

Key Areas to Economic Takeoff from Demographic Dividend: A Case of Nepal

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Abstract

Rapid demographic change in the context of age structure and basic demographic indicators have created opportunity to accelerate economic growth and development in Nepal. At the time of favorable demographic context, it is required to qualify and mobilize currently existing large volume of active years population to fulfill the mission of sustained economic development. For this, it is necessary to invest on health, education, infrastructure along with creating employment opportunities but such opportunity period is missing out due low attention on social, economic, political and cultural sectors, which may misfortune for Nepal. Focusing on the key areas of economic take off in the declined fertility context, this paper reviews literature related to reaping demographic dividend. Based on secondary data from journal articles, census and Nepal Demographic Health Survey (NDHS) results, descriptive and content analysis method is applied. National Census data from Central Bureau of Statistics (CBS) and Nepal Demographic Health Survey (NDHS) is taken as reference and some estimation from United Nations (UN) are also taken as requirement. To identify vital areas and situation to support economic take off and support to formulate and implement proper future population policy in Nepal are the main objectives of this article. Coping with socio-economic challenges need to focus on primary area of social development like education, productivity of labor, proper use of remittance to economic take off. Need to open gate for secondary demographic dividend with appropriate policy formulation in the recent context.

Keywords: age transition, demographic dividend, policy, National Transfer Accounts (NTA), economic opportunity

Introduction

Human population of any country transits mainly through three phases: Maximum child dependents phase, maximum youth or active years population phase and maximum old dependents phase along with demographic transition. The

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period having maximum youth or working age population is associated with the context of population dividend, appears only one time in the history of any country. That consist large potentiality of economic take off and missing such opportunities related to demographic dividend may misfortune for the development mission of developing countries. On the way of population transition from high birth and death rate towards low birth and death rate, population structure of a country becomes more favourable for the socio-economic development up to certain period of time is known as demographic dividend. Along with this favourable demographic condition of a country if we had invested more and more in education, health, infrastructure like primary sector then, economic growth would be accelerated due to large volume of quality labour force. Population age structure is taken as more significant rather than population size and growth in the context of demographic dividend. Decreased fertility supports to bulge youth population or working age population, is taken as first dividend then due to lower fertility we can appropriately qualify future workforce by which economic growth become possible, known as second dividend. Second dividend occurs due to increased capital or human capital, comparatively durable, can be self-sustaining and delayed than first. Similarly, economic behavior varies along with age and size of population. Such opportunity period is going to be over, on the one and we need to prepare future work force for the second, on the another, in the context of Nepal. To capitalize transition created opportunities/dividend along with appropriate policy environment and to produce sustain period of economic growth through identifying key areas of social development and critical area of policy should be kept at major priority on policy area of every developing country like Nepal. In the current context, Nepal is moving with aging society and will become an ageing society around 2028 another 7 years counting from 2021, and an aged society around 2054 another 33 years counting from 2021. It will therefore take 26 years for Nepal to transit from an ageing society to an aged society. This is the period of opportunity to economic take off for Nepal. Japan went through the same transition process in 24 years between 1970 and 1994. This transition took 115 years for France; 85 years for Sweden; 47 years for the UK; and 40 years for Germany (Amin et.al, 2017). There is only calculation and estimation based on age group wise population as first demographic dividend but lack of identifying critical programme and policy area on the basis of social reality.

Methods and Materials

This article is based on theoretical and empirical analysis with secondary data sources on descriptive research design. Available material on online and printed version were collected and synthesized from literature, published by national and international publications, agencies (Governmental and Non-Governmental). Mostly data from National census and Nepal Demographic Health survey (NDHS) are used to depict and find out key areas to achieve dividend in the context of Nepal and to support to identify major focusing area to formulate and implement population policy.

Result and Discussion

In the context of relationship between demographic change and economic development, there are mainly three types of viewing as pessimistic, optimistic and neutralist. The pessimistic view is related to the high consumption of resources with increasing size of population. It focuses on negative impacts by rapid population growth on food and natural resources. Association of pessimistic view is with fear of high fertility rate and its lineage is with Thomas R Malthus in 1790s. He showed terrible consequences and dark future of human kind due to rapidly increasing population at that time.

Taking the population of the world at any number, a thousand million, for instance, the human species would increase in the ratio of -- 1, 2, 4, 8, 16, 32, 64, 128, 256, 512, etc. and subsistence as -- 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, etc. In two centuries and a quarter, the population would be to the means of subsistence as 512 to 10; in three centuries as 4096 to 13, and in two thousand years the difference would be almost incalculable, though the produce in that time would have increased to an immense extent. (Thomos Malthus, 1798, p. 8)

In relation with resources Malthus has described gaps between population and means of subsistence with time. Growth rate creates scarcity of food around after 25 years i.e., means of subsistence (available food) will fall below subsistence level, if it is not interrupted by death. It is very necessary to make balance between population and resources for the regulation of rule of nature.

Another announcer of pessimistic view is Paul Ehrlich through his writing Population Bomb, he predicted that hundreds of millions of people will be starved due to rapid population growth. Prediction of negative effects by rapid population growth has also done by United Nations through the base on trend of world population growth. Policies related to the family planning and other indirect measures for economic growth became widespread for the management of rapid population growth and high fertility as a consequence of pessimistic view towards population growth.

By the early 1980's economists started to counter pessimistic views on population growth, they focused on technological advancement, human capital based on duration. Which compel to rethink and revise pessimistic population perspectives. With the pace of time population continue to grow but people did not die due to rapid population growth as Ehrlich projection but died by lack of entitlement and capability according to Amartya Sen (Bloom, Canning & Sevilla, 2002). Technological progress, agricultural revolution created base for the optimistic view. Julian L. Simon, E. Boserup are the major contributors for it. Rapid population growth actually impacts positively on aspects of economy. Population growth creates additional opportunities and facilitates adaptive changes in the economic and social structures (Simon, 1996). Population growth led to use more intensive techniques of production. People would find new ways of acquiring food. This would lead to technological and agricultural advances. There would be no need

to reduce population size (Darity, 1980). Every next generation equips more than their previous generation, produce more and advance techniques for production. Similarly, create methods of adaptation so, it is not necessary to be worry about population growth is the key themes of positivist thinker.

The third neutralist perspective is associated with less significant relationship between population growth and economic growth. There is not any reverse relationship between population growth and economic growth. Population growth impacts negatively in short period but not in long run i.e., long run effect of population growth on economic growth is independent of income (Huang & Xie, 2013).

Optimistically, bulging youth age structure in the process of population transition provides opportunity to speed up economy, mainly from three ways: The first one focuses on relationship between age transition and economy in relation with appropriate fertility related policy. while the second one views quality of youth labour force and expected outcome of economy and third one focuses on economic measurement and evaluation with qualitative change in labour force.

There is relevancy of policies related to fertility and aging for the sustainability. If widely we adopt anti-natalist population policy in continuous way, there will be problem in future demographic situation because fertility behavior of people is connected with social norms and values, economic cost of children and it can't be change as wish of national needs. Due to rapid declining rate of fertility, large size of youth labour force will not sustain that hinders demographic dividend in future (Dameny, 2011). World widely, population trend is in the way of decreasing fertility and increasing life expectancy. Adoption of appropriate population policy on the basis on objective socio economic and cultural situation is required along with demographic transition otherwise, we will face many problems related to aging and declined fertility, which ultimately hampers economic growth and development.

On the contrary, Chandrasekhar, Ghosh, & Roychowdhury, (2006) Cuaresma, Lutz, & Sanserson, (2014) and Mason, (1997) focus on quality or capitalization of dividend population or bulge population for more and durable economic growth and development. Chandrasekhar, Ghosh and Roychowdhury (2006) have focus on youth labour force absorption should be made high through increasing employability. Deficit in education and health along with burden of disease are considerable factors for attaining demographic dividend by which policies implementation part is so poor in the context of India. Similarly, Ronald Lee and Andrew Mason (2010) focus on productivity of labour force through investment in human capital and reduced fertility related population. Human capital investment is a potentially important mechanism by which a second demographic dividend can be generated. Cuaresma, Lutz and Sanderson (2014) emphasized on study of changed age structure with labour productivity and claim that labour productivity does not change if human capital dynamics is controlled along with changed age structure. According to authors, population change issue should be

viewed by various potentially relevant characteristics of people, especially educational attainments are the keys to achieving productivity and income growth. Labour productivity, quality and potentiality are very important factor for achievements related to changing age structure. Mainly educational attainments play vital role for dividend.

Changing structure of population with itself is not sufficient for economic growth and development. If there is large volume of workable population, there remains chances of high productivity but if that population is more efficient, employable, educated that would be more supportive for the high economic growth. There would be sustainable economic growth i.e., second demographic dividend, if we invest more and more for working youth population along with decreasing fertility at the time of getting first demographic dividend.

National Transfer Accounts (NTAs) represent a new set of tools that reveal the age dimension of an economy, showing how populations at each age produce, consume, save and share resources(Mason and Lee, 2019). Dramani and Oga (2017) have given priority on measurement, especially it should be discussed by support ratio through the method of National Transfer Accounts (NTA) in the context of economic implications of changing demographic conditions in Africa. They are in side of quality-quantity trade off based on measurement. Estimate of capitalization of demographic dividend is important as well as the needs of human and physical capital for second demographic dividend.

Measurement of support ratio, income, consumption and expenditure are necessary to evaluate economic implication of demographic shifting for adopting proper policy. The NTA method is one of the best ways to estimate production and consumption on the basis on age group. Results from the measurement of production and consumption should take as basis for population policy.

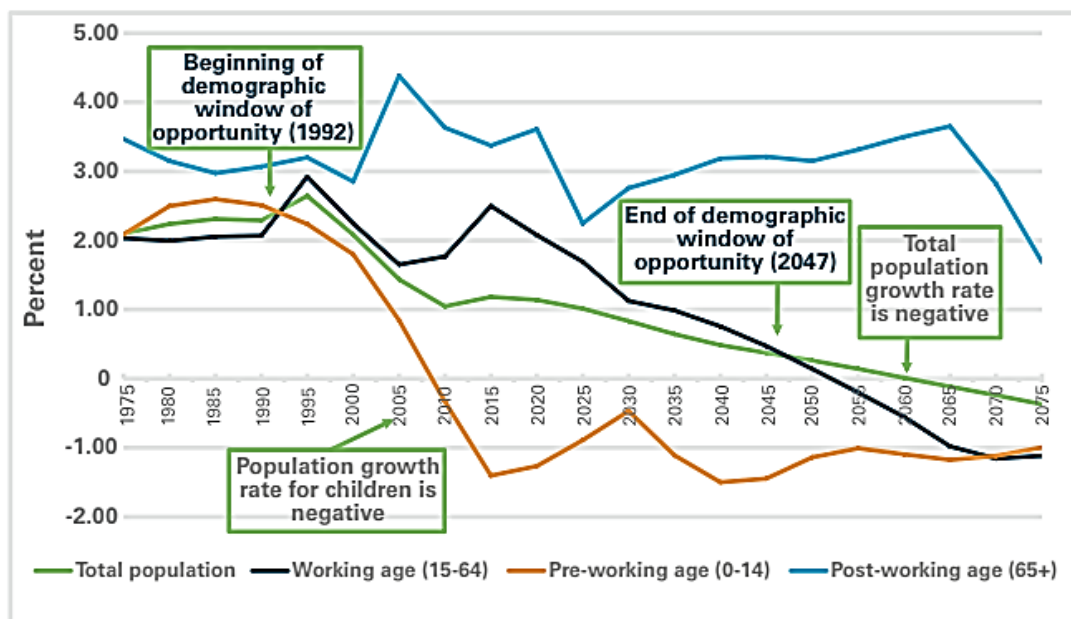
The demographic dividend is the accelerated economic growth that may result from a decline in a country's birth and death rates and the subsequent change in the age structure of the population. With fewer births each year, a country's young dependent population declines in relation to the working-age population. With fewer people to support, a country has a window of opportunity for rapid economic growth if the right social and economic policies are developed and investments made (Gribble & Bremner, 2012).

Nepalese Context

Dependency condition should be bearable and favourable to achieve demographic dividend. Population Report, 2007 and National Population Report, 2012 shows that number of persons in active year age group (15-59 years) are increasing and population has been significantly decreased for the age group 0-4 & 5-9 years, that means percentage of economically dependent child population has been decreased significantly in the period 1991-2011 but slight increment (2.38% & 2.28% for male and female respectively) at old age dependency in Nepal. The working age population (15 + years) had a share of 71.5 percent (20.7 million) of

the total population of which 55.6 percent were females (CBS, 2019). The period of demographic dividend in the context of Nepal is shown in following figure:

Figure 1: *Population Growth Rates by Age Group and Working Status, 1975–2075*



Source: Amin et. al, 2017

On the base of UN data, demographic window of opportunity began in 1992 and predicted to end in 2047. Population growth rate for children is negative since 2005 and it is projected total population growth rate will be negative by 2060. Among 55 years period we have already spent most of the years even we have limited period of time.

Table 1: *Population Dependency Ratios (per 100), 1950-2100, Nepal*

Year	1950	1970	1990	2000	2010	2015	2020	2030	2050	2075	2100
Total dependency ratio	153.3	168.6	184.1	179.8	155.2	155.5	130.6	90.1	71.5	100.0	129.2
Childdependency ratio	148.5	160.7	174.0	169.2	142.4	141.3	117.2	76.6	49.5	43.0	45.4
Potential support ratio	21.1	12.7	10.0	9.5	7.8	7.1	7.4	7.4	4.5	1.8	1.2

Source: UN, 2019.

As table 1, Changing dependency ratio is depicted by breaking into three parts as total dependency child dependency and potential support ratio from 1950-2100. The potential support ratio is the ratio of the population aged 15-64 to the population aged 65 years or over. They are presented as number of dependents per 100 persons of age 65 years or over. Potential support ratio is in decreasing trend from 21.1 in 1950 to 1.2 will be in 2100. Total dependency ratio is projected to increase after 2050 and in the context of child dependency it is projected to decreased up to 2075. On this basis of UN projection, up to the year 2050, it seems more favourable demographic condition for achieving demographic dividend.

Lowered fertility and mortality level of any country support for economic growth and development through lowering cost on child health and protection. Crude Birth Rate (CBR) and Total Fertility Rate (TFR) has been significantly decreased (41.6/1000 to 20/1000 and 5.6 to 1.9 respectively) from the period 1991 to 2019. In the similar way Crude Death Rate (CDR) has been decreased from 9.6 to 6/1000 between the period 1991 to 2019. Life expectancy, another important indicator has been increased from 54.3 years to 70 years between these periods (UN, 2019). Nepal has been experiencing rapid demographic transition since last three decades. On this transition older population is increasing along with high life expectancy and proportion of children is decreasing.

Mobilization of resources along with active years population becomes significant for country. Contribution of youth relates with participation in economic activity. A snapshot of labour market indicators is presented as below:

Table 2: *Key Labour Market Indicators by Age and Sex*

Age group (Years)	Employment population ratio			Labour force participation rate			Unemployment rate		
	Male	Female	Total	Male	Female	Total	Male	Female	Total Percent
Total	48.3	22.9	34.2	53.8	26.3	38.5	10.3	13.1	11.4
15-24	31.2	15.4	22.5	38.9	20.3	28.6	19.7	23.9	21.4
25-34	66.0	32.3	46.1	74.9	37.6	52.8	11.9	13.9	12.7
35-44	71.0	33.1	49.1	76.8	36.7	53.6	7.5	9.9	8.5
45-54	60.1	25.9	42.1	63.4	28.0	44.7	5.2	7.6	6.0
55-64	39.8	16.4	27.2	42.2	16.9	28.6	5.5	3.5	4.9
65+	20.4	6.9	13.4	21.1	7.0	13.8	3.5	0.6	2.7

Source: CBS, 2019.

There is gap between male and female in the context of labour force participation in each active year age group. The highest unemployment rate is for 15-24 years age group, this rate downs slightly after 35 years of age. The employment population ratio is 34.2, which is very low in the context of higher proportion of active year population. There is large gap between male and female in the context of labour force participation rate. There were approximately 908 thousand Nepalese who were actively looking for work (unemployed). 38.1 percent of job seekers were young people aged from 15–24 years. This was the biggest group of unemployed and was followed by that of those aged between 25 and 34 years, at 31.1 percent. This implies that 69.1 percent of job seekers in Nepal were young people aged between 15 and 34 years (CBS, 2019).

Foreign labour migration and remittance is also major concern of Nepalese economy. Migration between India and Nepal and flow of remittance is not properly documented on the other hand Nepalese people are using India as transit point for other countries. Another undocumented dimension of employment is trafficking. About 12,000 children under 18 years were trafficked annually to India

for the purpose of sexual exploitation. There are about 20,000 to 25,000 girls and women engaged in commercial sex work illegally in about 500 dance, bar, cabin restaurants, massage parlors alone in Kathmandu valley.

In the recent context of Nepal, the total working population (around 7.3 per cent) work abroad and the remittance contributed by them is around 30 per cent of Nepal's GDP (Sijapati, et al., ND). National statistics indicates that 79 per cent of the remittances received by Nepali HHs is used for daily consumption (CBS 2012). So, to use remittance in proper way through programmes and policies is very important in the context of Nepal. Nepal Labour Force Survey 2017/018 also shows huge disparities in the labour market indicator between male and female and also there, sufficient geographical disparities in labour market outcomes.

Based on time series data from 2011 to 2015 average social cost in education was found 15.84% of the total government cost and total social unit cost per teacher and for per student were 196.39 thousand and 5.51 thousand respectively (Paudel, 2018). This is very low in compare with developed countries. Similarly, teacher student ratio at basic level (1-5 and 6-8) is 24 and 51 respectively and for secondary level (9-10 and 11-12) is 40 and 73 respectively in academic year 2076 BS (MoF, 2020). Which shows insufficiency of teacher educators at school level.

Along with socio-economic development fertility rate has come down to the replacement level or below replacement level. Which has supported age structure related opportunities through high percentage of active year age group population. Such demographic transition ultimately creates economic burden for the country but if we adopt appropriate policy, investment on human capital country can be benefitted from self-sustaining, permanent second demographic dividend. At the process of achieving dividend, we must pay attention for measurement and evaluation of dependency ratio and support ratio for appropriate policy making. Human capital formation and demographic dividend should go simultaneously for the sustain economic growth and development of a country

Conclusion

Policy makers should pay attention to capture maximum benefits through extra labour productivity, enhancement of free operation of markets, social protection and political feasibility.

Shifting population from high to low birth and death rate creates large volume of youth in the history of nation at once. Such transition demands proper policy for the utilization of high volume of labour force. Bloom, Canning & Sevilla (2002) recommend that public health, family planning, education and economic policies that promote labor-market flexibility, openness to trade, and savings are the major critical area for policy to get benefit from demographic window of opportunity.

In spite of having some socio-demographic opportunities, we Nepalese, are facing challenges as to reduce unemployment rate, extend health services and facilities, need based education, proper use of remittance and to implement

appropriate policy to lengthen demographic window of opportunity with implementation, monitoring and evaluation of programmes and policies related to social development. Policies related to capitalization of demographic dividend would better to be prioritized.

There is opportunity of economic growth and accelerating development in current demographic context with utilizing large youth labour force, savings and investment at basic infrastructure especially on education, health, proper use of remittance related policies may basis for second demographic dividend and economic take off.

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