.

It was mentioned that during the decade international migration of labor has increased tremendously. It has become important source of employment and plays a vital role in reducing poverty in Bangladesh. But the demand for skills that are required in getting jobs abroad is an important issue that needs to give special attention. Given the global labor market pressures, specific policy decisions must be formulated in order to effectively prepare our workers to cope with emerging competency requirements. Qualification of workers must now include knowledge and appreciation of cultural values of the receiving countries aside from language proficiency. Most importantly there is a need of international accepted certification.

8. Address by Guest of Honor Dr. Md. Abdur Rob Howlader, Member, SEI Division, Planning Commission

Mr. Howlader specifically pin pointed that according to the population projection done by UNFPA, youth population would grow from 41.2 million in 2011 to 51.3 million in 2026, implying growth of 24.5 percent over the period. The large number of youth and adolescent population can bring the opportunity of rapid economic development if appropriate policy interventions are taken to ensure human resource development. However, despite achieving remarkable success in meeting many of the MDGs it will be a daunting challenge for Bangladesh to achieve the Sustainable Development Goals (SDGs) due to several resource constraints in one hand and the existence of large number of youth and adolescent population without adequate training and skills. Thus achieving the SDGs will depend on the extent to which Bangladesh can fulfill the needs of youth and adolescent population for translating them into human resources. For instance, it is very essential to ensure adequate employment opportunities for the large number of youth population in order to get rid of poverty in the one hand and to ensure sustainable development on the other. However, ensuring adequate employment opportunities for large number of population requires long-term planning and investment in appropriate sectors to develop a skilled labor force so that they can compete globally and take the opportunities of employment in abroad. To generate effective intervention programs for translating youth and adolescents into human resources it is worthwhile to assess their needs in greater detail.

9. Closing Remarks by the Chair

Dr. Shamsul Alam, Member, General Economics Division, Planning Commission thanked all the speakers for their brief but valuable speech. He said that most of the key issues were addressed in the speeches related to population and its link to the development of Bangladesh. With respect to some indicators, he requested to use the figure of latest Bangladesh Bureau of Statistics (BBS) and other government data sources. He also requested Dr. Kamrul to update the information and based on the discussion and rewrite the paper and submit the same to the General Economics Division of the Planning Commission to include this in the workshop proceeding.

The workshop was officially called off by thanking all the participants from the Chair.

Policy Paper on

The Level of Integration of Population Dynamics Issues in the 7th Five Year Plan Document for 2016-20

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The author would like to express his gratitude to Ms Farzana Jahan, Lecturer, Department of Applied Statistics, East West University for her extensive help in preparing this manuscript.

PAPER 3



General Economics Division (GED)
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Ministry of Planning, Dhaka, Bangladesh
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Introduction :

Bangladesh has been currently facing the most important phase of economic transformation since the independence. The success of this transformation largely depends on the policies based on the demographic transition which is underway in Bangladesh. In the process of demographic transition, Bangladesh has been experiencing a rapid change in the growth and structure of population. This process will result in: (i) growth in population very rapidly, (ii) change in age composition of population from younger age to a relatively older age over time, (iii) shift from largely rural to urban population, (iv) continued decline in dependency ratio from high to low, and (v) rapid increase in working age population. During this process, there will be necessity for remarkable changes with major policy implications in the following sectors: (i) economy, (ii) education, (iii) health, and (iv) urbanization. Next five years will be the most important phase in determining the policies and strategies to face crucial challenge of transforming demographic window of opportunity to demographic dividend. This will require quality investment on the young population who will be entering into the workforce in growing numbers. The growth rate of population is still above 1 and the total fertility rate is yet to reach the replacement level, however, the country is going through a rapid transition due to underlying impact of population dynamics with an enormous increase in the base population. In other words, the population size after the completion of demographic transition and after being stabilized will be much higher than the current size of the population in Bangladesh. In this context, the Seventh Five Year Plan can provide the most important policy guideline with a clear vision to lead the country toward a transition to optimum economic growth with high priorities to improvement in human resources by integrating population dynamics issues in the plan document.

We can summarize the status of demographic transition as noted in a recent study on the impact of demographic transition on socio-economic development in Bangladesh (UNFPA, 2015): (i) the mortality transition is still ongoing, infant, child and maternal mortality have been declining consistently, (ii) the decline in fertility started since mid-seventies and yet to reach the replacement level, (iii) the current TFR is the lowest among countries with similar level of poverty, (iv) there is declining trend in the proportion of young age population while proportion of population in other age groups are increasing, and (v) the urban population growth is approximately double the national rate but is still under 30 percent of the total population. For Bangladesh, the challenge is quite formidable because: (i) Bangladesh has already the highest population density in the world apart from some city states, (ii) poverty needs to be decreased while the population continues to grow rapidly, (iii) service sector contributes more than 50 percent of economic output, industry more than 25 percent and agriculture only 15 percent but still nearly 50 percent of the workforce is employed in agriculture, (iv) young age of marriage and childbearing remain as barriers to employment of women as well as to overall development process, and (v) about 28 percent of the population lives in urban areas which is heavily concentrated in Dhaka city where 37 percent of the population lives in slums. In addition, completion rates and quality of education at primary, secondary and tertiary levels require special attention.

In this paper, some important targets of the Seventh Five Year Plan for human development are discussed in the light of the ongoing demographic transition in Bangladesh. In the Seventh Five Year Plan document, following strategic perspectives are highlighted: (i) improvement in education at primary, secondary and tertiary level, (ii) improvement in health sector especially for women and children including attention to nutritional status, (iii) women empowerment, and (iv) skilled workforce and employment. It is noted that greater emphasis will be given to secondary and higher education as well as to technical education. Besides, capacity of the health workforce will be enhanced to ensure a safe, healthy and nourishing environment. In addition, rapid urbanization is identified as a major challenge and it has been observed that the resource base of urban local bodies is extremely weak and depends predominantly on central government. This dependence results in poor service delivery and weak operations and maintenance systems.

In the Sixth Five Year Plan (GED, 2012), major emphasis was given on human development and specified the following aspects: (i) quality of education, (ii) gender parity at all levels of education, (iii) improvement in health and nutrition indicators, (iv) reduction in population growth rate, and (v) equity in health and education. It was observed that although enrolment in primary level reached almost 100 percent, secondary level enrolment increased, gender parity was achieved at both primary and secondary levels, however, lagging behind at the tertiary level. The most important aspect was the concern about the quality of education which is the core of human resources. The challenges for the Seventh Five Year Plan based on the progress made in the Sixth Five Year Plan in the education sector are: (i) substantial increase in quality of education at all levels, (ii) universal enrolment and completion of primary and secondary schooling, (iii) increased enrolment at tertiary level, improvement in gender parity at tertiary level along with substantial improvement in quality of tertiary level education as well. Some major challenges reported in the Seventh Five Year Plan are (GED, 2015Bb, pp.582-584): (i) access, dropout and equity issue; (ii) gender discrimination in higher education, and (iii) quality issue (teacher capacity, curriculum, physical facilities, training of teachers). To improve the skill of the workforce, an integrated strategy needs to be undertaken. In the health sector, progress has been made in reducing infant, child and maternal mortality as well as in child malnutrition and total fertility. Equity aspects are emphasized for attaining the targets and public-private partnerships need to be strengthened for attaining the goals for education, health and nutrition sectors. It is suggested in the Seventh Five Year Plan that at least an additional 1.2 percent of GDP needs to be allocated for health and education sector (GED, 2015Bb, p.20).

The targets for human resource development as delineated in the Seventh Five Year Plan (GED, 2015b, p.27) are:

- (i) Achieving 100 percent net enrolment rate for primary and secondary education,
- (ii) Increasing enrolment rate in 12th class to 60 percent,
- (iii) Percentage of cohort reaching grade 5 to be increased to 100 percent from current 80 percent
- (iv) Under 5 mortality rate to be reduced to 37 per 1000 live births,
- (v) Maternal mortality ratio to be reduced to 105 per 100,000 live births,
- (vi) Immunization, measles (percent of children under 12 months) to be increased to 100 percent
- (vii) Births attended by skilled health staff to be increased to 65 percent,
- (viii) Reduction of Total Fertility Rate to 2.0, and
- (ix) Increasing contraceptive prevalence rate to 75 percent.

Some additional targets related to population dynamics are:

- (i) Creating good job for underemployed and new labor force entrants by increasing the share of employment in the manufacturing sector from 15 percent to 20 percent,
- (ii) Access to improved water source will be ensured for all urban rural dwellers,
- (iii) Access to sanitary latrines to be increased to 100 percent in urban areas and 90 percent in rural areas,
- (iv) The ratio of female to male in tertiary education to be raised from current 70 percent to 100 percent,
- (v) The ratio of literate female to male for age group 20-24 to be raised to 100 percent from the current 86 percent, and
- (vi) Spending on Research and Development to constitute 1 percent of GDP.

The targets relevant to the human development are displayed in the following table as documented in the 7th Five Year Plan:

Table 1.1: Some Human Resource Development 7th Five Year Plan Targets in Context

	Targets	Base Year 2010	Vision 2021	Progress under 6th FYP 2015	7th FYP 2020
E.	Human Resource Development (Education, Health and Population)				
26	Net Enrolment at Primary Level (%)	91		97.3	100
27	Net Enrolment at Secondary Level (%)	43		57	100
28	Net Enrolment at Tertiary Level (%)	9		12	20
29	Percentage of cohort reaching grade 5 (%)	55		80.5	100
30	Total Fertility Rate	2.7	1.8	2.11	2.0
31	Increase Contraceptive Prevalence Rate (%)	60	80	62	75
32	Under 5 Mortality Rate (per 1000)	62		46	37
33	Immunization, measles (% children under 12 months)	87		84	100
34	Population Growth Rate (% per annum)	1.4	1	1.37	1
35	Maternal Mortality Ratio (per 100,000 live births)	194		170	105
36	Births attended by skilled health personnel (% of total staff)	24		42.1	65
37	Literacy Rate (7+)		100	57.2	100
H.	Gender Equality and Social Protection				
44	Ratio of girls to boys in tertiary education (%)	32		70	100
45	Ratio of literate females to males (percent of ages 20- 24)	85		86	100
46	Female enrolment in technical and vocational education (%)			27	40
47	Income Inequality (Gini coefficient)	0.458			0.450
48	Spending on Social Protection (% of GDP)			2.02	2.3

Source: GED, 2015b

2. Background

2.1 Population Size and Structure: Current Status and Long-term View

The population of Bangladesh increased from 111.45 million in 1991 to 149.8 million in 2011. The growth rate was 1.59 percent during 1991-2001 and 1.37 percent during 2001-11. Based on the enumerated population by age and sex as found in the census 2011, the adjusted age-sex composition is computed for the census night (zero hour of March 15 was the census night and the census was conducted during March 15-19, 2011). The estimate for undercount was 3.971 percent (BBS, 2013). Using this under-enumeration rate, the population of Bangladesh is adjusted. In this paper, the TFR is assumed to reach 2.1 in 2020 and 1.9 in 2028 for projection of population from 2012 to 2061. The population of Bangladesh is about 161 million in 2016 which will reach more than 223 million in 2061 according to this projection. The population density will increase from 1091 per square kilometer in 2016 to 1514 per square kilometer in 2061.

Table 2.1: Population in million under medium scenario, 2011-2061

Year	Population (million)
2011	149.8
2016	160.95
2021	171.58
2025	181.78
2031	190.83
2036	199.13
2041	206.39
2046	212.54
2051	217.51
2056	221.19
2061	223.46

Source: Population and Housing Census, 2011, BBS 2013; Projected for 2012-2061

Figure 2.2: Intercensal Growth Rate of Population, 1911-2011 (Source: BBS 2013)

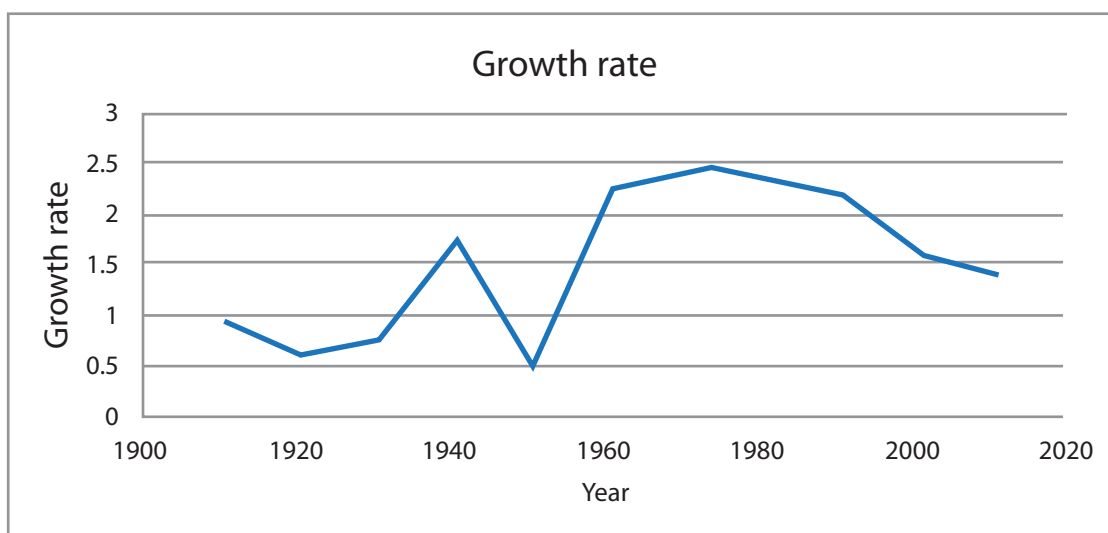
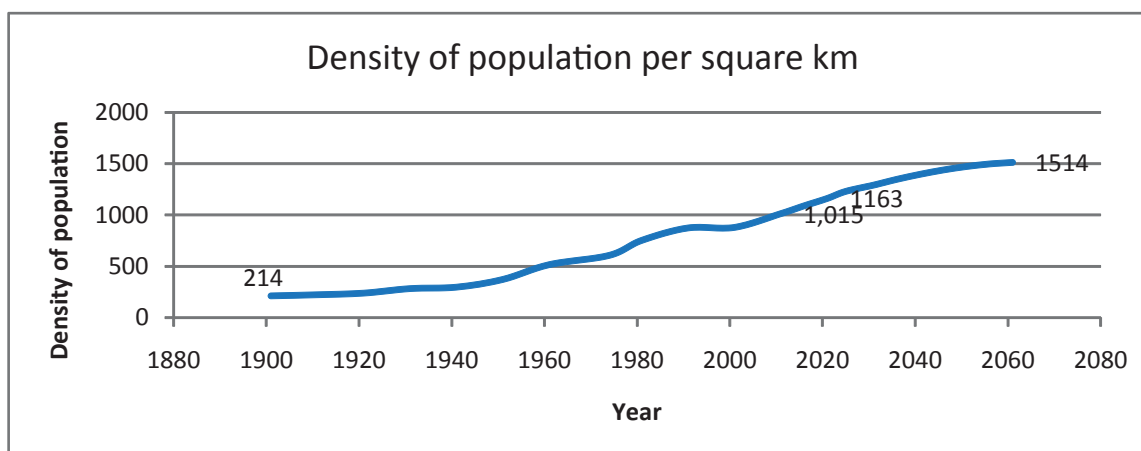


Figure 2.3: Population Density, 1911-2061 (Sources: BBS, 2013), Projections



A remarkable feature in the population growth of Bangladesh is the increase in the working age population as compared to that of the population under 15 and over 60 years of age. During the period from 1991 to 2011, the

working age population increased from 49.5 percent to 59.1 percent. As a result of the increase in the working age population, the dependency ratio has been decreasing sharply providing the onetime window of opportunity termed as demographic dividend for the population of Bangladesh. It appears that the working age population will have a continued increase to 65 percent of the total population until 2025-36 and thereafter it will start declining due to increase mainly in the old age population. The old age population will increase from 7.5 percent in 2011 to 23.3 percent in 2061. The dependency ratio will decrease up to 54 percent during 2025-36 and then it will rise to about 70 percent in 2061. It is evident from the dependency ratio that the period of demographic dividend has started after 1991 and the ratio declined from 102 in 1991 to 83 percent in 2001 and 71 percent in 2011. In other words, Bangladesh is currently in the last phase of the window of opportunity which is extremely crucial for the future of the country as a whole. In fact, it is noteworthy that 2016-21 period will be the most important phase for implementing policies in order to seize benefit from window of opportunity.

Table 2.2 Percentage of Population by Three Main Age Groups, 1991-2061

Year	0-14	15-59	60+
1991	45.1	49.5	5.4
2001	39.1	54.7	6.2
2011	34.7	59.1	7.5
2016	31.1	61.5	7.5
2021	27.2	64.4	8.4
2025	25.6	65.0	9.5
2031	24.0	65.0	11.1
2036	22.4	64.8	12.9
2041	20.9	64.5	14.6
2046	19.9	62.9	17.2
2051	19.0	61.7	19.3
2056	18.3	61.0	20.6
2061	17.8	59.0	23.3

Source: Rahim, A. (1911-1974), BBS 1977, BBS, 2013, Projections

Table 2.3 Dependency Ratio, 1911-2061

Year	Dependency Ratio
1991	102.0
2001	82.8
2011	71.4
2016	62.8
2021	55.3
2025	54.0
2031	54.0
2036	54.5
2041	55.0
2046	59.0
2051	62.1
2056	63.8
2061	69.7

Source: Rahim, A. (1911-1974), BBS, 1977, BBS 1981-2011, Projections

The Crude Birth Rate declined from 32.8 to 19.2 per thousand during 1991-2011(SVRS, 2011) and the Crude Death Rate declined from 11.4 to 5.5 per thousand during the same period. The decline in the level of fertility was largely attributable to the increase in the level of CPR from 46.3 percent in 1994 to 58.4 in 2011.

Table 2.4 Crude Birth Rate per 1000 population

Year	CBR per 1000 population
1990	32.8
1991	31.6
1992	30.8
1993	28.8
1994	27
1995	26.5
1996	25.6
1997	21
1998	19.9
1999	19.2
2000	19
2001	18.9
2002	20.1
2003	20.9
2004	20.8
2005	20.7
2006	20.6
2007	20.9
2008	20.5
2009	19.4
2010	19.2
2011	19.2
2012-13	19.3
2014	18.9

Source: BBS 2012, BBS, 2015a, BBS 2015c

The TFR declined from 4.3 births per woman in 1990 to 2.3 births per woman in 2014. We observed a plateau in the TFR level during the nineties at a level of 3.3. There was a decline of one birth per woman since then. However, it seems that there is another plateau at a level of 2.3 births per woman seems to be in progress now according to the Bangladesh Demographic Surveys 2011 and 2014 (BBS, 2015a; NIPORT, 2015a). This is reflected in the estimate of the crude birth rate which remained almost constant during 2009-2013 at a range of 19.2-19.4 per thousand women. Hence, there is a likely delay in attaining the replacement level fertility of 2.1 very soon. This will have impact on the projected population of Bangladesh.

Table 2.5 Total fertility Rate for SVRS and BDHS

Year	TFR (SVRS)	TFR (BFS, CPS, BDHS)
1990	4.33	4.3 (1989-1991)
1991	4.24	
1992	4.18	3.4 (1991-93)
1993	3.84	
1994	3.58	

Year	TFR (SVRS)	TFR (BFS, CPS, BDHS)
1995	3.45	3.3 (1994-96)
1996	3.41	
1997	3.1	
1998	2.98	3.3 (1997-99)
1999	2.64	
2000	2.59	
2001	2.56	
2002	2.55	3.0 (2001-2003)
2003	2.57	
2004	2.51	
2005	2.46	2.7 (2004-2006)
2006	2.41	
2007	2.39	
2008	2.3	
2009	2.15	
2010	2.12	2.3 (2009-2011)
2011	2.11	
2012-13	2.3	
2014		2.3

Source: BBS 2012, BBS 2015a, NIPORT 2015a

2.2 Urban Population

The definition of urban area was changed in the 2011 census, hence, it is not possible to obtain the growth rate of the urban population directly. We have obtained the adjusted urban population by age and sex for March 17, 2011 using the ratio of the total for SMA adjusted and enumerated urban population (1.2497) and then July 1, 2011 population is estimated using the estimated growth rate of 2.95 percent for urban as compared to that of 1.4 percent for the rural population during the 2001-2011 intercensal period. Then, the rural population is estimated by subtracting the urban population from the adjusted national population on July 1, 2011.

Table 2.6 Projected Population (million) in Urban and Rural Population

Year	Urban Population (million)	Rural Population (million)
1981	14.1	75.8
1991	22.4	89
2001	31.0	95.5
2011	42.31	108.06
2016	47.87	112.94
2021	57.56	113.74
2026	68.33	113.01
2031	79.81	110.43
2036	92.03	106.47
2041	104.57	101.10
2046	117.12	94.58

Year	Urban Population (million)	Rural Population (million)
1981	129.36	87.20
2056	140.89	79.24
2061	151.37	70.98

Source: BBS, 2013, Projections for 2016-61

The census and projected rural and urban populations for the period 1981-2061 are displayed in Table 2.6. The projected urban population will increase from 42.3 million (28 percent of the total population) in 2011 to 151.4 million (68 percent of the total population) in 2061. The urban population is expected to surpass the rural population size after 2036.

The working age population of the urban areas in Bangladesh is expected to increase from 27.1 million to 94 million during the fifty-year period from 2011 to 2061. On the other hand, the working age population in rural area will increase from 60 million in 2011 to 70 million in 2021 and then there will be steady decline to 37 million in 2061. Hence, the Seventh Five Year Plan document needs to provide the guideline for this irreversible transition towards predominant urbanization.

Table 2.7 Urban population as Percentage of National Population (1961-2061) (Census Counts and Projection under medium scenario)

Year	Urban population as % of Total Population
1961	5.19
1974	8.78
1981	15.54
1991	20.15
2001	23.81
2011	28.00
2016	29.77
2021	33.60
2026	37.68
2031	41.95
2036	46.36
2041	50.84
2046	55.32
2051	59.73
2056	64.00
2061	68.08

Source: BBS, 2013, Projections

Table 2.8 Projected Urban Population in three main age groups in million

Year	Population (in million) in Three Age Groups		
	0-14	15-59	60+
2011	12.8	27.1	2.4
2016	13.0	32.2	2.7
2021	13.6	40.2	3.8
2026	15.3	47.9	5.1
2031	17.0	55.7	7.1

Year	Population (in million) in Three Age Groups		
2036	18.6	63.7	9.8
2041	20.0	71.7	12.8
2046	21.6	78.2	17.3
2051	23.1	84.5	21.8
2056	24.5	90.6	25.8
2061	25.8	93.8	31.7

Source: Bangladesh Population and Housing Census, 2011, BBS, 2013, Projections

Table 2.9 Projected Rural Population in three main age groups in million

Year	Population (in million) in Three Age Groups		
	0-14	15-59	60+
2011	39.3	60.0	8.8
2016	36.9	66.8	9.3
2021	32.8	70.3	10.7
2026	30.8	70.2	12.1
2031	28.3	68.1	14.0
2036	25.6	65.0	15.9
2041	22.9	60.9	17.4
2046	20.4	54.9	19.3
2051	17.9	49.1	20.1
2056	15.7	43.7	19.9
2061	13.6	37.1	20.2

Source: Projections

Another important point to be noted here that the growth of the elderly population of age 60 years or higher will be increasing even at a much higher rate from 2.4 million to 32.5 million during the same period. Compared to these two broad groups of population belonging to working age and elderly, the growth in the young age population is quite modest from 12.8 million to 26.1 million during the same period. This scenario appears to be very different in the rural area. The working age population shows a slight increase up to 2026 but then a steady decline is expected to 35.8 million in 2061 from 60 million in 2011. On the other hand, the elderly population will increase from only 8.8 million to 19.5 million. Although this transition is expected as a consequence of demographic and economic transitions which are currently in progress steadily, the resulting challenges due to an irreversible shift to urbanization are quite formidable and require priority focus to policy measures for addressing the transformation from an agrarian to urban concentration.

2.3 Reproductive Health

For human resource development, reproductive health concerns are given high priority. Some selected indicators are considered for this report. The selected indicators are: mean age at marriage, maternal mortality ratio, percent of births attended by skilled health personnel, contraceptive prevalence rate, unmet need for family planning, adolescent fertility etc.

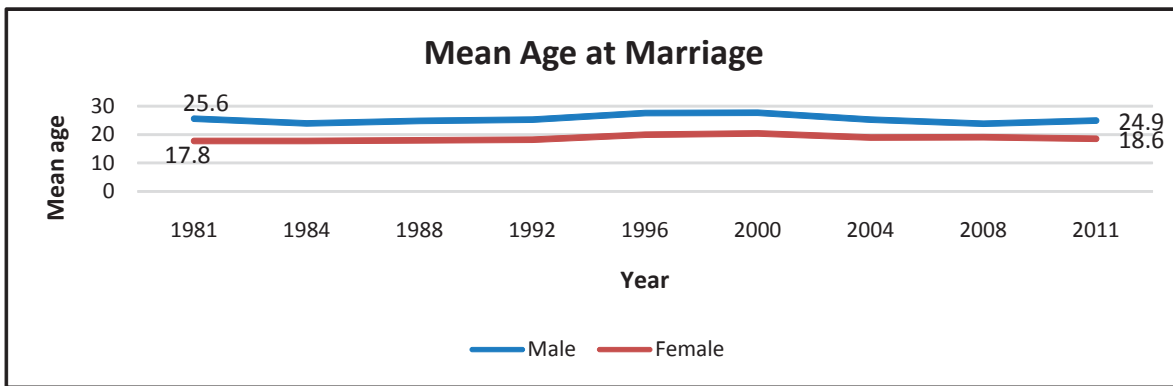


Figure 2.10: Mean age at marriage, 1981-2011 (Source: BBS, 2012)

The mean age at marriage is an important indicator of reproductive health. It is observed that the mean age at marriage for females has not changed much during the period 1990 to 2011. It remains close to 18 to 19 years during most of the period except 20 years or above during 1996 to 2003. The median age at first both shows that the women who enter into the reproductive stage most recently (age 20-24 in this case), have reported slightly higher median age at first birth, 18.9 years. The older women reported lower median age at first birth. This displays that a large proportion of the first births take place at teenage period.

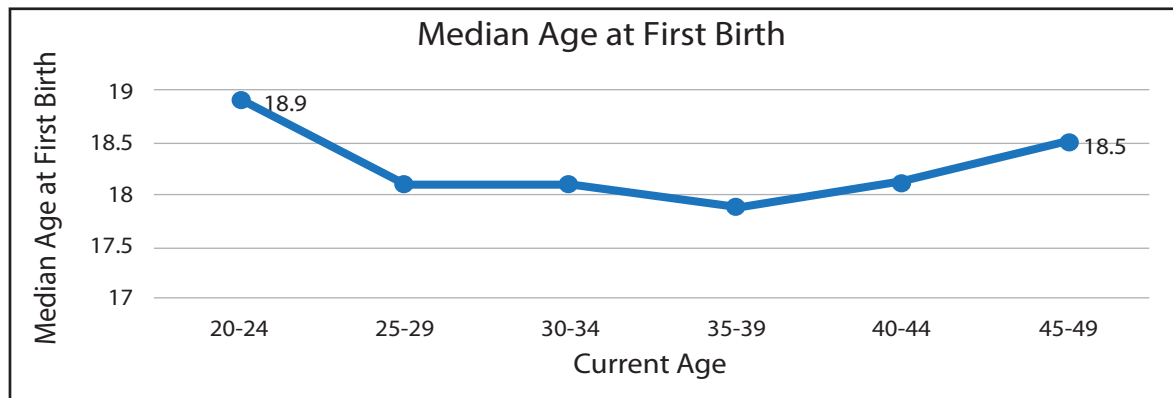


Figure 2.11: Median age at first birth by age group (Source: NIPOORT 2013)

The percentage of women giving birth to their first baby by age 15 and 18 are displayed in the following figure. A substantial proportion of women reported their first birth before age 15 although there might be slight decline during the recent past. About one-third of the women age 15-19 had begun childbearing in 2014 which remained almost constant during 1994-2014 (NIPOORT, 2015).

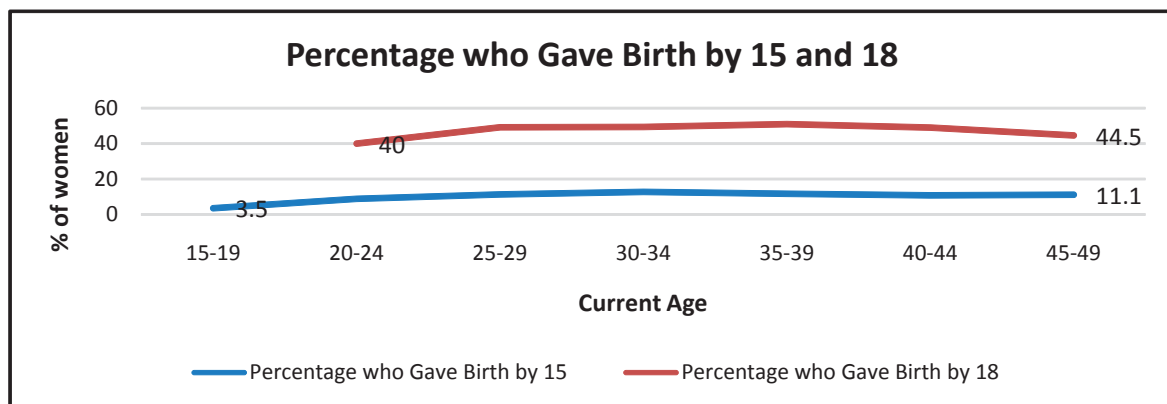


Figure 2.12: Percentage who Gave Birth by 15 and 18 (Source: NIPOORT 2013)

The maternal mortality ratio per hundred thousand live births declined from 648 in 1986 to 209 in 2011 and 170 in 2013. This decline is a remarkable achievement which is less than 50% of the ratio estimated in 1995. A further decline to 170 is estimated in 2013 which might be attributable to the emphasis in the government policies on this issue at all levels. This decline can be accelerated to bring about the maternal mortality ratio to a very low level if the time of first birth can be delayed and birth intervals are prolonged. An effective policy measure can be adopted to accelerate the process.

Table 2.10 Maternal Mortality Ratio per 100,000 Live Births

Year	National
1986	648
1989	508
1992	468
1995	447
1998	323
1999	320
2000	318
2001	315
2002	391
2003	376
2004	365
2005	348
2006	337
2007	351
2008	348
2009	259
2010	216
2011	209
2013	170

Source: BBS, 2012, MMEIG, <http://www.maternalmortalitydata.org>

To address the specific target groups for delayed pregnancy, particularly to avoid teenage pregnancy, the issue of unmet need requires special attention. During the period from 1993-94 to 2014, the unmet need for family planning methods has shown a reduction from 19.4% to 14%. This has reduced to 12 percent in 2014 (NIPORT, 2015) and a further reduction needs a special action plan.

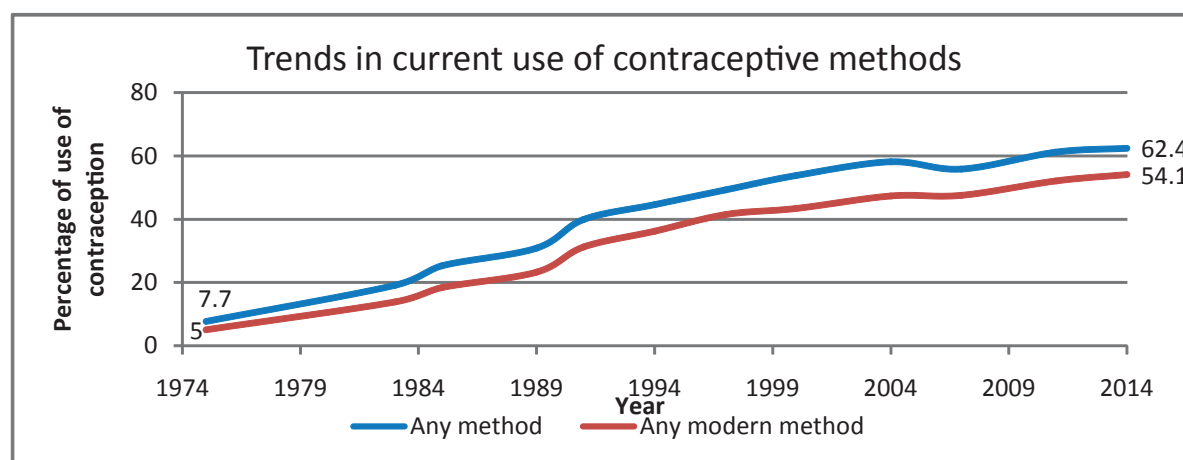


Figure 2.15: Trends in current use of contraceptive methods (Source: NIPORT, 2015)

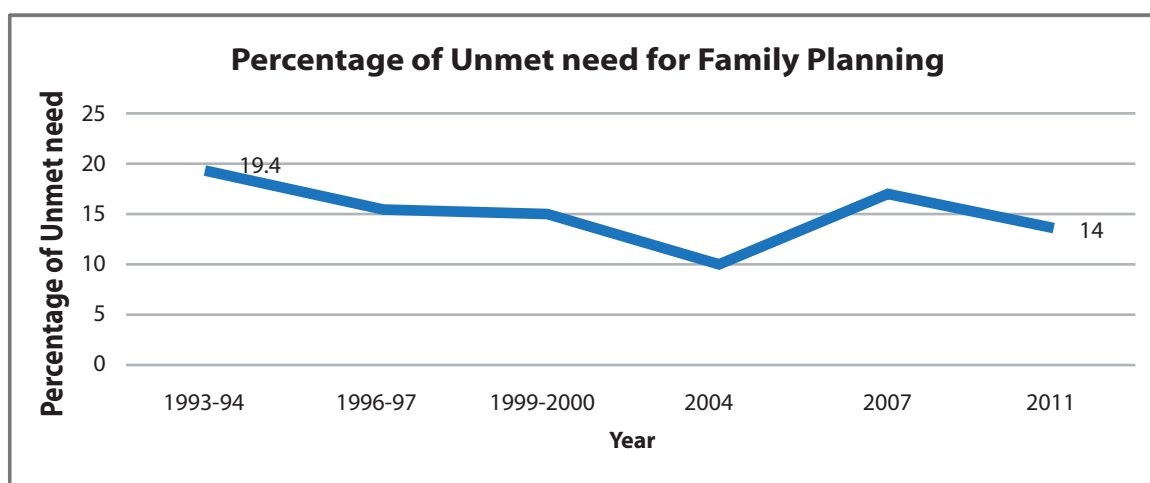


Figure 2.16: Percentage of Unmet Need for family planning, 1991-2013 (Source: NIPORT 1994, 2001, 2005, 2009, 2013)

2.4 Infant and Child Mortality

The decline in infant, child and mortality appears to be fast during the past 15 years. It is expected to decline further during the Seventh Five Year Plan. Following table summarizes the childhood mortality during the past 15 years. During 2011-14, the under 5, child and infant mortality declined from 53 to 46, 11 to 8 and 43 to 38, respectively. However, Table 2.12 shows that any further decline in the childhood mortality will depend mostly on the reduction of neonatal deaths. A trend shows that in 1993-94, share of neonatal deaths to infant and under 5 deaths were 60 percent and 39 percent respectively. In 2014, the percentage of neonatal deaths increased to 74 percent of the infant deaths and 61 percent of the under 5 deaths. More importantly, the share of neonatal deaths remained constant during the Sixth Five Year Plan period. Three out of four infant deaths and three out of five under 5 deaths occur at neonatal stage. Hence, any further decline in infant mortality will depend predominantly on the decline in neonatal deaths which will require a very organized long term strategy. Deaths during neonatal period are closely associated with complications during antenatal period and delivery stages, first births, pregnancy during teenage, shorter birth space, poor sanitation and nutritional deficiency of mother. All these factors require longer time strategies and improvement in quality of antenatal and delivery care at the grassroots levels (Islam et al., 2004a, b; Chakraborty et al., 2003, Rahman and Abidin, 2010).

Table 2.11 Trend in Infant, Child and Under 5 Mortality per Thousand Live Births

Year	Infant	Child	Under 5
1993-94	87	50	133
1996-97	82	37	116
1999-2000	66	30	94
2004	65	24	88
2007	52	14	65
2011	43	11	53
2014	38	8	46

Source: NIPORT, 2015

Table 2.12 Trend in Neonatal Mortality per 1000 Live Births

Year	Neonatal Mortality	Proportion of Neonatal Deaths to Infant Deaths	Proportion of Neonatal Deaths to Under 5 Deaths
1993-94	52	0.60	0.39
1996-97	48	0.59	0.41
1999-2000	42	0.64	0.45
2004	41	0.63	0.47
2007	37	0.71	0.57
2011	32	0.74	0.60
2014	28	0.74	0.61

Source: NIPOORT, 2015

2.5 Education

Some key indicators on education at primary, secondary and tertiary levels are demonstrated in Tables 2.13-2.17. Enrolment at primary level is almost universal (97.7 percent in 2014). Completion rate at primary level reached 81 percent in 2014. It is noteworthy that 58 percent of the teachers are trained. The pupil/teacher and pupil/trained teacher ratios at the primary level are 40 and 70 respectively.

Table 2.13 Education at Primary Level

Year	Enrolment	Completion	Teaching Staff (000)	Trained Teachers (%)	Pupil/Teacher Ratio	Pupil/Trained Teacher Ratio
1999						
2011	94.9	79.6				
2012	96.7	75.3	458 (54% F)	58 (60% M, 56% F)	40	70
2013	97.3	80.5				
2014	97.7	81.0				

Source: BANBEIS, 2015; UNESCO, 2015

Table 2.14 Education at Secondary Level

Year	Enrolment	Completion	Teaching Staff (000)	Trained Teachers (%)	Pupil/Teacher Ratio	Pupil/Trained Teacher Ratio
1999			265 (13% F)		32	
2011	53.7	46.4				
2012	57.4	55.4	378 (21% F)	53 (52% M, 60% F)	30	57
2013	59.0	56.8				
2014	50.2	58.1				

Source: BANBEIS, 2015; UNESCO, 2015

Table 2.14 displays that both the enrolment and completion rates at secondary level are still low, 50.2 percent and 58.1 percent, respectively. Only 21 percent of the teaching staff are females and 53 percent of the teachers at the secondary level are trained. The Pupil/teacher and pupil/trained teacher ratios are 30 and 57 respectively.

The enrolment rate in 2014 for age group 15-19 is 48.6 percent. The enrolment rate increased gradually since 2011 and the number of enrolments reached 7.57 million in 2014.

Table 2.15: Enrolment Rate and Number of Enrolment for Age 15-19, 2011-2014

Year (July1)	Enrolment Rate	Enrolment (million)
2011	42.9	5.76
2012	44.8	6.24
2013	46.7	6.85
2014	48.6	7.57

Source: BANBEIS, 2015

The tertiary enrolment rate for the age group 20-24 increased from 11 percent in 2011 to 14 percent in 2014. To achieve the target of 20 percent in 2020, enrolment for the age group 20-24 needs to increase from 1.9 million to 3.3 million during 2015-20.

Table 2.16: Enrolment Rate and Number of Enrolments for Age 20-24, 2011-2014

Year (July1)	Enrolment Rate	Enrolment (million)
2011	11.07	1.54
2012	12.06	1.64
2013	13.05	1.74
2014	14.05	1.84

Source: BANBEIS, 2015

Quality issue in education remains a formidable challenge to the success of the Seventh Five Year Plan. Some important features are summarized in the following table to indicate the prevailing quality challenges in the education sector. According to the National Student Assessment 2011 as noted in Bangladesh Education for All 2015 National Review (UNESCO, 2015b, p. 46):

By the end of primary education cycle (i.e., at the end of Class 5), only one-quarters (25%) of students master Class 5 Bangla competencies, and one-third (33%) of students master Class 5 Mathematics competencies. The rest of students finish primary education with knowledge and competency that is short of expectations in the Bangla and Mathematics curriculum.

It is clear from Table 2.17 that Bangladesh has achieved success in universal enrolment at primary level and gender parity at both primary and secondary levels but the following problems need to be addressed in the forthcoming Seventh Five Year Plan: (i) primary survival rate needs to be 100 percent during the next 5 years, (ii) secondary enrolment rate is lagging behind miserably, it has to be doubled during the next 5 years from 50 percent to 100 percent which requires a very intensive and concerted effort, (iii) the survival rate in secondary level is less than 60 percent and attaining 100 percent survival at the secondary level may need special attention too, (iv) pupil/teacher ratio in Bangladesh at both primary and secondary levels are close to countries with low income, but on average, 10 students higher per teacher at primary and 8 students higher per teacher at secondary levels compared to countries with lower middle income and 21 students more per teacher at primary and 15 students more per teacher at secondary levels compared to countries with upper middle income, (v) the problem appears to be more challenging if we take into account pupil/trained teacher

ratio which is 70 and 57 per trained teacher respectively at primary and secondary levels, (vi) learning time in a school year is almost half of the international standard (1000 hours), (vii) school life expectancy from primary to tertiary level is 1.1 year less than that of the lower middle income countries and 3.3 years less than the upper middle income countries, (viii) public expenditure on education is 12.3 percent which is 14.9 percent for low income and 15.6 percent for lower middle income countries, and (ix) public expenditure on education as percent of GNP is slightly higher than 2 percent in Bangladesh compared to 4 percent in low income, 4.9 percent in lower middle income and 5.1 percent in upper middle income countries.

Table 2.17: Some Key Indicators of the Education Sector in Bangladesh

Indicator	Bangladesh	Countries with Low Income	Countries with Lower Middle Income	Countries with Upper Middle Income
Primary Enrolment Rate (%), 2014	97.7			
Primary Repetition Rate (%), 2013	6.4			
Primary Dropout Rate (%)	20.9			
Primary Survival Rate (%)	81.0			
Secondary Enrolment Rate (%)	50.2			
Secondary Survival Rate (%)	58.1			
Primary Pupil/Teacher Ratio	40	42	30	19
Primary Pupil/Trained Teacher Ratio	70	51	37	
Secondary Pupil/Teacher Ratio	30	26	22	15
Secondary Pupil/Trained Teacher Ratio	57			
School Life Expectancy (years)	10.0 (9.7 M, 10.3F)	9.6 (10.1M, 9.3F)	11.1 (11.4M, 10.8F)	13.3 (13.3M, 13.4F)
Public Expenditure on Education as % of Total Expenditure (%)	12.3	14.9	15.6	14.9
Public Expenditure on Education as % of GNP, 2012	2.1	4.0	4.9	5.1
Learning Time in a School Year (Hours)	578 International Standard= 1000Hours			

Source: UNESCO, 2015, BANBEIS, 2015, GED, 2015B, GOB, 2015

3. Population Size and Structure: 7th Five Year Plan Period 2016-20/21

3.1 Population Size

During 2015-2020, the population is expected to increase from 159 million to 172 million and the population density will be increased by additional 73 per square km during this period. The dependency ratio was above 100 until 1991 then started to decline steadily. According to the 2011 census, the dependency ratio was 71 percent and the projected ratios for 2015 and 2020 were 65 and 56 respectively. This indicates that the population of Bangladesh has been experiencing the lowest dependency currently which will decline further slightly to 54 percent during the next decade before it starts to rise steadily again.

Table 3.1 Population (in million) Under Medium Scenario, 2011-2021

Year (July1)	Population (million)
2011	150.37
2012	152.41
2013	154.53
2014	156.68
2015	158.87
2016	160.95
2017	163.06
2018	165.22
2019	167.40
2020	169.48
2021	171.58

Source: Population and Housing Census, 2011, BBS, Population Projection for 2012-2021

3.2 Young Age Population

The change in age structure for age groups below 30 during 2011-21 is displayed in Table 3.2. This change reflects the likely influence in setting the priorities for the Seventh Five Year Plan in relation to human development.

Table 3.2 Population in the Age Groups Less Than 30 in 2011, 2016 and 2021

	2011	2011	2016	2016	2021	2021
2011	Population (million)	%	Population (million)	%	Population (million)	%
0-4	15.72	10.46	15.56	9.67	15.70	9.15
5-9	18.97	12.62	15.58	9.68	15.45	9.00
10-14	17.38	11.56	18.85	11.71	15.49	9.03
15-19	13.43	8.93	17.22	10.70	18.70	10.90
20-24	13.88	9.23	13.24	8.23	17.04	9.93
25-29	14.07	9.36	13.71	8.52	13.10	7.63
Age <30	93.45	62.16	94.16	58.51	95.48	55.64
Total	150.37		160.95		171.58	

Source: BBS, 2003, BBS, 2013, Projections

Total population size will increase from nearly 161 million in 2016 to about 172 million in 2021 as compared to a growth from 94 million in 2016 to 95.5 million in the age groups less than 30. Although the growth in age less than 30 years seems natural, there are some major shifts taking place in five yearly age groups. A comparison in the age composition of this young population indicates some important policy challenges that need to be taken into account seriously during the 7th Five Year Plan period:

(i) The size of the population in the age group 5-9 will decrease from about 19 million in 2011 to 15.6 million in 2016 and 15.5 million in 2021, this resulted in direct impact on the primary education enrolment and completion during the 2011-15 period. The Sixth Five Year Plan needed much higher allocation in the primary education.

(ii) The projected population in the age group 10-14 will increase from 17.4 million in 2011 to 18.9 million in 2016 but there will be steady decline in the population of this age group to 15.5 million in 2021 which implies that the 7th Five Year Plan will start with a large cohort of population who will enter into the secondary education which may require much higher allocation in the secondary education to achieve the target as compared to that of the primary education. In the Sixth Five Year Plan, this fact was given priority but due to absence of a clear sectoral plan to address this issue, the problem still remained as one of the most difficult challenges, which might have caused low enrolment and completion rates in the secondary education during the Sixth Five Year Plan period.

(iii) The base population for the age group 15-19 has been increasing from 13.43 million in 2011 which is projected to reach 17.22 million in 2016 and will keep on increasing to 18.70 million in 2021 which implies that the 7th Five Year Plan will require substantial increase in the education of this cohort as compared to that in the Sixth Five Year Plan. As the mean age at marriage is slightly higher than 18 years, and a large proportion of those who marry before age 18 enter into the reproductive cycle, higher allocation will be needed to reduce maternal and infant mortality in relevant health facilities. In addition, a large number will enter into workforce from this cohort.

(iv) There will be substantial increase in the population of the age group 20-24 from 13.24 million in 2016 to 17.04 million in 2021 implying requirement of increased allocation for tertiary education, health for women, and creation of new jobs.

3.3 Women in Reproductive Period and Number of Births

The projected number of women in reproductive period will increase from 40.1 million in 2011 to 43.8 million in 2015. At the beginning of the seventh five year plan, the projected number of women in the reproductive ages is expected to be 44.8 million, one million higher than the number in 2015. This number will increase to 48.5 million in 2020. In other words, nearly 1 million more women will join the reproductive period each year. If age at marriage and proportion married remain same, then the number of women who will start giving births will increase accordingly. The number of births will increase from 3.20 million births in 2016 to 3.33 million in 2020 and will start to decline due to projected decline in the level of fertility.

The number of births to mothers under age 20 will increase from 0.78 million in 2016 to 0.81 million in 2019. Almost one-fourth of the births will occur to the high risk mothers at age under 20. The process of antenatal care, delivery and postnatal care need special attention for reducing both the risks of maternal morbidity and mortality as well as neonatal and post neonatal mortality.

Table 3.3: Projected Number of Women in Reproductive Ages in Million under Medium Scenario, 2011-2021

Year (July1)	Number of Women in Reproductive Ages (million)
2011	40.09
2012	40.90
2013	41.80
2014	42.77
2015	43.76
2016	44.75
2017	45.72
2018	46.67
2019	47.59
2020	48.46
2021	49.29

Source: Population and Housing Census, 1901-2011, BBS, Projections

Table 3.4 Projected Number of Total Births in Million under Medium Scenario, 2011-2021

Year (July1)	Population (million)
2011	3.22
2012	3.23
2013	3.25
2014	3.27
2015	3.30
2016	3.20
2017	3.24
2018	3.28
2019	3.33
2020	3.22
2021	3.26

Source: Population and Housing Census, 1901-2011, BBS, Projections

In this context, let us review the status of some related indicators as observed at the latest time point, prior to the beginning of the Seventh Five Year Plan.

There is a sharp increase in the percentage of births attended by skilled personnel from 5% in 1991 to 42.1% in 2014. Although this is a very noteworthy achievement, still three-fifths of the births are not attended by skilled health personnel which remain a challenge to the policymakers. If this process is accelerated then there will be acceleration subsequently in the reduction of both neonatal and maternal morbidity and mortality to a greater extent in near future.

Table 3.5 Births Attended by Skilled Health Personnel (in %), 1991 – 2014

Y ear	1991	1994	2004	2007	2009	2010	2011	2014
% of Birth attended by skilled Personnel	5	9.5	15.6	20.9	24.4	26.5	31.7	42.1

Source: NIPORT 1994, 2001, 2005, 2009, 2013, 2015

Table 3.6 Trends in Current Use of Contraceptive Methods

Year	Any method	Any modern method
1975	7.7	5.0
1983	19.1	13.8
1985	25.3	18.4
1989	30.8	23.2
1991	39.9	31.2
1994	44.6	36.2
1997	49.2	41.5
2000	53.8	43.4
2004	58.1	47.3
2007	55.8	47.5
2011	61.2	52.1
2014	62.4	54.1

Percentage of currently married women age 10-49 who are currently using specific family planning methods, selected sources, Bangladesh 1975-2014

Source: NIPORT, 2015

Table 3.7 Unmet need for Family Planning; 1993-94 to 2011

Year	1993-94	1996-97	1999-2000	2004	2007	2011	2014
% of Unmet Need for family planning	19.4	16	15	11	17	14	12

Source: NIPORT 1994, 2001, 2005, 2009, 2013, 2015

3.4 Reproductive Health

In a recent study, Mishra and colleagues (2015) observed that while most maternal and child deaths can be avoided through cost effective interventions, a range of factors including poor governance to lack of skilled health care providers may affect it's delivery at scale. According to them, this affects more to the poorest people in the low to middle income countries where the burden appears to be the highest. Despite low health budgets, ten countries, namely, Bangladesh, Cambodia, China, Egypt, Ethiopia, Laos, Nepal, Peru, Rwanda, and Vietnam, have made remarkable progress in achieving maternal and child health targets, due to three main reasons: (i) guiding principles, (ii) systematic adoption of evidence based or catalytic strategies, and (iii) multisector progress. According to Mishra and colleagues, political vision with proper emphasis on human rights, mobilization of partnerships and effective planning leading to timely implementation, and multisector progress in associated areas such as education, gender parity, water, sanitation and alleviation of poverty contributed to such achievement. However, to achieve the targets ahead, skilled health care providers will be one of the most formidable challenges in achieving the targets ahead.

In order to reduce maternal and infant morbidity and mortality, regular antenatal care throughout the pregnancy from medically trained personnel is essential. This is important for monitoring the pregnancy status as well as to prevent complications during antenatal period and delivery and also to reduce the risk of pregnancy outcome. The target set by the HPNSDP was to achieve 50 percent of the pregnant women making 4 or more visits for ANC by 2016. However, the rate was only 31.2 percent in 2014 indicating a formidable challenge to achieve target of 60 percent during the 2016-20 period. The additional number of women making at least four visits for ANC will be 0.74 million (on an average, 0.15 million per year) during 2016-20 to achieve the target of 60 percent by 2020. This will require a range of challenging tasks including increase in health facilities, health workers, workers for motivating the pregnant women and improvement in quality of services.

Table 3.8 Projected Number of Women in Million Making 4+ Antenatal Care Visits Achieving Rate 60% in 2020 under Medium Scenario, 2011-2021

Year	Rate of 4+ ANC Visits (Proposed)	Number of Women	Rate of 4+ ANC Visits (Constant)	Number of Women	Additional Number of Women Making 4+ ANC Visits to Achieve Target
2011	25.5	0.82	25.5	0.82	-
2012	24.7	0.80	24.7	0.80	-
2013	24.7	0.80	24.7	0.80	-
2014	31.2	1.02	31.2	1.02	-
2015	36.0	1.19	31.2	1.00	-
2016	40.8	1.31	31.2	1.01	0.12
2017	45.6	1.48	31.2	1.02	0.29
2018	50.4	1.65	31.2	1.02	0.46
2019	55.2	1.84	31.2	1.04	0.65
2020	60.0	1.93	31.2	1.01	0.74

Antenatal care by any medically trained provider was 64 percent in 2014 (NIPORT, 2015). Medically trained providers include qualified doctor, nurse/midwife/paramedic, FWV, community skilled birth attendant, and medical assistant/sub-assistant community medical officer. To reach an assumed target of 90 percent in 2020, about 0.65 million additional pregnant women need to be provided ANC by medically trained personnel during 2016-20 which is on an average 0.13 million additional new pregnancies to be covered by medically trained providers per year. Antenatal coverage by medically trained provider will increase from 2.25 million in 2015 to 2.90 million in 2020.

Medically trained skilled provider is a precondition to reduce the maternal and neonatal morbidity and mortality. According to the BDHS 2014, 42 percent of the deliveries were attended by medically trained provider. The projected target of attaining 65 percent in 2020 will require 0.60 million additional deliveries to be attended by medically trained providers during the 7th Five Year Plan period. In other words, every year an additional 0.12 million deliveries need to be attended by medically trained providers.

Table 3.9 Projected Number of Women in Million Getting Antenatal Care by Medically Trained Provider Achieving Rate 90% in 2020 under Medium Scenario, 2011-2021

Year	Rate of Getting ANC by Medically Trained Provider (Proposed)	Number of Women	Rate of Getting ANC by Medically Trained Provider (Constant)	Number of Women	Additional Number of Women to Receive ANC by Medically Trained Provider to Achieve Target
2011	54.6	1.76	54.6	1.76	-
2012	58.7	1.90	58.7	1.90	-
2013	58.7	1.91	58.7	1.91	-
2014	63.9	2.09	63.9	2.09	-
2015	68.2	2.25	63.9	2.11	-
2016	72.6	2.32	63.9	2.04	0.07
2017	76.9	2.49	63.9	2.07	0.24
2018	81.3	2.67	63.9	2.10	0.42
2019	85.6	2.85	63.9	2.13	0.60
2020	90.0	2.90	63.9	2.06	0.65

Table 3.10 Projected Number of Women in Million Getting Skilled Attendant at Delivery Achieving Rate 65% in 2020 under Medium Scenario, 2011-2021

Year	Rate of Getting Skilled Attendant at Delivery (Proposed)	Number of Women	Rate of Getting Skilled Attendant at Delivery (Constant Rate of 2014)	Number of Women	Additional Number of Women to Get Skilled Attendant at Delivery to Achieve Target
2011	31.7	1.02	31.7	1.02	-
2012	35.2	1.14	43.5	1.14	-
2013	38.6	1.25	43.5	1.25	-
2014	42.1	1.38	42.1	1.38	-
2015	45.9	1.49	42.1	1.39	-
2016	49.7	1.52	42.1	1.35	0.03
2017	53.5	1.71	42.1	1.36	0.22
2018	57.3	1.88	42.1	1.38	0.39
2019	61.1	2.03	42.1	1.40	0.54
2020	65.0	2.09	42.1	1.36	0.60

Bangladesh is lagging behind in providing delivery services in health facilities. Only 37 percent of the deliveries take place in health facilities, only 13 percent in public health facilities whereas remaining 24 percent in private/NGO facilities. It is noteworthy that 23 percent of the deliveries are C-section. To achieve the target of 65 percent, the number of deliveries in health facilities needs to be increased from projected 1.39 million in 2015 to 2.09 million in 2020, an increment in delivery in health facilities by 0.14 million per year. Any policy regarding increase in health facilities for delivery needs to state clearly a sustainable strategy to achieve the national target. As the public facilities provide delivery service only to a small proportion, public-private partnership and quality service for delivery in private sector needs to be integrated in the policy immediately. If the public sector is expected to provide the service with increasing share to achieve the target, it will require an action plan with immediate effect by bringing in drastic modifications and expansions in the existing health providing system.

Table 3.11 Projected Number of Deliveries in Health Facilities Achieving Rate 65% in 2020 under Medium Scenario, 2011-2021

Year	Rate of Getting Deliveries in Health Facilities (Proposed)	Number of Women	Rate of Getting Deliveries in Health Facilities (Constant Rate of 2014)	Number of Women	Additional Number of Women to Get Deliveries in Health Facilities to Achieve Target
2011	28.8	0.93	28.8	0.93	-
2012	31.0	1.00	31.0	1.00	-
2013	31.0	1.01	31.0	1.01	-
2014	37.4	1.22	37.4	1.22	-
2015	42.0	1.39	37.4	1.23	-
2016	46.6	1.49	37.4	1.20	0.10
2017	51.2	1.66	37.4	1.21	0.27
2018	55.8	1.83	37.4	1.23	0.44
2019	60.4	2.01	37.4	1.25	0.62
2020	65.0	2.09	37.4	1.20	0.70

Contraceptive prevalence rate was 62.4 percent in 2014, and there was 12 percent unmet need for spacing and limiting births. In the 7th Five Year Plan the target is to achieve 75 percent contraceptive prevalence in 2020. In that case, we may expect that the number of contraceptive users will increase from 21 million to 27 million during 2015-2020. This will require an additional 6 million new contraceptive users in 2020. The number of users at constant rate of 62.4 percent for the same period is also displayed.

Temmerman and colleagues (2015) observed that a new global strategy for women's, children's and adolescents' health is based on the key objectives of supporting resilient health systems for improving the quality of health services ensuring equitable coverage and working with associated health enhancement sectors such as education, water, sanitation and nutrition. It is noted that investment in childbirth and delivery can quadruple returns in terms of women's and newborn's lives saved and stillbirths and disabilities reduced. At this backdrop, we can summarize from the projections in Section 3.4 that not only there is a need to provide health care services for increased number of women who will be seeking assistance from health

care providers but also they will need an improvement in the quality of services to make it a sustainable system.

Table 3.12 Projected Number of Contraceptive Users Achieving Rate 75% in 2020 under Medium Scenario, 2011-2021

Year	Contraceptive Prevalence Rate (Proposed)	Number of Users	Contraceptive Prevalence Rate (Constant Rate of 2014)	Number of Users at Constant Rate	Additional Number of Users to Achieve Target
2011	61.3	19.85	61.3	19.85	-
2012	61.8	20.41	61.8	20.41	-
2013	61.8	20.86	61.8	20.86	-
2014	62.4	21.55	62.4	21.55	-
2015	64.5	22.80	62.4	22.06	-
2016	66.6	24.07	62.4	22.56	1.18
2017	68.7	25.37	62.4	23.04	2.39
2018	70.8	26.69	62.4	23.52	3.61
2019	72.9	28.02	62.4	23.98	4.85
2020	75.0	29.36	62.4	24.43	6.08
2021	75.0	29.86	62.4	24.84	6.56

3.5 Childhood and Maternal Mortality

The trend in childhood mortality and service delivery during pregnancy and delivery reflect the challenges associated with maternal and childhood mortality. There was remarkable decline in infant, child and under five mortality rates during the twenty years from 1993-94 to 2014 (NIPORT, 2015). Infant mortality decreased from 87 to 38 (less than 50 percent), child mortality from 50 to 8 (less than one-sixth) and under 5 mortality from 133 to 46 (one-third). In other words, the decline was fastest in the child mortality and the least in the infant mortality. Now, if we compare the decline in the neonatal and post-neonatal mortality then the challenge for the Seventh Five Year Plan becomes obvious. During the past twenty years, post-neonatal mortality reduced from 35 to 10 (less than one-third) but the decline in neonatal mortality is very slow from 52 to 28 (54 percent). This can be summarized more specifically in terms of proportion of neonatal deaths to under 5 deaths. In 1993-94, the share of neonatal mortality was 39 percent of the under 5 mortality which increased sharply to 61 percent in 2014. Hence, any decrease in childhood mortality needs clear focus and strategy for reducing neonatal mortality with highest priority. To achieve the target of under 5 mortality of 37 per thousand live births will require mostly a decline in neonatal mortality in next five years. This will require special attention to the following facts: (i) reduction in teenage pregnancy still remains an unresolved issue of concern which is associated with reduction in neonatal mortality and morbidity; (ii) prolonged birth spacing among the high risk fertility groups need further emphasis, (iii) nutritional status of mother need further improvement, and (iv) health care delivery of women at antenatal, delivery and post-natal stages need to be achieved as a precondition for improving the neonatal mortality status as a subsequent/ follow-up outcome.

3.6 Working Age Population and Labor Force Participation

The working age population will grow from 96 million in 2015 to 108 million in 2020. In other words, there

will be 12 million additional working age population. The dependency ratio is expected to decline from 65 percent in 2015 to 56 percent in 2020. The labor force participation was 59.3 percent in 2010 (BBS, 2014) and if we assume that the rate will increase to 70 percent in 2020 due to increased participation by women and growing share of participation by men of working age groups then it is projected that an additional 13 million will join the labor force during 2015-20. During the same period, the unemployed population will rise from 17 million to 19 million. Hence, the projected potential workforce by combining the projected participation and projected unemployed population will grow from 78 million in 2015 to 93 million in 2020. The projected additional labor force according to the 7th Five Year Plan document is 9.9 million during the 2015-20 period (GED, 2015B, p.52) which is lower than the projected numbers displayed in this section. It is noteworthy that the labor force participation rate was 82.5 percent for males and 36 percent for females. Since mid-eighties, the labor force participation of females has demonstrated steady rise from 5.6 percent to 36 percent which is expected to continue (BBS, 2013). In the projected labor force participation, the number of women in labor force will be in growing numbers as compared to that of males.

Table 3.13 Projected Population (in Million) in Three Main Age Groups and Dependency Ratio (%), 2011-2021

Year (July 1)	0-14	15-59	60+	Dependency Ratio (%)	Additional Labor Force During 2016-20
2011	52.07	87.05	11.24	72.7	
2012	51.93	89.07	11.40	71.1	
2013	51.64	91.38	11.51	69.1	
2014	51.20	93.87	11.61	66.9	
2015	50.69	96.43	11.76	64.8	
2016	49.99	98.95	12.00	62.6	2.52
2017	49.29	101.40	12.37	60.8	4.97
2018	48.62	103.77	12.83	59.2	7.34
2019	47.99	106.07	13.34	57.8	9.64
2020	47.27	108.33	13.88	56.4	11.90
2021	46.64	110.53	14.41	55.2	

Table 3.14: Projected Labor Force Participation in Million Using Constant and Increasing Rates, 2011-2021 under Medium Scenario

Year (July1)	Labor Force (million), Constant Rate (59.3%)	Labor Force (Million), Increasing Rate (70% in 2020)
2011	52.11	52.11
2012	53.24	53.87
2013	54.58	56.14
2014	56.05	58.60
2015	57.59	61.19
2016	59.15	63.84
2017	60.68	66.51
2018	62.15	69.17
2019	63.56	71.81
2020	64.91	74.44
2021	66.22	77.05

Table 3.15 Projected Unemployed Population in Million under Medium Scenario, 1911-2021

Year (July1)	Unemployed Population (million) Male (constant rate 6.6%)	Unemployed Population (million) Female (constant rate 31.5%)	Unemployed Population (million) Total (constant rate 14%)
2011	2.84	12.30	14.12
2012	2.90	12.57	15.47
2013	2.98	12.88	15.86
2014	3.06	13.23	16.29
2015	3.14	13.60	16.74
2016	3.23	13.97	17.20
2017	3.32	14.33	17.65
2018	3.40	14.67	18.07
2019	3.48	15.01	18.49
2020	3.55	15.33	18.88
2021	3.62	15.63	19.25

3.6 Urban Population

The urban population was 28 percent in 2011 but the projected population in urban areas shows that it will grow steadily to about 33 percent in 2020 starting from 29 percent in 2015. The growth in urban population is also associated with increase in slum population in urban areas. According to the latest census on slum population conducted in 2014, 2.23 million people live in slums in Bangladesh. In 1997, 1.39 million people lived in slums. In Dhaka division, 1.06 million people live in slums. However, according to another source, one-third of the City Corporations' population, live in slums (Center for Urban Studies, 2006).

Table 3.16: Projected Number and Percentage of Urban and Rural Population, 2011-2021

Year (July1)	Urban Population (million)	% Urban Population	Rural Population (million)	% Rural Population
2011	42.31	28.06	108.46	71.94
2012	42.76	28.09	109.46	71.91
2013	43.55	28.18	110.98	71.82
2014	44.66	28.50	112.02	71.50
2015	46.08	29.03	112.65	70.97
2016	47.87	29.77	112.94	70.23
2017	49.71	30.51	113.21	69.49
2018	51.62	31.27	113.46	68.73
2019	53.54	32.04	113.58	67.96
2020	55.52	32.82	113.67	67.18
2021	57.56	33.60	113.74	66.40

Table 3.16: Percentage of slum population according to major cities

City	Slum population as % of city population
Dhaka Metropolitan Area	37.4
Chittagong	35.4
Khulna	19.5
Rajshahi	32
Sylhet	27.4
Barisal	30.1
Total six cities	35.2

Source: CUS 2006

3.7 Primary, Secondary and Tertiary Education

Education will play the key role in making the necessary transformation in human resource development for seizing the window of opportunity through realization of demographic dividend. Bangladesh has made progress in: (i) access to primary, secondary and tertiary education, (ii) improvement in survival rate, and (iii) gender parity in primary and secondary levels. However, quality enhancement and further improvement of completion rate in secondary education require special attention and strategies on priority basis.

The primary enrolment rate reached 97.7 percent in 2014 and survival rate was 81.0 percent (BANBEIS, 2015). Assuming that the primary enrolment will reach 100 percent in 2016 and the survival rate will also attain the target of 100 percent in 2020 then the projected additional survival will increase from 0.1 million in 2016 to 1.34 million in 2020.

Secondary enrolment and survival both are low compared to primary level. To achieve universal enrolment and survival in secondary education in 2020, the survival in secondary education needs to increase at a very fast pace from 7 million 2015 to 17 million in 2020, it will require 2 million additional survival every year.

Table 3.17: Projected Number of Primary Enrolment and Survival in Primary Education for Age 6-10, 2011-2021

Year (July1)	Enrolment Rate	Enrolled in Primary (million)	Survival Rate	Survival in Primary (million)	Survival Rate (Constant)	Survival in Primary (million)	Additional Survival to Achieve Target
2011	94.9	17.98	79.6	14.31	79.6	14.31	-
2012	96.7	18.33	75.3	13.80	75.3	13.80	-
2013	97.3	17.78	80.5	14.32	80.5	14.32	-
2014	97.7	17.18	81.0	13.91	81.0	13.91	-
2015	98.8	16.68	84.0	14.04	81.0	13.51	-
2016	100	16.19	87.0	14.14	81.0	13.11	0.10
2017	100	15.57	91.0	14.09	81.0	12.61	0.05
2018	100	15.52	94.0	14.53	81.0	12.57	0.49
2019	100	15.49	97.0	15.00	81.0	12.55	0.86
2020	100	15.48	100	15.48	81.0	12.54	1.34
2021	100	15.51	100	15.51	81.0	12.56	1.37

Table 3.18: Projected Number of Secondary Enrolment and Survival in Primary Education for Age 11-15, 2011-2021

Year (July1)	Enrolment Rate	Enrolment in Secondary (million)	Completion Rate	Survival in Secondary (million)	Completion Rate (Constant Rate of 2014)	Survival in Secondary (million)	Additional Survival to Achieve Target
2011	53.7	8.90	46.4	4.13	46.4	4.13	-
2012	57.4	9.95	55.4	5.51	55.4	5.51	-
2013	59.0	10.58	56.8	6.01	56.8	6.01	-
2014	50.2	9.23	58.1	5.36	58.1	5.36	-
2015	58.5	10.92	65.0	7.10	58.1	6.34	-
2016	66.8	12.57	72.0	9.05	58.1	7.30	1.95
2017	75.1	14.14	79.0	11.17	58.1	8.21	4.07
2018	83.4	15.14	86.0	13.02	58.1	8.79	5.92
2019	91.7	16.01	93.0	14.89	58.1	9.30	7.79
2020	100	16.77	100	16.77	58.1	9.74	9.67
2021	100	16.09	100	16.09	58.1	9.34	8.99

The enrolment rate for age group 15-19 was under 50 percent in 2014 (BANBEIS, 2015). To achieve the enrolment rate of 60 percent in 2020, the projected number of enrolment will increase from 8 million in 2015 to 11 million in 2020.

The tertiary enrolment rate for the age group 20-24 increased from 11 percent in 2011 to 14 percent in 2014. To achieve the target of 20 percent in 2020, enrolment for the age group 20-24 needs to increase from 1.9 million to 3.3 million during 2015-20.

Table 3.19: Projected Number of Enrolment for Age 15-19, 2011-2021

Year (July1)	Enrolment Rate	Enrolment (million)	Increased Enrolment (million)
2011	42.93	5.76	-
2012	44.83	6.24	-
2013	46.72	6.85	-
2014	48.62	7.57	-
2015	50.52	8.31	-
2016	52.41	9.03	0.72
2017	54.31	9.68	1.37
2018	56.21	10.27	1.97
2019	58.10	10.77	2.46
2020	60.00	11.21	2.90
2021	60.00	11.22	2.91

Table 3.20: Projected Number of Enrolment for Age 20-24, 2011-2021

Year (July1)	Enrolment Rate	Enrolment (million)	Increased Enrolment (million)
2011	11.07	1.54	-
2012	12.06	1.64	-
2013	13.05	1.74	-
2014	14.05	1.84	-
2015	15.04	1.90	-
2016	16.03	2.12	0.22
2017	17.02	2.34	0.44
2018	18.02	2.61	0.71
2019	19.01	2.92	1.02
2020	20.00	3.25	1.35
2021	20.00	3.41	1.51

4. Strategy for Human Development and the Seventh Five Year Plan: Challenges, Gaps and Recommendations

In the 7th Five Year plan, human development strategy is based on the objective of further transformation of broad progress achieved during the 6th Five Year Plan in order to achieve targets of economic growth, economic transformation from rural based agrarian economy to urban based manufacturing and service based economy and job creation. In the process of achieving these targets, human development will be playing a pivotal role particularly due to the dynamics of age structure that created window of opportunity which may be transformed to demographic dividend. Hence, emphasis is given on health, education and employment in formulating the human development strategy for the 7th Five Year Plan. It has been acknowledged internationally that despite low health budgets, Bangladesh has made remarkable progress in achieving maternal and child health targets, due to three main reasons: (i) guiding principles, (ii) systematic adoption of evidence based or catalytic strategies, and (iii) multisector progress. However, the next phase targets not only for health but also for other human development sectors require a more careful plan because now the challenges are manifold and long term which can be improved and sustained if the following facts are considered and integrated in our plan comprehensively: (i) age-sex composition has been changing rapidly with increase in the population size above 15 years affecting the ongoing programs in the human development sectors including education and health, (ii) service delivery systems in these sectors need to be extended further to sustain the progress made so far, (iii) quality of services in all the sectors need to be improved substantially, and (iv) both education health sectors have lower allocation as percentage of GNP which need to be increased in order to achieve the targets of the Seventh Five Year Plan.

Following sub-sections 4.1 and 4.2 summarize the population structure that will have direct influence on the targets set for human development strategy of the 7th Five Year Plan. In sub-sections 4.3-4.6 the challenges and gaps are identified and recommendations are provided stemming from the background discussions in sections 2 and 3 and the priorities set in the 7th Five Year Plan document.

4.1 Age Structure

- During 2015-2020, the population is expected to increase from 159 million to 172 million.
- Population density will be increased by additional 73 per square km during this period.
- Projected dependency ratios for 2015 and 2020 are 65 and 56 respectively.
- This indicates that the population of Bangladesh is experiencing the lowest dependency now which will decline further slightly to 54 percent during the next decade before it starts to rise again steadily.

4.2 Young Age Population

- Population in the age group 5-9 will decrease from about 19 million in 2011 to 15.6 million in 2016 and 15.5 million in 2021, this declining trend had direct impact on the primary education enrolment and completion during the 2011-15 period.
- Population in age group 10-14 will increase from 17.38 million in 2011 to 18.85 million in 2016 but there will be steady decline in the population of this age group to 15.49 million in 2021 which implies that the 7th Five Year Plan will start with a large cohort of population who will enter into the secondary education which will require much higher allocation in the secondary education to achieve the target in the beginning. It is noteworthy that the secondary enrolment was 53.7 percent in 2011 which increased to 59 percent in 2013 but there was a sharp decline to 50 percent in 2014 which might be attributed mostly to an increased population in the age group 10-14. The Seventh Five Year Plan is going to start with even larger population in this group, hence, the target of achieving 100 percent enrolment in the secondary school will be a daunting task in all respects.
- The base population for the age group 15-19 will increase from 13.43 million in 2011 and will reach 17.22 million in 2016 and will keep on increasing in 2021 to 18.70 million which implies that the 7th Five Year Plan will require substantial increase in the education of this cohort as compared to that in the Sixth Five Year Plan.
- As the mean age at marriage is slightly higher than 18 years, and a large proportion of those who marry before age 18 enter into the reproductive cycle, higher allocation will be needed to reduce maternal and infant mortality in relevant health facilities.
- A large number will enter into workforce from the cohort of age 15-19 in 2016.
- There will be substantial increase in the population of the age group 20-24 from 13 million in 2016 to 17 million in 2021 implying requirement of increased allocation for tertiary education, health for women, and creation of new jobs.

4.3 Reproductive Health, Maternal and Under 5 Mortality

Challenges

- The projected number of women in reproductive period will increase from 40 million in 2011 to 44 million in 2015.
- At the beginning of the seventh five year plan, the projected number of women in the childbearing ages is expected to be 45 million, one million higher than the number in 2015.
- This number will increase to more than 48 million in 2020.
- About 1 million additional women will join the reproductive ages each year.
- If the age at marriage and proportion married remain same, then the number of women who will start giving births will increase accordingly.
- The number of births will increase from 3.20 million births in 2016 to 3.33 million in 2020 and will start to decline due to projected decline in the level of fertility thereafter.
- The number of births to mothers under age 20 will increase from 0.78 million in 2016 to 0.81 million in 2019.
- Almost one-fourth of the births will occur to the high risk mothers at age under 20. The process of antenatal care, delivery and postnatal care need special attention for reducing both the risks of maternal morbidity and mortality as well as infant mortality.

- The target was to achieve 50 percent of the pregnant women making 4 or more visits for ANC by 2016. However, the rate was only 31.2 percent in 2014 indicating a formidable challenge to achieve target of 60 percent during the 2016-20 period. The additional number of women making at least four visits for ANC will be 0.74 million (on an average, 0.15 million per year) during 2016-20 to achieve the target of 60 percent by 2020. This will require substantial increase in health facilities, skilled health workers, workers for motivating the pregnant women and improvement in quality of services.
- Medically trained skilled provider is a precondition to reduce the maternal and neonatal morbidity and mortality. According to the BDHS 2014, 42 percent of the deliveries were attended by medically trained provider. The projected target of attaining 65 percent in 2020 will require 0.60 million additional deliveries to be attended by medically trained providers during the 7th Five Year Plan period. In other words, every year an additional 0.12 million deliveries need to be attended by medically trained providers.
- Only 37 percent of the deliveries take place in health facilities, 13 percent in public health facilities whereas remaining 24 percent in private/NGO facilities.
- It is noteworthy that 23 percent of the deliveries are delivered by C-section. This implies that a growing number of deliveries need C-section and this number will be higher with increase in the number of deliveries in the health facilities requiring increasing health facilities with C-section for the pregnant women at grassroots levels.
- To achieve the target of 65 percent in 2020, the number of deliveries in health facilities needs to be increased from projected 1.39 million in 2015 to 2.09 million in 2020, an increment in delivery in health facilities by 0.14 million per year. In other words, there will be 50 percent higher deliveries in health facilities as compared to deliveries in 2015. This will require extending health facilities and trained/skilled health providers by 50 percent during 2016-20.
- Contraceptive prevalence rate was 62.4 percent in 2014, and there was 12 percent unmet need for spacing and limiting births. In the 7th Five Year Plan the target is to achieve 75 percent contraceptive prevalence in 2020, which is equal to the combined contraceptive prevalence and unmet need as observed in 2014. In that case, we may expect that the number of contraceptive users will increase from 21 million to 27 million during 2015-2020. This will require an additional 6 million new contraceptive users by 2020, on an average, 1.2 million per year.
- Reduction in Maternal and under 5 mortality will depend on the improvement in antenatal care visits, antenatal care by medically trained personnel, skilled attendant at delivery, delivery at health facilities and contraceptive prevalence.

Gaps and Recommendations

- Any further reduction in under 5 mortality will depend on reduction in neonatal mortality because three-fourths of infant and three-fifths of under 5 mortality occur at neonatal stage. However, this reduction will be feasible through: (i) reducing pregnancy before age 20, (ii) prolonging birth interval, (iii) ensuring ANC visits 4 or more times, (iv) increased proportion of antenatal care by medically trained providers, (v) increasing proportion of deliveries attended by skilled/trained health personnel, (vi) increasing proportion of deliveries in health facilities, and (vii) increasing the contraceptive prevalence rate. Some of these are specified in the goals and targets in the 7th Five Year Plan (GED, 2015B, p.564).
- For reducing pregnancy before age 20 and prolonging birth interval, education of women may play a vital role. A successful program to ensure universal enrolment and survival of girls at the secondary level education may provide the necessary background for achieving the targets of reducing teenage

pregnancy and prolonging birth interval. The role of secondary education for improving nutrition status is mentioned in the 7th Five Year Plan document (Table 10.6 p569). In addition, an increase in the enrolment rate and survival of women at the tertiary level education to attain the target of gender parity index at tertiary level will have a great impact as well.

- To achieve the targets for ensuring ANC visits 4 or more times, increasing proportion of antenatal care by medically trained providers, increasing proportion of deliveries attended by skilled/trained health personnel and increasing proportion of deliveries in health facilities, the immediate policy implications are: (i) extension of current health facilities, (ii) enhancement in quality of services provided in health facilities, (iii) increase in trained/skilled health providers at all levels, (iv) monitoring and evaluation of performance at each health facility, and (v) encourage the women, particularly, the women in high risk groups to receive services from these health facilities.
- To achieve the target for contraceptive prevalence, the family planning workers will have to reach to the women with unmet need and access of supplies need to be ensured for them. This will require a special program with the objective of identifying and motivating women with unmet need and a feasible approach to make sure of their access to family planning methods.
- As the public facilities provide delivery service only to a small proportion, a strategy for public-private partnership in providing quality service for delivery in both public and private sectors need to be designed immediately. This is emphasized in the health program in the 7th Five Year Plan (GED, 2015B, p. 565).
- If the public sector is expected to provide the service with increasing share to achieve the targets of the health sector, it will require an action plan with immediate effect by bringing in drastic modifications and expansions in the existing health providing system.
- In the 7th Five Year Plan document, it is noted that various innovative approaches will be explored through utilization of the existing vast health network to improve service delivery (GED, 2015B, p.565). However, no specific outline has been provided to make sure about taking into consideration the strategy to provide services to potential clients who need the support in increasing numbers starting from 2016. This may cause serious setback as all the indicators mentioned as challenges that need immediate attention.
- It is noted that Community Skilled Birth Attendants (CSBAs) will be employed with further training and mentoring for strengthening delivery and newborn care (GED, 2015B, p.565). However, BDHS 2014 revealed that CSBAs assisted only 0.1 percent of the deliveries. It will be a very ambitious and impractical approach in the short run. However, this may be an option in the long run.
- Improvement in quality of services is one of the most difficult challenges in order to achieve the targets through a sustainable strategy. Quality of providing health care services at all levels can be ensured through substantial increase in trained/skilled health care providers, extending the required health facilities in each unit, monitoring and evaluation of performance at all levels.
- A strategy for improving health facilities needs to be developed to achieve the national target (GED, 2015B, Table 10.5, p.567). A specific strategy based on short and long term targets for improving the quality and utilization of the existing health network can be a very effective option for providing health care services. As the public sector is expected to provide the service with increasing share to achieve the targets, it will require an action plan with immediate effect by bringing in drastic modifications and expansions in the existing health providing system.
- It is mentioned that there will be close collaboration with the private and NGOs but this requires a very clear and feasible outline in the Seventh Five Year Plan.

- Improvement in public sector facilities for antenatal care and delivery assistance by skilled providers needs to be emphasized simultaneously in addition to collaboration with private and NGO facilities.

4.4 Working Age Population and Labor Force Participation

Challenges

- The working age population will grow from 96 million in 2015 to 108 million in 2020. In other words, there will be 12 million additional working age population which is more than projected 9.9 million in the 7th Five Year Plan document (GED, 2015B, pp. 52-53).
- The projected potential workforce by combining the projected participation and projected unemployed population will grow from 78 million in 2015 to 93 million in 2020. Based on the combined projection of workforce participation and unemployed population, there will be 15 million additional jobs needed during the 7th Five Year Plan period which is higher than the projected 12.9 million jobs to be available during the same period. This point has not been highlighted in the employment expansion section of the document which demands serious attention.
- It is noteworthy that the labor force participation rate was 82.5 percent for males and 36 percent for females. Since mid-eighties, the labor force participation of females has demonstrated steady rise from 5.6 percent to 36 percent which is expected to continue. In the projected labor force participation, the share of women in labor force will be in growing proportion as compared to that of males.

Gaps and Recommendations

- Service sector contributes more than 50 percent of economic output, industry more than 25 percent and agriculture only 15 percent but still nearly 50 percent of the workforce is employed in agriculture. This is a matter of great concern because it will require a strategy based on multi-sectoral approach to transform human resources involved primarily in agriculture to have appropriate background for relocation in non-farm sectors in rural areas or jobs in urban areas (GED, 2015B, p. 55).
- It is a matter of great concern that 41 percent of the workforce do not have any formal education and 23 percent have little education (primary schooling), both for male and female workers (World Bank, 2013). This indicates an increasingly important role of secondary or higher level of education.
- It is projected that there will be additional jobs ranging from 2.3 million in 2016 to 2.9 million in 2020 which will exceed additions to the labor force each year. However, considering the unemployed population, these numbers will be less than the potential workforce in the job market.
- It is noteworthy that creation of additional jobs will be mainly in service and manufacturing sectors which will require higher level of quality education compared to the prevailing status. This will require more emphasis on secondary and tertiary education in addition to universal quality primary education. Moreover, working age population with technical education will have greater scope for these jobs.
- For economic transformation, there is a need to enhance the process of human resource development through increase in the share of allocation for improving quality of education to make the workforce ready for service or manufacturing jobs at a faster pace.
- A more realistic projection is needed concerning job creation during the 7th Five Year plan period relating with the projected number of working age population with necessary background.

4.5 Urban Population

Challenges

- The urban population was 28 percent in 2011 but the projected population in urban areas shows that it will grow steadily to about 33 percent in 2020 starting from 29 percent in 2015.

- The urban population is heavily concentrated in Dhaka city where 37 percent of the population lives in slums.
- With an increase in the urban population, the slum population will increase sharply as well. Taking into account this reality, it will be difficult to achieve the targets of 100 percent urban population with access to improved water source and 60 percent sanitation facilities to city dwellers.

Gaps and Recommendations

- It is noted in the 7th Five Year Plan document that there will be relocation of rural labor to urban activities through the pull effects of urbanization, however, there is no mention about increasing slum population. This requires very specific work plan and necessary allocations need to be documented.
- As the increase in population is likely to be in urban areas from now on, a more comprehensive plan and corresponding allocation need to be taken into account in the 7th Five Year Plan document. This will be a pioneering activity for addressing a major issue of concern with a visionary approach by implementing a plan through improvement in urban living and creating more jobs in both formal and informal sectors.

4.6 Primary, Secondary and Tertiary Education

Challenges

- Education will play the key role in making the necessary transformation in human resource development for seizing the window of opportunity through realization of demographic dividend. Bangladesh has made progress in: (i) access to primary, secondary and tertiary education, (ii) improvement in survival rate, and (iii) gender parity in primary and secondary levels. However, quality enhancement and further improvement of enrolment and completion rate in secondary and tertiary education require special attention and strategies on priority basis.
- The primary enrolment rate reached 97.7 percent in 2014 and the survival rate was 81.0 percent. Assuming that the primary enrolment rate will reach 100 percent in 2016 and the survival rate will also attain the target of 100 percent in 2020 then the projected additional survival will increase from 1 million in 2016 to 3 million in 2020.
- Secondary enrolment and survival both are low compared to primary level. To achieve universal enrolment and survival in secondary education in 2020, the survival in secondary education needs to increase at a very fast pace from 7 million 2015 to 17 million in 2020, it will require 2 million additional survival every year.
- The enrolment rate for age group 15-19 was under 50 percent in 2014 (BANBEIS, 2015). To achieve the enrolment rate of 60 percent in 2020, the projected number of enrolment will increase from 8 million in 2015 to 11 million in 2020.
- The tertiary enrolment rate for the age group 20-24 increased from 11 percent in 2011 to 14 percent in 2014. To achieve the target of 20 percent in 2020, enrolment for the age group 20-24 needs to increase from 1.9 million to 3.3 million during 2015-20.

Gaps and Recommendations

- The primary enrolment is almost universal and the target of gender parity index has already been achieved but the target for universal survival is yet to be achieved.
- Primary pupil/teacher ratio and pupil/trained teacher ratio need serious attention. Improvement in the pupil/trained teacher ratio is a precondition to enhance the quality of primary education.
- Learning time in a school year is little more than only half of the international standard. This will continue to have serious influence on the quality of education if an action plan is not considered in this regard on priority basis.

- Secondary education enrolment and completion rates will be very formidable challenges during 2016-20. The population of secondary school going children will increase very rapidly resulting in increasing number of enrolments. In order to ensure achieving the targets for secondary school, a substantial proportion of additional allocation will be necessary which is not taken into consideration keeping in view of sharp increase in enrolment and survival at the secondary level in the proposed 7th Five Year Plan document. It is noteworthy that achieving the target for the secondary level is one of the most important elements for transforming the human development to the desired level needed for the success of the 7th Five Year Plan. The strategy for education in the Sixth Five Year Plan (pp. 117-15) identified these issues of concern but could not achieve the targets at the secondary level mostly due to lack of projected numbers associated with implementation of quantitative and qualitative goals.
- The quantitative and qualitative goals summarized in Table 11.5 of the 7th Five Year Plan (GED, 2015B, p.593) do not address the increasing number of enrolment and survival required to achieve the targets. These activities need to be based on the projected numbers and an integrated approach for both improving the qualitative and quantitative will be necessary in terms of monitoring the progress with measurable indicators instead of making isolated efforts.
- Pupil/trained teacher ratio needs to be improved and an action plan has to be designed for the secondary level. This is a more difficult challenge compared to the primary level due to a sharp increase in enrolment and survival at the secondary level as expected to achieve during 2016-20.
- To achieve the targets for secondary level education, a much higher allocation will be needed. In the 7th Five year Plan document it is noted that the ‘goal would be to make a pathway to attain the UNESCO prescribed level of 20 percent budget allocation which translates into 6 percent of GDP’ (GED, 2015B, p. 584).
- The gender gap in primary and secondary education has been eliminated but at the tertiary level only 30 percent are female. To reduce this gender gap at the tertiary level specific measures need to be taken.
- Quality of education remains a formidable challenge and without enhancement in quality of education at all levels, the transformation of economy will be difficult to achieve.
- For increasing number of jobs in service and manufacturing sectors, enhancement of secondary and higher level of education will be essential and a plan in this regard needs to be incorporated in the 7th Five Year Plan.

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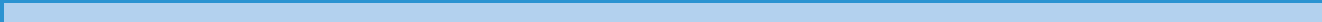
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Report on Policy Dialogue on “The Level of Integration of Population Dynamics Issues in the 7th Five Year Plan Document for 2016-20”

Venue: NEC Conference Room, Sher-e-Bangla Nagar, Dhaka-1207

Date: December 31, 2015

**Organized by:
‘Strengthening Capacity of the General Economics Division (GED) to
Integrate Population Issues into Development Plans’ Project
General Economics Division
Planning Commission
Government of the People’s Republic of Bangladesh**



A. Introduction

1. *Background of the workshop*

Under the auspices of ‘Strengthening Capacity of the General Economics Division (GED) to Integrate Population Issues into Development Plans’ a Policy Dialogue on **“The Level of Integration of Population Dynamics Issues in the 7th Five Year Plan Document for 2016-20”** was held on December 13, 2015. The workshop was organized by the General Economics Division of Planning Commission, Government of the People’s Republic of Bangladesh in collaboration with UNFPA Bangladesh at the NEC Conference Room, Sher-e-Bangla Nagar, Dhaka. Respected Member (Senior Secretary), GED Dr. Shamsul Alam graced the occasion as the Chief Guest. Ms. Argentina Matavel Piccin, Representative, UNFPA, Bangladesh was the special guest, Mr. Humayun Khalid, Member, Socio-economic Infrastructure Division was the Guest of Honor and Mr. Naquib bin Mahbub, Chief, General Economics Division, Planning Commission chaired the workshop.

2. *Objective(s) of the workshop*

The overall objective of the workshop was to exchange knowledge and views among various stakeholders in integrating population issues into national development plans of Bangladesh. The main objective of the policy brief is to analyze important targets of the Seventh Five Year Plan for human development that discussed in the light of the ongoing demographic transition in Bangladesh. More specifically, in this policy brief we focus on the trends and patterns of population change in Bangladesh, estimating population growth and future population projection, reproductive rights and reproductive health, young age population, women in reproductive period and number of births, working age population and labor force participation, urban population, primary, secondary and tertiary education in the Seventh Five Year Plan and finding out the challenges and gaps and also investigating emerging population challenges for Bangladesh and mapping the scope of mainstreaming population in formulating national development plans and policies in relation to environmental sustainability, exploring effective strategies for achieving national and international development goals, identifying the important recommendations to be addressed into Seventh Five Year plan.

3. *Participants*

The workshop was attended by around 70 participants including representatives from relevant organs of the government including Planning Commission, civil society organizations (CSOs), community based organizations (CBOs) and academicians. In addition, delegates of the United Nations Population Fund (UNFPA) also attended the workshop.

B. Inaugural session

4. *Welcome Address*

The session was commenced with a welcome address from Mr. Mohammad Shahjahan, Project Director & Joint Chief, General Economics Division, Planning Commission. In his address, he briefed the participants about the project. He informed that the project focused on building the capacity of government personnel, particularly the in-house capacity of GED officials to integrate population issues and gender concerns into national planning and policy formulation. He rationalized the endeavor mentioning that despite the remarkable achievement in most of the MDG goals, Bangladesh is facing huge challenges of booming population, climate change, gender and development issues.

He emphasized on the necessity of the discussed project being implemented to take the initiative to highlight

the importance of managing the population trends and behaviours and gender concerns for the analysis, design, and implementation of Seven Five Year Plan, particularly against the backdrop of the MDGs (and SDGs), with due regards for human rights.

The Project Director said that the Policy dialogue is not only to introduce the key note article but also to ensure the stakeholders' support in implementing the project through enriching the outputs. One of the major purposes of the workshop was to provide an opportunity for all the stakeholders to understand their roles, functions, and responsibilities and accumulating their valuable suggestions/comments to guide the project output papers in a successful trajectory. He gave special thanks to the Chief Guest for sparing his valuable time on this occasion. He thanked all other guests and participants especially the key paper presenter and the principal discussant. He also appreciated the participants from the Government, NGOs, for their meaningful participation. Special thanks also went to the UNFPA Bangladesh team for their effort to make the workshop a successful one.

5. Address by the Special guest:

Ms. Argentina Matavel Piccin from UNFPA said that excess population may be a problem for a country but at the same time it is also expected that country would be stronger as well if the country is able to utilize this excess population. If the population trend of a country is continuing to soar up, then the additional population, which will be added with the existing population, will be a matter of great concern in near future to cope up with the limited resources of the country. Existing economy of the country could create employment opportunity only for the half of the productive force and unable to create for the rest, as a result unemployed workforce will be the great concern for social unrest in the country. Quality education can create opportunity for transforming this excess population to human resources. In case of Bangladesh, it is prime time to talk about population trend, demographic dividend, and population dynamics to incorporate these issues in the development approaches of Bangladesh. This policy dialogue is organized to help the stakeholders related to find out some concrete population recommendation for national level policy formulation.

6. Address by guest of honour:

As the guest of honour of the occasion, Mr. Humayun Khalid addressed the participants with special focus on population problem, claiming it as one of the top most problem in our country. He expressed his concern about the uncertainty regarding exploiting the benefit of excess population, especially in a developing country like Bangladesh, where high illiteracy exists with a huge rural inhabitants. The extremely high density of population, rapid unplanned urban growth, wide-spread illiteracy and conservative socio-cultural environment, high incidence of communicable diseases, malnutrition and a high teen-age fertility rate with limited access to services for adolescents – makes the scenario worse implying population problem to be grave. He also mentioned that Bangladesh is currently experiencing 'demographic transition' as a result of slower population growth. The Seventh Plan will seek to harness the opportunities of demographic dividend by developing and implementing a well thought education and training strategy along with associated policies and institutions. He further added that a significant part of the additional investment for higher growth will need to be deployed for the human resource development to ensure a productive labour force.

7. Address by Chief Guest:

As chief guest of the occasion Dr. Shamsul Alam, Member (Senior Secretary), General Economics Division, Planning Commission said that population is not an asset by default; it is human planning that converts it into asset. Bangladesh inherited the most unfavourable land-man ratio in the world. He pointed out that population boom is one of the major causes of global warming from the consumption aspect. Every human

being is a polluting machine. He added that as the population increases, the environmental degradation gets severe. Characterizing the population of Bangladesh, he referred that almost 40% of its labour force is illiterate and 23% has got only primary education. These issues have long term implications for development of the country. He remembered Malthus about the problem of higher rate of population growth comparing to that of food production, which is applicable for Bangladesh too. He mentioned that the issues regarding population is largely emphasized in 7th Five Year Plan. He suggested that so far demographic dividend could not be properly exploited due to resource constraints and lower literacy rate and dominance of unskilled labour force. In this regard quality of education has to be increased, which is a major development concern in 7th FYP. He emphasized on the importance of identifying optimum population for the development of the country. For this reason, population policy has to be developed properly. Converting excess population to human resources is considered with utmost significance in the government flagship document, 7th FYP. Finally, He thanked the invitees and participants, especially the key paper presenter, representative from UNFPA and the principal discussants of the Policy Dialogue.

8. The Chair Mr. Naquib bin Mahbub, Chief, GED, Planning Commission delivered his speech on the policy dialogue expressing his high expectation from the project activities and outputs. He wished that the upcoming analyses and planning processes e.g. Delta plan formulation, review of the Perspective plan and monitoring of the Seventh Five Year Plan led by the GED would fully mainstream population issues into the planning process by absorbing the findings of the study and the policy dialogue on population issues. He thanked the respected Chief Guest for sparing his valuable time to attend the dialogue. He also appreciated the attendance of the participants, officials from different Ministries/Divisions, Planning Commission and other government agencies, representatives from NGOs, civil society for attending the policy dialogue. He urged the invitees to participate in the dialogue with their intelligent remarks and feedback on the key note paper.

Session II: Business Session

Dr. Shamsul Alam, Member, GED, Planning Commission chaired the business session.

9. A Key Note Paper was presented by Mr. M. Ataharul Islam, Professor, Department of Applied Statistics, East West University on **‘The Level of Integration of Population Dynamics Issues in the 7th Five Year Plan Document for 2016-20’**. He mentioned that Bangladesh has been currently facing the most important phase of economic transformation since the independence. The success of this transformation largely depends on the policies based on the demographic transition which is underway in Bangladesh. In the process of demographic transition, Bangladesh has been experiencing a rapid change in the growth and structure of population. Next five years will be the most important phase in determining the policies and strategies to face crucial challenge of transforming demographic window of opportunity to demographic dividend. In this context, the Seventh Five Year Plan can provide the most important policy guideline with a clear vision to lead the country toward a transition to optimum economic growth with high priorities to improvement in human resources. In this policy brief, some important targets of the Seventh Five Year Plan for human resource development are discussed in the light of the ongoing demographic transition in Bangladesh. In the Seventh Five Year Plan document, following strategic perspectives are highlighted:

- (i) Improvement in education at primary, secondary and tertiary level;
- (ii) Improvement in health sector especially for women and children including attention to nutritional status;
- (iii) Women empowerment and
- (iv) Skilled workforce and employment.

It is noted that greater emphasis is given to secondary and higher education as well as to technical education.

Besides, capacity of the health workforce will be enhanced to ensure a safe, healthy and nourishing environment during 7th FYP period. In addition, rapid urbanization is identified as a major challenge and it has been observed that the resource base of urban local bodies is extremely weak and depends predominantly on central government. This dependence results in poor service delivery and weak operations and maintenance systems.

In his presentation, Mr. M. Ataharul Islam highlighted the targets for human resource development and population dynamics as delineated in the Seven Five Year Plan are:

- (i) Achieving 100 percent net enrolment rate for primary and secondary education,
- (ii) Increasing enrolment rate in 12th class to 60 percent,
- (iii) Percentage of cohort reaching grade 5 to be increased to 100 percent from current 80 percent,
- (iv) Under 5 mortality rate to be reduced to 37 per 1000 live births,
- (v) Maternal mortality rate to be reduced to 105 per 100,000 live births,
- (vi) Immunization, measles (percent of children under 12 months) to be increased to 100 percent,
- (vii) Births attended by skilled health staff to be increased to 65 percent,
- (viii) Reduction of Total Fertility Rate to 1.7,
- (ix) Increasing contraceptive prevalence rate to 80 percent,
- (x) Creating good job for under employed and new labor force entrants by increasing the share of employment in the manufacturing sector from 15 percent to 20 percent,
- (xi) Access to improved water source will be ensured for all urban rural dwellers,
- (xii) Access to sanitary latrines to be increased to 100 percent in urban areas and 90 percent in rural areas,
- (xiii) The ratio of female to male in tertiary education to be raised from current 70 percent to 100 percent,
- (xiv) The ratio of literate female to male for age group 20-24 to be raised to 100 percent from the current 86 percent, and
- (xv) Spending on Research and Development to constitute 1 percent of GDP.

He mentioned that **Human Resource Development** refers to providing quality education and training to large number of working and youth population to increase their productivity and to make them more compatible in the global labour market. Ensuring human resource development has a wide range of consequences on increased productivity, reduced unemployment and underemployment, increased flow of international migration, sustained capacity to compete in the global world, and effective population management. He also opined that for sustained economic growth it is worthwhile to invest in increasing quality of human capital through investing in early schooling, health and employment. Investing in human capital will contribute to increasing age at marriage and higher rate of contraceptive use, thus leading to decline in fertility rate and expanding secondary schooling, employment opportunities, and universal access to reproductive health care, as well as large-scale maternal and child health and nutrition programs are essential to accelerating fertility transitions and sustained economic development.

Mr. Ataharul Islam, however, identified gaps and recommendations in the following area:

- Reproductive Health, Maternal and Under 5 Mortality
- Working Age Population and Labor Force Participation
- Urban Population
- Primary, Secondary and Tertiary Education

The Chair of the session then opened the floor for discussion on the presentation. The comments and queries raised are noted below.

10. Open Discussion

▪ **Ahmed A N Neaz, Advisor, MPH Programme, American International University of Dhaka, Bangladesh** participated as one of the discussants in the policy dialogue. He provided some remarks on the key note paper. He said that the policy dialogue output would have helped the enrichment of 7th Five Year Plan document if it were held before formulation of 7th FYP. Even though it will be helpful for further revision or implementation of existing plan. He opined that the demographic dividend is a prospect but it will not have positive results by own rather the policy makers will have to harness the benefit of this once for all opportunity. In this connection he added that there are lack of specific strategies in the policy paper regarding education and reproductive health care issues, even though both of these issues are important aspect in exploiting the benefit demographic dividend. He mentioned that International Conference on Population Development (ICPD) Programme of Action is a paradigm shift for resurrection of individualistic approach which should not be forgotten in our policy preparations. He suggested that if we could decrease our population size then poverty as well as other major problems would also decline as these two are mutually reinforcing. It was informed in the meeting that 25% births are still unwanted along with unwanted pregnancy cases estimated to 30%. He also said that more focus should be given on population trend analysis by age composition which is absent in the work of demographers and economists. He mentioned that budget was also an important issue for the development of education and health sector. He suggested increasing the budget in health and education sector is a must where the project proposals and implementation is also required to be up to the mark, as it is found several time that the budgetary allocations are unutilized because of low quality proposal and implementation. He also mentioned that how much population is sustainable depends on life style of citizen of a country. Food security can be ensured through modern technology of cultivation but at what environmental cost was a big question. So we should consider population problem seriously. If we want to transform population into human resource, education is the only way to convert them into asset. But how we achieve 100% enrolment that was absent in the document.

▪ **Dr. Bellal Hossain, Associate Professor, Department of Population Sciences, University of Dhaka** participated as another discussant and informed the session that we all were here to integrate population issues into seven five year plan document but population issue was totally isolated in the plan document. It should be elaborately described in the population chapter. He pointed out that child marriage is still a problem in our country which has big role in population increasing. He also said that we should give more emphasis on age composition that is changing rapidly. How we will address the ‘aging issue’ that is a primary development question in the upcoming years as it is not properly addressed in the plan document. Although we are concern about the aging people, but we may find productive and capable for working people even in 65 years’ cohort. We have huge number of working age population as demographic dividend but we will not have more than 30 years’ time to make our population skilled or turned into resources. How we will create employment opportunity for them is also a big question. In the plan document issues of creating more medical professionals, i.e. skilled nurse/doctors/attendants and reducing maternal mortality ratio are not addressed properly. It is necessary to identify the labour demand inside and outside of the country, so that we can prepare the human resource accordingly.

▪ **Professor Dr. Bazlul Hoque Khandhoker, Chairman, South Asian Network on Economic Modeling (SANEM)** was the third discussant in the policy dialogue. He agreed about explicit as well as implicit existence of population strategies and other issues in Human Resource Development strategies of 7FYP. In order to analyse the opportunities of Demographic Dividend in our economy more data is required and the methodologies should be similar to other countries. The methodology of the UN manual of population issues

can also be used which is intergenerational and capable of capturing the population dynamics and demographic dividend. He argued that there are reports and studies which suggest that we are already lagging behind in harnessing the dividend for economic exploitation as Bangladesh entered the period of demographic dividend in early nineties and will be diminish within next decade. It will be a matter of concern then as our young generation is not yet skilful for high income employment, so that they can bear the burden of aging population. The population strategy should be such, which will support to linger the diminishing period for the dividend. In this connection he informed that a global monitoring report published by World Bank in 2015 which used cross country data, found that if working age (15-59 years) population increases 1% then per capita GNI also increases by 2% for a country. It is very important to develop our human resource as enshrined in 7FYP. He also expressed his concern about child marriage and said that 60% of child marriages are below 15 years old girls. Female work force is required to be in effect with high rate of participation for stimulate growth initiatives which calls for secured working environment and reduced child marriage. He opined that Finance Division, Ministry of Finance should prepare a reporting on Aged People Budget, as they do if for Children, Poor and Gender. Proper Planning as well as appropriate population projection is required in order to project number of roads, buildings, schools, colleges and other physical facilities would be required during next five, ten and in next 50 years. How to raise female labour force participation that is also important, as future growth will come from this area. Proper care for sanitation, providing hygiene environment, stop child marriage, secured life etc. are the most important issue where we should emphasize in any population strategy in plan.

➤ The participants took floor during the dialogue and raised several issues related to utilizing Demographic Dividend in Bangladesh. The following questions which should be answered in the paper, were raised in the meeting:

- Where will productive jobs, vital for economic growth, come from?
- What have been the sources of growth in Bangladesh, and how do they compare with other fast growing Asian economies?
- Will Bangladesh be able to make adequate investments in education and health (currently only around 1-2% of GDP) to ensure a healthy, skilled and productive workforce?
- Most of the increase in employment has been in the low productivity informal sector due to relatively limited number of jobs created in the formal sector, including the manufacturing and services sectors, i.e. the vast majority does not have “decent jobs”. Moreover, there has been no marked change in the occupational and industrial structures of the employed population. Futuristic aspects, i.e. the strategy beyond 2050 when share of working people will be much lower, the food production of strategy at that time of population strategy should be integrated in the paper for further incorporation in future plans.
- The discussion also included the problem of data insufficiency and flaws in data and methodologies for estimating the population. In this regard a point was noted regarding growth of urban population depicted in the paper, which says that the growth of urban population was 1% in 2011-15 and estimated to be 3% in 2016-17. It seems that the estimation may be upward biased. The improper estimation leads to flawed project proposals with inconsistent supports in socio and infrastructural developments. It is also mentioned that the priority of the project selection and making an appropriate and realistic action plan is very much required to interpret the implicit population strategies in 7th FYP.
- On the other hand, it was coined in the meeting that the NRR is not achieved yet and contraceptive prevalence rate is not enhanced effectively in past years, the reasons behind this need to be researched. CPR and TFR improvement should be in the core of population strategy of 7FYP. It was argued that if TFR is

reduced along with elimination of child marriage then human resources will be developed. At same time, the migration issue was also raised in the business session to incorporate in the population strategy as it was argued that population increase will induce higher migration resulting in a massive inflow of remittances.

➤ It was discussed in the session that quality education has been highlighted in the presentation but elaboration is required. For each stage of education system, that is primary, secondary and tertiary, there should be clear targets and indicators in terms of quality education. For instance, the major focus of primary education may be numeracy and literacy, for secondary stage it may be written and verbal idea generation capacity and in case of tertiary education there come understanding the laws and theories of specialized fields.

➤ It was mentioned that there was only one para about ‘demographic dividend’ in the plan document, but how we accelerate taking advantage of the opportunity this dividend it was not mentioned clearly. While Bangladesh partly satisfies the necessary condition for demographic dividend to be achieved, it falls short of both of the sufficient conditions. Therefore, to be able to reap the benefits of demographic dividend, Bangladesh's challenges are to spend adequate amounts in improving the health and education standards to be able to produce healthy and educated workforce.

9. Closing Remarks by the Chair

Dr. Shamsul Alam, Member, General Economics Division, Planning Commission thanked all the speakers for their brief but valuable discussions and comments. He said that most of the key issues related to population and its link to the development of Bangladesh is discussed. He requested to utilize these information and recommendations to enrich the paper for further use in the development planning process and to integrate the ideas in future plans.

The workshop was officially called off by thanking all the participants from the Chair.

