

# Unleashing Prosperity: The Dynamic Duo of Demographic Dividend and Economic Growth in Begusarai, Bihar (India)

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## ABSTRACT

The concept of the demographic dividend encapsulates a distinctive avenue for economic growth and developmental opportunities, emerging when a nation undergoes a transformative shift in its population structure. This phenomenon transpires during the demographic transition—a trajectory from elevated birth and death rates to diminished levels. While the essential components of the demographic dividend are discernible, comprehending this intricate phenomenon demands an intricate analysis due to the intricate interlinkages among numerous variables. Navigating the complexities of the demographic dividend poses substantial challenges for policymakers seeking judicious decisions conducive to realizing and optimizing the benefits associated with a transforming age distribution. The nuanced nature of these inquiries adds an additional layer of complexity. Various methodologies have evolved over time to enhance our comprehension of the demographic dividend. The demographic dividend typically unfolds in three distinct stages: High Fertility and Mortality, Fertility Decline, and Low Dependency Ratio. However, it is crucial to recognize that the demographic dividend is a transient occurrence. As the expansive working-age population advances in age, the potential for sustained economic growth wanes without concomitant adjustments in economic policies and social frameworks. This transition underscores the imperative for strategic, long-term planning to perpetuate the advantages derived from the demographic dividend. In the context outlined above, this scholarly endeavour aims to delve into the complex interplay of demographic dividend and economic growth within the precincts of Begusarai, Bihar (India). The objective is to comprehensively figure out the current manifestation of prosperity being unleashed through the symbiotic relationship between these two pivotal factors.

**Keywords:** Demographic Dividend, Economic Growth, Low Dependency Ratio.

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## INTRODUCTION

The concept of the demographic dividend refers to a unique opportunity for economic growth and development that arises when a country experiences a significant change in its population structure. This phenomenon is characterized by a bulge in the working-age population relative to the dependent youth and elderly population. The demographic dividend occurs during the demographic transition, a process through which societies move from high birth and death rates to low birth and death rates. Key elements of the demographic dividend concept include:

**Shift in Age Structure:** The demographic dividend is closely tied to changes in the age structure of a population. It occurs when a society successfully transitions from a phase with high fertility and mortality rates to a phase of lower fertility and mortality.

**Large Working-Age Population:** The dividend manifests when there is a temporary increase in the proportion of the population in the working-age group (typically 15 to 64 years old). This results from a decline in fertility rates and the subsequent "bulge" in the age pyramid.

**Economic Opportunities:** A larger working-age population can potentially contribute to economic growth, as there are more individuals available for employment and productivity. This situation can lead to increased labour supply, higher savings, and greater economic output.

**Dependency Ratio:** The demographic dividend is often associated with a favourable dependency ratio, which is the ratio of dependents (children and elderly) to the working-age population. A lower dependency ratio means there are fewer dependents relative to the workforce, freeing up resources for economic development.

**Social and Economic Policies:** Realizing the benefits of the demographic dividend requires supportive social and economic policies. Investments in education, healthcare, job creation, and infrastructure are crucial to ensure that the growing working-age population is equipped with the necessary skills and opportunities.

**Temporary Nature:** The demographic dividend is a temporary phenomenon, typically lasting for a few decades. The large working-age population ages, the potential for economic growth diminishes unless there are corresponding adjustments in economic policies and social structures. Begusarai district that effectively harness the demographic dividend can experience accelerated economic development and improvements in living standards. However, realizing the full potential of the demographic dividend requires strategic planning, investments, and policy interventions to capitalize on the opportunities presented by the changing age structure of the population. The demographic transition theory is a framework used to understand the population changes that occur as societies undergo economic and social development. It outlines a series of stages through which a population typically passes as it transitions from pre-industrial to industrialized societies. The theory was first proposed by demographer Frank W. Notestein in the mid-20th century and has been widely used to explain demographic patterns around the world. The theory consists of four main stages:

**Stage 1 - High Birth and Death Rates:** In the initial stage, both birth rates and death rates are high, resulting in slow population growth. This is typical of pre-industrial societies where limited access to healthcare, high infant mortality and agricultural-based economies contribute to these demographic patterns.

**Stage 2 - High Birth Rates, Falling Death Rates:** As societies undergo economic development and improvements in healthcare, sanitation, and nutrition, death rates start to decline. However, birth rates remain high, leading to a rapid population increase. This stage often corresponds to the early phases of industrialization.

**Stage 3 - Falling Birth Rates, Low Death Rates:** In this stage, birth rates begin to decline due to factors such as increased education, urbanization, and improved economic opportunities. Death rates remain low or continue to decline. The gap between birth and death rates narrows, resulting in a slowing of population growth.

**Stage 4 - Low Birth and Death Rates:** In the final stage, both birth and death rates are relatively low. Birth rates stabilize at a level close to replacement, resulting in minimal population growth or a stable population size. This stage is characteristic of mature industrialized societies. It's important to note that some demographers include a potential fifth stage in the demographic transition theory, characterized by declining population size due to very low birth rates. Additionally, not all countries follow this transition in a linear fashion, and some may experience variations or different trajectories.

The demographic transition theory helps explain how demographic patterns are linked to societal and economic changes, providing insights into population dynamics, fertility trends, and the aging of populations as countries progress through different stages of development.

#### **Significance of the demographic dividend for economic development**

The demographic dividend holds significant implications for economic development, offering a unique window of opportunity for countries that effectively navigate the demographic transition. These are key aspects highlighting the significance of the demographic dividend for economic development:

**Increased Labour Force and Productivity:** A larger working-age population, resulting from declining fertility rates, can lead to an expanded labour force. When this workforce is gainfully employed and productive, it can contribute to increased economic output and growth. The demographic dividend provides a period during which the potential for productivity gains is maximized.

**Savings and Investment Opportunities:** A demographic dividend often coincides with a period of lower dependency ratios, meaning there are fewer dependents (children and elderly) relative to the working-age population. With fewer dependents to support, households may experience increased savings, which can be channelled into investments. This surge in savings can stimulate economic development through increased capital accumulation.

**Human Capital Development:** To fully leverage the demographic dividend, investments in education and skills development become crucial. A youthful population provides an opportunity for countries to invest in human capital, ensuring that the workforce is equipped with the skills needed for a modern, knowledge-based economy. This, in turn, enhances the potential for innovation and technological advancement.

**Entrepreneurship and Innovation:** A large working-age population can foster entrepreneurship and innovation. With more individuals in their productive years, there is a higher likelihood of a dynamic and innovative business environment. This can lead to the creation of new industries, increased competition, and a more diversified economy.

**Increased Consumption and Demand:** As more people enter the workforce and experience improved economic conditions, there is likely to be an increase in consumption. This rising demand for goods and services can drive economic growth, stimulate production, and create additional employment opportunities.

**Demographic Window of Opportunity:** The demographic dividend is time-bound and represents a finite window of opportunity. Countries that effectively capitalize on this period can experience a rapid pace of economic development. However, to maximize the benefits, it is crucial for governments to implement strategic policies and investments during this demographic window.

**Poverty Reduction:** Economic growth driven by the demographic dividend has the potential to lift a significant portion of the population out of poverty. The combination of increased employment opportunities, higher incomes, and improved living standards contributes to poverty reduction.

**Global Competitiveness:** Nations that harness the demographic dividend strategically can enhance their global competitiveness. A skilled and productive workforce can attract foreign investment, foster economic partnerships, and contribute to a positive international image.

**Factors Influencing Demographic Dividend:** Several interconnected factors contribute to the realization of the demographic dividend. Such as education policies, healthcare improvements, and economic reforms are the factors that contribute to the demographic dividend. These factors play a crucial role in shaping the demographic transition and creating favourable conditions for economic development. Here, we explore key contributors to the demographic dividend:

**Education Policies:** Increased Educational Attainment: Education is a fundamental factor influencing fertility rates. Implementing policies that promote and improve access to quality education, particularly for women, can lead to delayed marriage and childbirth. Higher levels of education empower individuals to make informed family planning decisions, contributing to lower fertility rates.

**Skills Development:** Education policies that focus on skills development and vocational training are essential for equipping the workforce with the capabilities needed for a modern and technologically advanced economy. A skilled workforce enhances productivity and innovation.

#### **Healthcare Improvements:**

Reduced Child Mortality Improvements in healthcare, particularly in child and maternal health, contribute to lower child mortality rates. When parents have confidence that their children are more likely to survive into adulthood, they are generally inclined to have fewer children. This reduction in child mortality is a key driver in the demographic transition.

**Increased Life Expectancy:** Advances in healthcare also lead to increased life expectancy. As people live longer, there is less pressure on families to have a large number of children to ensure support in old age. This contributes to a decline in fertility rates.

**Economic Reforms:** Job Creation: Economic reforms that stimulate job creation are critical for harnessing the demographic dividend. A growing working-age population can only contribute to economic development if there are sufficient employment opportunities. Policies that encourage entrepreneurship, attract investment, and foster a conducive business environment are essential.

**Social Safety Nets:** Implementing social safety nets and pension schemes can alleviate concerns about old-age support, reducing the need for large families as a form of social security. This can contribute to a decline in fertility rates.

**Women's Empowerment:** Gender Equality: Promoting gender equality through policies that empower women economically and socially is a key driver of the demographic dividend. When women have access to education, healthcare, and employment opportunities, they tend to make choices that lead to lower fertility rates and delayed childbearing.

**Reproductive Rights:** Policies that support reproductive rights, including access to family planning services and information, are crucial. Empowering women to make choices about the timing and spacing of their children contributes to lower fertility rates.

**Urbanization:** Rural-to-Urban Migration: Urbanization is often associated with lower fertility rates. As people move from rural to urban areas, lifestyles may change, and there is often greater access to family planning services, education, and healthcare. Urban environments may also provide more employment opportunities.

**Government Policies and Planning:** Population Policies: Proactive population policies that align with economic development goals are essential. Governments can implement policies that encourage family planning, provide reproductive health services, and address population-related challenges.

**Social Infrastructure:** Investments in social infrastructure, including healthcare facilities and educational institutions, are crucial for supporting the well-being and development of the population.

### LITERATURE REVIEW

Acharya (2004) and Chandrasekhar et. al. (2006), although acknowledging the importance of age structure, was sceptical of the policy environment which did not focus enough on human capital formation. Studies prior to 2010 did not focus on quantifying the demographic dividend for India, notable exception is James (2008). Although, the studies on Begusarai a positive effect of age structure on growth however the inconsistency in findings with respect to magnitude of age structure related variables have prompted us to comprehensively analyze the effect of working age share for different periods. The motivation for this study mainly comes from the pessimism surrounding Begusarai future growth prospects. India has witnessed lower growth in decade starting from 2010. A number of structural factors (rigid labour laws) and cyclical factors such as roll out of GST, NBFC crises, poor performance of agriculture sector and demonetization are responsible for the growth debacle. The labour force participation rate has declined among both males and females.

Most of the existing studies on India have analyzed the data for the period 1961 to 2011. Furthermore, there is no consensus about defining the demographic window. As per National Transfer Account framework, the demographic window for India will be from 1980 to 2035 (Ladusingh & Narayana, 2011). As per UNDP’s definition the phase will be from 2010 to 2050. We estimate the demographic dividend based on both these definition with a focus on contribution of age structure towards growth over 2011.

### RESULTS AND DISCUSSION

As per 2011 census, 80.82 % population of Begusarai districts lives in rural areas of villages. The total Begusarai district population living in rural areas is 2,400,718 of which males and females are 1,266,308 and 1,134,410 respectively.

**Table 1 Rural/Urban Begusarai District Population As per 2011 census**

Description	Rural	Urban
Population %	80.82%	19.18%
Male population	1266308	301352
Female population	1134410	268471
Sex ratio	896	891
Child Sex ratio (0-6)	920	914
Child population	449629	96336
Male Child (0-6)	234183	50334
Female Child (0-6)	215446	46002
Male Child percentage	18.49%	16.70%
Female Child percentage	18.99%	17.13%
Literates	1205992	342681
Male literates	721880	196627
Average literacy	61.81%	72.37%
Male Literacy	69.94%	78.335
Female literacy	52.68%	65.65%

As per 2011 census, 80.82 % population of Begusarai districts lives in rural areas of villages. The total Begusarai district population living in rural areas is 2,400,718 of which males and females are 1,266,308 and 1,134,410 respectively. In rural areas of Begusarai district, sex ratio is 896 females per 1000 males. If child sex ratio data of Begusarai district is considered, figure is 920 girls per 1000 boys. Child population in the age 0-6 is 449,629 in rural areas of which males were 234,183 and females were 215,446. The child population comprises 18.49 % of total rural population of Begusarai district. Literacy rate in rural areas of Begusarai district is 61.81 % as per census data 2011.

Gender wise, male and female literacy stood at 69.94 and 52.68 percent respectively. In total, 1,205,992 people were literate of which males and females were 721,880 and 484,112 respectively.

### CONCLUSION

The demographic dividend represents a critical phase in a country's demographic transition, offering a unique opportunity for accelerated economic development. However, realizing the full potential of the demographic dividend requires proactive and well-designed policies that address education, healthcare, employment, and other socio-economic factors. Demographic dividend is not a spontaneous outcome but rather the result of a combination of policies and societal changes. Education, healthcare, economic reforms, and women's empowerment are integral components of a comprehensive strategy to unlock the demographic dividend and promote sustainable economic development.

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