Indira Gandhi National Open University
School of Education

MAE-005
POPULATION AND DEVELOPMENT EDUCATION

Demographic Dividend and Population Policies

4

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MAE-005 POPULATION AND DEVELOPMENT EDUCATION

Block

4

DEMOGRAPHIC DIVIDEND AND POPULATION POLICIES

COURSE MAE-005: POPULATION AND DEVELOPMENT EDUCATION

BLOCK 4 DEMOGRAPHIC DIVIDEND AND POPULATION POLICIES

Introduction to Block 4

While Block 1 of course MAE-005 presented an overview of population and development education, Block-2 focused on family life education and quality of life and Block 3 has dealt with different measures of population control – individual (pre-marriage and post-marriage measures), national (population policies and programmes) and international (role of international agencies in information dissemination, funding, consultancy and training, among others). Block 4 here deals with the interrelationship among different aspects of demographic dividend, dynamics of population size and population policies. Demographic dividend is in fact a crucial concept in economics, emphasizing the economic advantages arising from a substantial working-age population compared to the segments of dependent youth and elderly population. Understanding 'demographic dividend' is essential for policymakers, economists, and development practitioners as it offers profound insights into a nation's economic potential and developmental trajectory. Moreover, the study of demographic dividend serves as a roadmap for sustainable development guiding the nations to capitalize on the unique window of opportunity for heightened productivity, increased savings, and overall economic advancement and welfare. This Block has the following three units focusing on all these aspects.

Unit 13 titled ***"Demographic Dividend and its Implications"*** focuses on how an economy's growth shifts based on the age structure of the population of a country. It delves into the complexities of demographic dividend, highlighting its implications and the nuanced correlation between population size and economic benefits. It explains the significance of demographic dividend by highlighting its role in accelerated economic growth, increased savings, improved living standards, innovation, and long-term sustainable development. It touches upon strategic planning, informing decisions on resource allocation, education, healthcare, and employment policies. It discusses how an understanding of the age structure of a population and identifying opportunities during demographic transitions will be useful to stakeholders to effectively leverage the economic benefits associated with a significant working-age population. In essence, it provides a strategic framework for nations to navigate demographic dynamics and foster balanced and inclusive paths towards sustained economic growth. It also provides insights into the complexities and nuances inherent in leveraging demographic dynamics for sustainable economic development. Further, it highlights the relationship of demographic dividend with population size and the economic benefits arising from changes in a population's age distribution, driven by declining fertility and mortality rates as well as the associated advantages and disadvantages.

Unit 14, ***"Demographic Dividend: Indian Context"***, is devoted to the India-specific scenario, focusing on the implications, challenges, and prospects of its demographic dividend. It presents both opportunities and challenges for economic growth of India, which being the world's first-most populous country has a pivotal moment in its demographic transition. It provides nuanced understanding of India's demographic dividend, addressing its complexities, socio-economic factors, and regional nuances. It discusses the interplay of prospects and challenges by emphasizing the role of human capital investment and proposing strategies for realizing and maximizing the benefits of the demographic dividend in India.

Unit 15 titled ***"Demographic Dividend: Experiences from Developing and Developed Countries"*** lays special focus on how demographic dividend as a phase of demographic transition, determined by declining fertility rates followed by a lag in the decline of mortality rates, creates a window of opportunity for economic development of a country, and how a country with a larger workforce relative to the dependent population during this phase can potentially experience increased productivity, higher savings rates, and greater investment in education and healthcare. It discusses how various factors that contribute to accelerated economic growth and development work differently in the diverse contexts of developing and developed countries, given appropriate policies and investments, particularly in education and healthcare to make the workforce healthy, skilled, and productive so as to capitalize on the favorable demographic structure. It highlights economic policies that promote job creation, innovation and entrepreneurship and enhance the benefits of the demographic dividend. Since the demographic dividend is a time-limited phenomenon and fertility rates eventually stabilize and the population ages, the demographic structure shifts again potentially leading to increased dependency ratios and economic challenges. It also highlights how demographic dividend will adversely influence the country' economic development, if adequate preparations are not made. Further, it explains how the concept of demographic dividend manifests differently in developing countries compared to developed countries due to variations in their demographic profiles, stages of development and policy contexts. In the light of these aspects, it also throws light on the demographic dividend related experiences of select countries, namely South Africa, United Kingdom, France and China.

After working through this Block, you will be able to:

- Analyse different aspects of demographic dividend and their implications for sustainable national development;
- Discuss the implications, challenges and prospects of Indian context of demographic dividend, and examine the role of human capital investment as well as the strategies for realizing or maximizing the benefits of demographic dividend in India; and
- Critically analyse and appreciate the demographic dividend experiences of the select developing and developed countries, namely South Africa, United Kingdom, France and China.

UNIT 13 DEMOGRAPHIC DIVIDEND AND ITS IMPLICATIONS

Structure

13.0 INTRODUCTION

If you recall, we have discussed 'Demographic Concepts' in Unit-2 of Block-1 of this course (MAE-005). You studied the concepts such as demography, population studies, population structure/composition, and measures of population distribution and population change/dynamics, among other things. Demographic dividend is another important concept which refers to an economy's growth resulting from a shift in the age structure of the population of a country.

Demographic dividend is a crucial concept in economics, emphasizing the economic advantages arising from a substantial working-age population compared to dependent youth and elderly segments. This unit (Unit-13) delves into the complexities of demographic dividend, highlighting its implications and the nuanced correlation between population size and economic benefits.

Understanding 'Demographic Dividend' is essential for policymakers, economists, and development practitioners, offering profound insights into a nation's economic potential and developmental trajectory. This comprehension aids strategic planning, informing decisions on resource allocation, education, healthcare, and employment policies. By grasping the age structure of a population and identifying opportunities during demographic transitions, stakeholders can effectively leverage the economic benefits associated with a significant working-age population. Moreover, the study of demographic dividend serves as a roadmap for sustainable development, guiding nations to capitalize on the unique window of opportunity for heightened productivity, increased savings, and overall economic advancement. In essence, it provides a strategic framework for nations to navigate demographic dynamics and foster, balanced and inclusive paths towards sustained economic growth. It also provides insights into the complexities and nuances inherent in leveraging demographic dynamics for sustainable economic development.

13.1 LEARNING OBJECTIVES

The primary objective of this unit is to equip learners with a comprehensive understanding of demographic dividend, spanning from its conceptual foundations to the intricate relationship between population size and economic advantages. After going through this Unit, we expect you to be able to:

- Explain the concept of demographic dividend;
- Describe different stages of demographic dividend and its relevance to economic development;
- Appreciate the significance of demographic dividend in the context of socio- economic growth;
- Analyze the relationship between population size and the realization of demographic dividend; and
- Evaluate the advantages and disadvantages associated with population size in the context of demographic dividend.

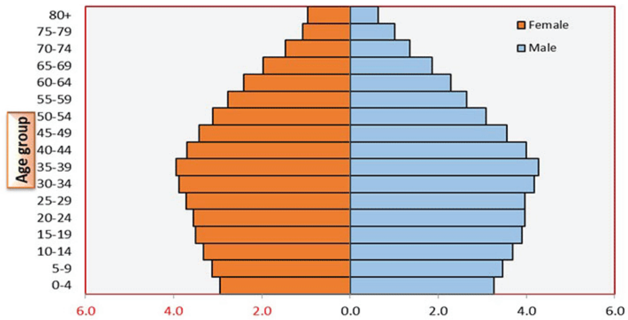
13.2 DEMOGRAPHIC DIVIDEND: CONCEPT AND SIGNIFICANCE

The demographic dividend is a transformative economic phenomenon that occurs when a significant proportion of a population enters the working-age bracket, creating a unique opportunity for economic growth and development. At its core, the demographic dividend represents a shift in age-structure that favors a larger working-age population compared to dependent segments, such as youth and the elderly. This section aims to provide a comprehensive overview of the demographic dividend, emphasizing its pivotal role in shaping a nation's economic trajectory.

The concept of demographic dividend emerged as scholars and policymakers recognized the transformative impact of changing age-structures on a nation's economic prospects. It gained prominence in the latter half of the 20th century as researchers observed that countries experiencing a decline in fertility rates tended to undergo substantial change in economic development. The concept gained further traction with the works of demographers and economists who explored the relationship between population dynamics and economic outcomes.

13.2.1 Concept

Demographic dividend is the term used to describe economic growth arising from a change in the age-distribution of a country's population. Typically, this shift is driven by a decline in both fertility and mortality rates. According to the United Nations Population Fund (UNFPA, 2018), the demographic dividend represents the economic potential derived from alterations in the age structure of the population. Specifically, it refers to the advantageous scenario where a substantial proportion of individuals falls within the working age group of 15 to 64 years, in contrast to those below 14 years and above 65 years who are considered part of the non-working age population.



A nation enters the demographic dividend phase when the proportion of its large working-age population, contributing significantly to economic productivity, surpasses that of the economically dependent population. The diagram depicts how the age pyramid will look like when a nation is in its demographic dividend phase.

A. Demographic transition and demographic dividend – Inter-linkages

The attainment of a demographic dividend hinges on a country undergoing a demographic transition, marking a shift from a predominantly rural agrarian economy characterized by elevated fertility and mortality rates to an urban industrial society marked by diminished fertility and mortality rates. In the initial phases of this transition, there is a decline in fertility rates, resulting in a labor force that temporarily expands more rapidly than the population dependent on it. This period is associated with a notably accelerated growth in per capita income, constituting the initial economic benefit or dividend, following the demographic transition.

During this transformative period, often referred to as the 'window of opportunity,' countries can tap into demographic dividends in four key areas:

1. ***Savings:*** During the demographic transition, personal savings undergo a noteworthy growth trajectory. This is a pivotal aspect as increased savings provide individuals and households with financial resources that can be directed towards investments. The opportunity to stimulate the economy arises as these accumulated savings can be strategically invested in various sectors, fostering economic growth. This financial influx can contribute to infrastructure development, technological advancements, and other critical areas that drive overall economic advancement (Kenton, 2020).

2. ***Labor Supply:*** The demographic transition brings about a significant expansion in the labor force. This expansion is not only characterized by numerical growth but also includes a broader inclusion of women in the workforce. The increased participation of women in economic activities

contributes to a more diverse and dynamic labor force. This augmented labor supply, comprising both men and women, is a key driver of increased productivity. It enables a country to harness the talents, skills, and potential of a larger workforce, thereby fostering economic growth and development (Unacademy, 2023).

3. ***Human Capital:*** A reduction in births during the demographic transition allows parents to allocate more resources per child. This reallocation of resources is instrumental in fostering improved educational and health outcomes for children. With fewer children to support, families can afford to invest more in each child's education and healthcare. Consequently, this leads to the development of human capital – the collective knowledge, skills, and abilities of the population. A well-educated and healthy populace is essential for sustained economic development, as it contributes to increased productivity and innovation (S & P Global, 2023).

4. ***Economic Growth:*** One of the fundamental outcomes of the demographic transition is a decrease in the dependency ratio. This decline signifies a proportionally smaller population of dependents (children and elderly) relative to the working-age population. The positive impact of this shift is reflected in an increase in GDP per capita, a key indicator of economic prosperity. With a larger working-age population contributing to economic activities and a reduced burden of dependents, overall economic growth is facilitated. The demographic transition, by influencing the dependency ratio, plays a pivotal role in fostering sustained economic development (UNFPA, 2022).

The inter-linkages between demographic transition and demographic dividends underscore the transformative journey a country undergoes, presenting opportunities for economic enhancement through strategic utilization of increased savings, an expanded and diverse labor force, enhanced human capital, and overall economic growth.

B. Stages of Demographic Dividend

The demographic dividend is typically associated with specific stages in the demographic transition of a population. The demographic transition theory outlines the shift from high birth and death rates to low birth and death rates, resulting in a temporary period of demographic dividend (UNFPA, 2018).

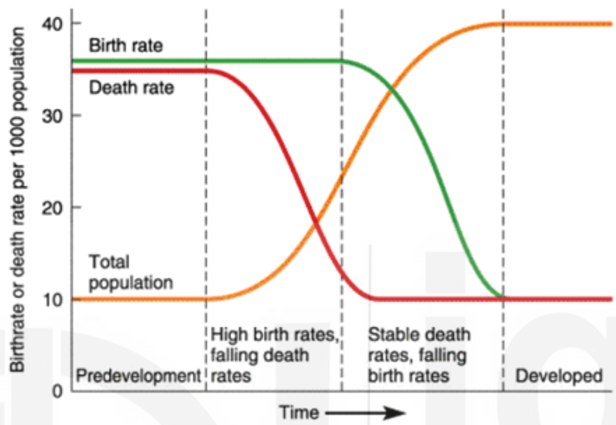
Stage 1: High Fertility and Mortality

- *Characteristics:* This initial stage is characterized by high birth rates and high death rates. It often corresponds to pre-industrial societies where living conditions are harsh, and healthcare is limited.

- *Demographic Dividend Implication:* The demographic dividend is limited during this stage as the high birth and death rates result in a population structure with a significant dependency ratio. The economic benefits of a growing working-age population are hindered by the challenges posed by high mortality rates.

Stage 2: Transitional Phase

- *Characteristics:* In this phase, high birth rates persist, but there is a noticeable decline in death rates. The introduction of healthcare improvements and better living conditions contributes to a rapid increase in population.
- *Demographic Dividend Implication:* While the potential for the demographic dividend begins to emerge as death rates decrease, the full benefits are not yet realized. The working-age population expands, but the demographic structure is still influenced by high birth rates, limiting the economic advantages.



Stage 3: Fertility Decline

- *Characteristics:* Both birth rates and death rates decline during this stage, resulting in a more balanced population growth. This phase often accompanies improved access to education and family planning, leading to smaller family sizes.
- *Demographic Dividend Implication:* The demographic dividend becomes more pronounced as fertility rates decline. The working-age population expands relative to the dependent population, creating favorable conditions for increased economic potential. This stage marks a critical period for harnessing demographic advantages.

Stage 4: Low Fertility and Mortality

- *Characteristics:* Low birth rates and low death rates define this stage, leading to a stable population. Urbanization, increased education, health care and economic development are typically associated with this phase.
- *Demographic Dividend Implication:* While the demographic dividend may decline as the population stabilizes, effective utilization of the working-age population can sustain the economic benefits. The focus shifts to ensuring that the economy adapts to the changing age structure, promoting innovation, and creating opportunities for a skilled workforce.

It's essential to note that the demographic dividend is not a one-size-fits-all concept, and variations exist based on the specific circumstances of each country. Additionally, some scholars propose an additional stage, Stage 5, where the population ages significantly, leading to potential challenges associated with an aging workforce and increased dependency.

13.2.2 Significance

Understanding the profound importance of the demographic dividend is paramount for policymakers, economists, and development practitioners. When harnessed effectively, a demographic dividend can catalyze increased productivity, higher savings, and overall economic advancement. This subsection delves into the multifaceted implications of the demographic dividend within the context of economic theories and development strategies, shedding light on how nations can leverage this demographic advantage for sustainable growth and prosperity.

Broader Dimensions of Significance: At its core, the demographic dividend serves as a *catalyst for accelerated economic growth and development,* transcending mere demographic numbers. This transformative phase shapes the trajectory of nations, offering a strategic opportunity to propel themselves towards sustainable growth and prosperity.

Key Aspects of Significance: Key aspects of significance of demographic dividend include the following.

1. ***Increased Productivity***

   a. *Labor Supply Advantage:* The demographic dividend provides a substantial advantage in the form of a larger working-age population, offering the potential for increased labor supply. When effectively utilized, this demographic configuration leads to heightened productivity across various economic sectors.

   b. *Economic Output Enhancement:* With the implementation of appropriate policies, education initiatives, and infrastructure development, a growing workforce significantly contributes to economic output. This heightened productivity spans across sectors from manufacturing to services, fostering overall economic expansion.

2. ***Higher Savings and Investments***

   a. *Financial Resource Generation:* The demographic shift toward a larger working-age population creates the potential for higher savings and investments. This surplus can be strategically channeled into critical areas such as infrastructure development, technological innovation, and other key sectors driving economic growth (Fi.Money, 2023).

   b. *Capital Formation Boost:* Increased savings contribute to capital formation, providing the necessary funds for businesses to invest in expansion, research and development, and the adoption of advanced technologies.

3. ***Improved Living Standards***

   a. *Income Growth:* A harnessed demographic dividend translates into a growing and productive workforce, leading to higher income levels for individuals. This, in turn, contributes to improved living standards and a higher quality of life.

b. *Access to Essential Services:* Economic benefits derived from the demographic dividend enhance access to essential goods and services, including improved healthcare and education, further enhancing overall well-being.

4. *Innovation and Adaptability*

a. *Diversity in Workforce:* A diverse and dynamic working-age population becomes a crucible for innovation and adaptability. Varied skill-sets, backgrounds, and perspectives contribute to a vibrant work environment essential for addressing challenges posed by the rapidly changing global economic landscape (S & P Global, 2023).

b. *Technological Advancements:* An innovative and adaptable workforce is more likely to embrace technological advancements, crucial for maintaining competitiveness in industries undergoing continuous transformation due to technological disruptions.

Economic Transformation

a. *Shift in Economic Structure:* The demographic dividend has the potential to drive a fundamental shift in a nation's economic structure. It facilitates the transition from agrarian economies to industrialized ones and, eventually, to service-oriented economies.

b. *Long-Term Sustainable Development:* This economic transformation is a cornerstone of long-term sustainable development. As economies evolve and diversify, they become less reliant on traditional sectors, ensuring resilience to global economic fluctuations.

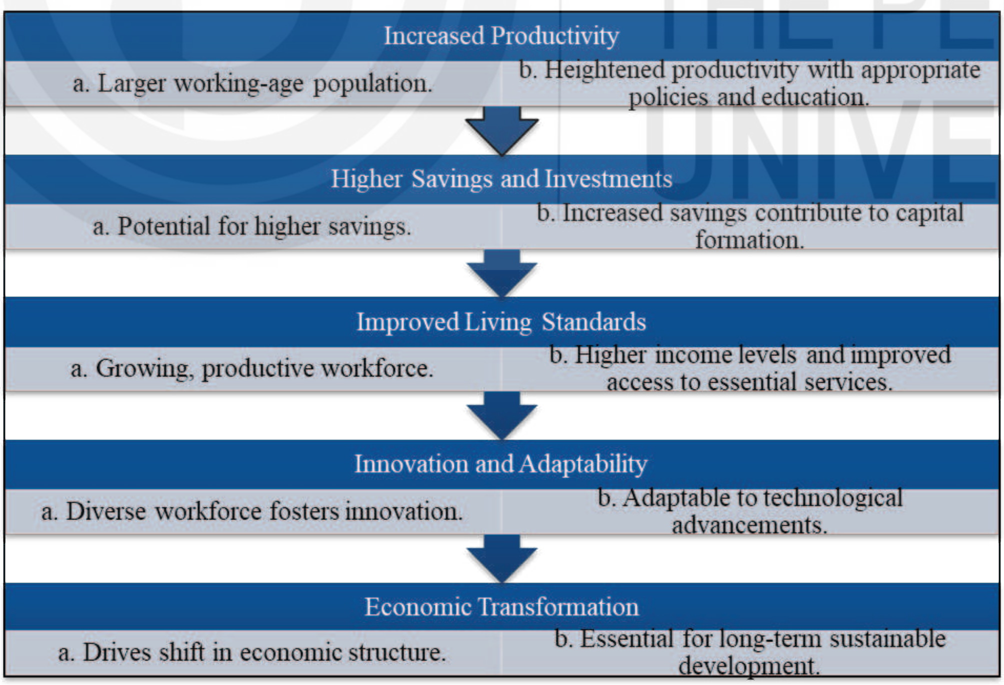


Figure 13.1: Significance of demographic dividend at a glance

The significance of the demographic dividend extends beyond economic indicators, influencing the overall quality of life for a nation's population. Effective harnessing of this demographic advantage necessitates strategic planning, substantial investment in education and healthcare, and the implementation of policies fostering innovation and economic development. When managed adeptly, the demographic dividend becomes a potent force propelling nations towards sustained prosperity and well-being.

13.3 POPULATION SIZE AND DEMOGRAPHIC DIVIDEND: ADVANTAGES AND DISADVANTAGES

This section provides insights into the interplay between population size and the realization of demographic dividend, shedding light on the advantages and disadvantages associated with varying population sizes.

The interplay between population size and the realization of demographic dividend is a nuanced and complex aspect of economic development. This section presents both the advantages and disadvantages associated with varying population sizes, highlighting the intricacies of leveraging demographic dynamics for economic benefit.

13.3.1 Relationship between Population Size and the Demographic Dividend

The relationship between population size and the demographic dividend is intricate and involves several dynamics that influence economic and social outcomes. While a large population size can potentially contribute to the demographic dividend, it is not the sole determinant. The key lies in the age structure of the population and the demographic transition a country is undergoing. Let's elaborate on the relationship between population size and the demographic dividend.

1. ***Demographic Transition Stages:*** The demographic transition theory outlines the stages a population undergoes in terms of fertility and mortality rates. In the early stages, both birth and death rates are high, resulting in slow population growth. As a country progresses through the demographic transition, birth rates decline, leading to a potential demographic dividend.

2. ***Working-Age Population Share:*** The demographic dividend is most pronounced when there is a significant proportion of the population in the working-age group (typically 15 to 64 years old) relative to dependents (below 15 and above 64 years old). A large working-age population, when effectively utilized, can contribute to economic growth (Ross, 2004; UNFPA, 2022).

3. ***Dependency Ratios:*** High dependency ratios, where the proportion of dependents (children and elderly) is substantial compared to the working-age population, can be a hindrance to the demographic dividend. A large population alone does not guarantee economic benefits if the dependency burden is high.

4. ***Population Growth Rate:*** The rate of population growth influences the potential for a demographic dividend. While a large population may have

a significant working-age segment, high population growth rates can pose challenges in terms of providing adequate education, healthcare, and employment opportunities.

5. ***Urbanization and Industrialization:*** The transition from agrarian to industrial and service-oriented economies is a crucial aspect. Large populations in rural areas may experience challenges in harnessing the demographic dividend compared to urban areas with diversified economic opportunities.

6. ***Policy and Institutional Factors:*** The effectiveness of policies and institutions in managing population dynamics is crucial. Adequate investments in education, healthcare, and employment opportunities, coupled with family planning initiatives, play a vital role in realizing the demographic dividend.

7. ***Quality of Education and Skill Development:*** The quality of education and the development of relevant skills within the working-age population are significant factors. A large population with a well-educated and skilled workforce is better positioned to capitalize on the demographic dividend (GK Today, 2023).

8. ***Global and Economic Context:*** Global economic conditions, trade relationships, and technological advancements also play a role. Countries that are well-integrated into the global economy may have more opportunities to leverage their demographic dividend through increased trade and foreign direct investment.

9. ***Socioeconomic Equality:*** Addressing socioeconomic inequalities is crucial for optimizing the benefits of the demographic dividend. Inclusive policies that ensure equal access to education, healthcare, and employment opportunities contribute to a more equitable and productive workforce (S & P Global, 2023).

While population size is a factor in the demographic dividend equation, the age-structure, dependency ratios, and the demographic transition stage are equally, if not more, critical. It is the strategic management of these factors through effective policies and investments that determines whether a large population size translates into a demographic dividend.

13.3.2 Population Size and Demographic Dividend: Advantages and Disadvantages

The interplay between population size and the demographic dividend is a critical factor influencing a nation's economic trajectory. While a large population size presents opportunities for economic growth, it also introduces challenges that need careful management. This subsection delves into the nuanced dynamics, exploring both the advantages and disadvantages associated with population size in the context of the demographic dividend.

A. Advantages

The advantages associated with a large working-age population extend beyond immediate economic considerations. They play a pivotal role in shaping a nation's growth trajectory and development prospects. A demographic dividend, fueled by a substantial working-age population and strategic management of demographic transitions, opens avenues for economic acceleration and innovation. As we delve into the intricacies of these advantages, it becomes evident that harnessing the potential of a large population requires thoughtful policies and investments to ensure sustained economic growth, job creation, and enhanced well-being for the populace.

1. ***Large Working-Age Population and Enhanced Economic Productivity:*** The presence of a substantial working-age population constitutes a strategic advantage, fostering heightened economic productivity. This demographic configuration enables active engagement in diverse economic activities, resulting in amplified output and overall economic growth (Fi Money, 2023; and S & P Global, 2023).

2. ***Potential for Demographic Dividend and Economic Growth Opportunity:*** The convergence of a sizable population with a demographic transition marked by declining fertility rates creates a fertile ground for potential demographic dividend realization. This distinct phase, characterized by a notable working-age population, presents a strategic opportunity for accelerated economic growth when managed effectively.

3. ***Labor Force Expansion and Skill Diversity and Optimized Labor Supply:*** A larger labor force, particularly one equipped with diverse skill-sets, proves advantageous for industries reliant on varied expertise and labor-intensive operations. This expanded labor supply not only supports economic activities but also contributes substantively to the development of various sectors.

4. ***Extension of Consumer Base and Market Potential:*** The substantial population size serves as a robust domestic market. Industries specializing in consumer goods and services derive significant benefits from a vast consumer base, stimulating economic activity, fostering market expansion, and attracting crucial investments.

5. ***Innovation and Diversity in the Workforce and Dynamic Work Environment:*** The inherent diversity within a larger population engenders a dynamic workforce. This diversity, spanning diverse skill-sets, backgrounds, and experiences, serves as a catalyst for innovation, adaptability, and resilience, particularly in the face of economic challenges.

B. Disadvantages

Navigating the complexities of a large population involves understanding not only the potential advantages but also the inherent challenges. The disadvantages associated with a sizable demographic dividend highlight the need for strategic policymaking, resource management, and global integration to ensure sustained economic development. As we delve into the intricacies of these challenges, it becomes evident that effective solutions require a comprehensive approach that addresses economic, social, and environmental aspects, fostering a balanced and inclusive development trajectory (Unacademy, 2023).

1. ***High Dependency Ratios and Economic Burden:*** The presence of a large population poses the risk of high dependency ratios, where the proportion of dependents, including children and the elderly, remains elevated in comparison to the working-age population. This imbalance can strain economic resources and potentially impede overall economic progress.

2. ***Resource Allocation Challenges and Infrastructure Strain:*** Effectively managing infrastructure and providing essential services for a large population presents challenges. Ensuring adequate resource allocation for education, healthcare, and employment opportunities becomes imperative to prevent disparities and foster sustainable development (Kenton, 2020).

3. ***Unemployment Concerns and Job Market Saturation:*** Rapid population growth, particularly if not accompanied by proportional job creation, can result in elevated unemployment rates. Such a scenario may undermine the potential benefits of a demographic dividend, giving rise to economic challenges and potential social unrest (S & P Global, 2023).

4. ***Environmental Pressures and Natural Resource Depletion:*** A large population exerts pressure on natural resources, potentially leading to environmental degradation. Striking a balance between population growth and resource conservation becomes critical for fostering sustainable development.

5. ***Social and Economic Inequalities and Potential for Disparities:*** Effectively managing a large population requires inclusive policies addressing social and economic inequalities. Failure to do so may exacerbate disparities, impeding the equitable distribution of benefits associated with the demographic dividend.

6. ***Challenges in Education and Healthcare and Infrastructure Gaps:*** Providing quality education and healthcare for a large population demands substantial infrastructure. Inadequate investments in these sectors may result in disparities, limiting the potential for cultivating a well-educated and healthy workforce.

7. ***Global Economic Competitiveness and Global Integration Challenges:*** While a large population offers advantages, a country's global economic competitiveness hinges on its effective integration into the international market. Trade policies, technological advancements, and global relationships play a pivotal role in maximizing the advantages of a large population.

In navigating the intricate landscape of population dynamics, it is imperative to adopt a comprehensive approach that takes into account the potential advantages and challenges associated with a large population. Strategic planning and adaptive policies become paramount in this endeavor, serving as essential tools to not only harness the economic benefits but also to address and mitigate potential drawbacks. This approach ensures a well-rounded and inclusive path towards sustainable economic development, promoting resilience and balance in the face of complex demographic dynamics.

Check Your Progress

Notes: a) Write the answer in the space given below the question.

b) Check your answer with the one given under "Answers to 'Check Your Progress' Questions" of this Unit.

1. What is the demographic dividend as per UNFPA definition?

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2. What are the 4 stages of Demographic Dividend?

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3. What are the 4 major aspects of significance of demographic dividend?

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4. What are the advantages and disadvantages of demographic dividend in job market?

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13.4 DEMOGRAPHIC DIVIDEND: IMPLICATIONS FOR DEVELOPMENT AND WELFARE

The concept of demographic dividend carries substantial significance for a nation's progress and the general welfare of its inhabitants. This demographic phenomenon, marked by a favorable age distribution featuring a substantial working-age populace, presents a unique prospect for swift economic expansion and societal progress. An in-depth comprehension of these implications is of utmost importance for policymakers, economists, and development practitioners.

It serves as a fundamental framework guiding strategic decision-making and the formulation of policies geared toward leveraging the demographic dividend for optimal economic growth and the holistic well-being of the populace.

1. ***Economic Development:*** The demographic dividend offers a window of opportunity for economic development by providing a substantial and productive workforce. As fertility rates decline and the working-age population expands relative to dependents, there is a potential surge in productivity, leading to increased economic output and income levels.

2. ***Increased Savings and Investments:*** During the demographic dividend phase, personal savings tend to grow as a result of a larger working-age population. This surplus can be channeled into critical areas such as infrastructure development, technological innovation, and other key sectors, fostering long-term economic growth.

3. ***Human Capital Development:*** With fewer births during the demographic dividend, parents can allocate more resources per child. This contributes to improved educational and health outcomes, enhancing the overall human capital of the population. A well-educated and healthy workforce is vital for sustained development.

4. ***Inclusive Growth:*** The demographic dividend, if harnessed effectively, promotes inclusive growth by providing opportunities for a diverse population to contribute to economic activities. Inclusion of women and marginalized groups in the workforce enhances the overall productivity and economic resilience of the nation.

5. ***Social Welfare and Standards of Living:*** As income levels rise during the demographic dividend, there is potential for improved standards of living. This includes better access to healthcare, education, and other essential services, contributing to enhanced well-being and overall quality of life for the population.

6. ***Technological Advancements and Innovation:*** A dynamic and growing workforce during the demographic dividend fosters innovation and adaptability. This is particularly significant in the era of rapid technological advancements, as a well-educated and diverse workforce is better positioned to embrace and drive innovation.

7. ***Long-Term Sustainable Development:*** Effectively leveraging the demographic dividend sets the stage for long-term sustainable development. By optimizing the economic opportunities presented during this phase, nations can transition from agrarian to industrialized economies and further evolve into service-oriented societies.

The comprehension of these implications serves as a guiding compass for policymakers, directing them in crafting strategies that harness the full potential of the demographic dividend. This underscores the critical significance of targeted investments in education, healthcare, and employment opportunities. The focus on these key areas is pivotal to ensure that the working-age population is not only adequately skilled but also equipped with the necessary resources. Such investments become instrumental in fostering sustained economic growth while concurrently enhancing the overall well-being of society. In essence, strategic allocation of resources in these sectors forms the cornerstone for maximizing the positive impact of the demographic dividend on both economic and societal dimensions.

13.5 LET US SUM UP

In this Unit, we have dealt with the concept of demographic dividend and its profound implications for a nation's economic development and welfare. We have focused on the key aspects of demographic dividend emphasizing its significance in the context of a population's dynamic age-structure, particularly the proportion in the working-age bracket. We have also highlighted the relationship of demographic dividend with population size and the economic benefits arising from changes in a population's age distribution, driven by declining fertility and mortality rates as well as the associated advantages and disadvantages.

The significance of demographic dividend has been explained by highlighting its role in accelerated economic growth, increased savings, improved living standards, innovation, and long-term sustainable development.

The implications of demographic dividend for a nation's development and welfare have also been elucidated, encompassing economic development, increased savings and investments, human capital development, inclusive growth, improved standards of living, technological advancements, innovation, and long-term sustainable development.

We hope that the Unit has provided you with a holistic understanding of demographic dividend, its various dimensions, and the strategic considerations necessary for leveraging this demographic advantage for the benefit of nations.

13.6 ANSWERS TO 'CHECK YOUR PROGRESS' QUESTIONS

1. According to the UNFPA (United Nations Population Fund) definition, demographic dividend refers to the economic growth potential resulting from changes in the age-structure of a population, particularly when there is a larger proportion of the population in the working-age group (15 to 64 years) compared to the dependent age groups (below 14 years and above 65 years).

2. The 4 stages of Demographic Dividend are:

   - High Fertility and Mortality (Stage 1)
   - Transitional Phase (Stage 2)
   - Fertility Decline (Stage 3)
   - Low Fertility and Mortality (Stage 4)

3. The 4 major aspects of significance of demographic dividend include:

   - Increased Economic Productivity

- Higher Savings and Investments
- Improved Living Standards
- Innovation, Adaptability, and Economic Transformation

4. Advantages and disadvantages of demographic dividend in job market are as follows:

Advantages

- Enhanced job creation due to a larger working-age population.
- Diverse skill-sets in the workforce, fostering innovation.
- Increased productivity leading to economic growth.

Disadvantages

- Potential job market saturation with rapid population growth.
- Risk of unemployment if job creation doesn't match population growth.
- Social unrest and economic challenges if demographic dividend potential is not realized effectively.

13.7 REFERENCES AND SUGGESTED READINGS

References

Ahmed, S. A., Cruz, M., Quillin, B., & Schellekens, P. (2016, November). Demographic Change and Development: A Global Typology. *World Bank Policy Research Working Paper 7893*. Retrieved from https://documents1.worldbank.org/curated/en/867951479745020851/pdf/ WPS7893.pdf.

Bloom, D., Canning, D., & Sevilla, J. (2003). *The Demographic Dividend: A New Perspective on the Economic Consequences of Population Change.* The RAND Corporation, Santa Monica.

BYJU'S. (n.d.). *Demographic Dividend*. Retrieved from https://byjus.com/free-ias-prep/ demographic-dividend/

Fi Money. (2023, October 30). *Demographic Dividend: Meaning, Advantages & More*. Retrieved from https://fi.money/blog/posts/what-is-meant-by-demographic-dividend-and-what-is-it-used-for#what-is-a-demographic-dividend

GK Today. (2023, November 9). *Demographic Transition Theory.* Retrieved from https://www.gktoday.in/demographic-transition-theory/

Kenton, W. (2020, November 29). *What Is the Demographic Dividend, and How Does It Work?* Retrieved from https://www.investopedia.com/terms/d/demographic-dividend.asp

Ross, J. (2004, September). *Understanding the Demographic Dividend.* Retrieved from http://www.policyproject.com/pubs/generalreport/demo_div.pdf

S & P Global. (2023, August 3). *India's Demographic Dividend: The Key to Unlocking Its Global Ambitions.* Retrieved from https://www.spglobal.com/en/research-insights/ featured/special-editorial/look-forward/india-s-demographic-dividend-the-key-to-unlocking-its-global-ambitions

Unacademy. (n.d.). *Demographic Dividend of India.* Retrieved from https://unacademy.com/content/upsc/study-material/sociology/demographic-dividend-of-india/

UNFPA. (2018, July). *Harnessing India's Demographic Dividend: A Differential Approach for Sustainable Development. UNFPA Policy Brief.*

UNFPA. (2022). *Reaping India's demographic dividend.* Retrieved from https://india.unfpa.org/en/news/reaping-indias-demographic-dividend#:~:text=With%20falling%20fertility%20(currently%202.0, middle%20of%20a%20demographic%20transition

UNICEF. (2019, November). *Population Dynamics and the Demographic Dividend Potential of Eastern and Southern Africa: A Primer.* UNICEF Eastern and Southern Africa Regional Office (ESARO).

13.8 UNIT-END EXERCISES

In your own interest, you may prepare the answers to the following questions which may be useful as a part of your preparation for your term-end examinations.

1. Elaborate on the economic development implications of demographic dividend.
2. How does demographic dividend contribute to increased savings and investments?
3. Explain the significance of demographic dividend in human capital development.
4. Discuss the role of demographic dividend in long-term sustainable development.

13.9 UNIT-END ACTIVITY

If you like to further enhance your interest, you may attempt to perform the following activity.

1. Read case studies, if any, available from Google search of any particular country, be it small or big. Compare the same with your theoretical understanding of the same.

UNIT 14 DEMOGRAPHIC DIVIDEND: INDIAN CONTEXT

Structure

14.0 INTRODUCTION

In Unit-13, we explored 'Demographic Dividend and its Implications' in a general context. Now, Unit 14 delves into the India-specific scenario, focusing on the implications, challenges, and prospects of its demographic dividend. As the world's first-most populous country, India stands at a pivotal moment in its demographic transition, presenting both opportunities and challenges for economic growth. This unit enables you to have a nuanced understanding of India's demographic dividend, addressing its complexities, socio-economic factors, and regional nuances. It explores the interplay of prospects and challenges, emphasizing the role of human capital investment and proposing strategies for realizing and maximizing the benefits of the demographic dividend in India.

14.1 LEARNING OBJECTIVES

The main aim of this unit is to provide you with a comprehensive grasp of India's demographic dividend and its repercussions on economic growth. The unit endeavors to endow you with the knowledge and insights essential for grasping the distinctive context of India's demographic transition, discerning the potential advantages it brings forth, and an understanding of the challenges it poses. From this unit, we anticipate you to acquire a well-rounded perspective on how demographic factors can influence the economic trajectory of a nation.

Specific learning objectives: After going through this Unit, we expect you to be able to:

- Explore how India's population dynamics contribute to the demographic dividend within its socio-economic landscape;
- Assess prospects and challenges of demographic dividend in India;
- Analyze the potential benefits and challenges arising from India's demographic transition, fostering discussions on economic prospects;
- Critically examine the role of investment in developing quality human capital: in terms of education, skill development, and healthcare to leverage the demographic dividend effectively;
- Explore strategies for realizing demographic dividend specially for translating demographic potential into tangible economic benefits through policy interventions and social initiatives; and
- Apply relevant tools and strategies to optimize or even to maximize the benefits from India's unique demographic profile, fostering sustainable economic growth.

14.2 PROBLEMS AND PROSPECTS OF DEMOGRAPHIC DIVIDEND IN INDIA

India stands at a crucial juncture in its demographic transition, presenting a unique opportunity known as the demographic dividend, which began in 2005-06 and is anticipated to continue until 2055-56. This phenomenon brings forth substantial prospects for economic growth but is not without its set of challenges.

14.2.1 Intra-country and Inter-Country Scenario

As per the findings outlined in the UNDP Global Population Growth and Sustainable Development report (UNDP, 2021), the global population is anticipated to experience significant changes between 2020 and 2050, with nine countries projected to play a pivotal role in driving this demographic shift (refer to Figure 14.1). Notably, seven of these nations rank among the 15 most populous countries globally, namely India, the United States of America, Indonesia, Pakistan, Nigeria, Ethiopia, and Egypt, listed in descending order based on their population sizes in 2020.

The primary contributors to this anticipated global population growth are the top four countries, each expected to witness an addition of more than 100 million people. In sequential order, these countries are India, Nigeria, Pakistan, and the Democratic Republic of the Congo. Collectively, these four nations are projected to contribute over one-third, totaling a staggering 676 million individuals, to the overall global population increase by the mid-century mark.

Interestingly, the report underscores a contrasting trend for China, Japan, and the Russian Federation, as they are anticipated to experience a decline in population growth from 2020 to 2050. In this demographic landscape, India was expected to emerge as the most populous country by 2050, surpassing all other nations, which surprisingly has become the most populous country in 2023 itself pushing back China. This insightful analysis sheds light on the dynamic trajectories of population growth and decline, emphasizing the distinct demographic futures of various countries on the global stage.

The United Nations Development Program (UNDP) uses specific criteria to define India's demographic dividend, which is essentially a temporal framework outlining the age-structure of the population. The criteria set by the UNDP focus on particular age-groups and proportions within the population, specifically looking at the percentage of individuals aged below 15 years and the restricted share of those aged 65 years and above. By employing these criteria, the UNDP aims to delineate the periods during which a country experiences a demographic window, signifying favorable conditions for economic growth. The assessment helps in understanding the dynamics of the population's age distribution and how it aligns with the concept of demographic dividend.

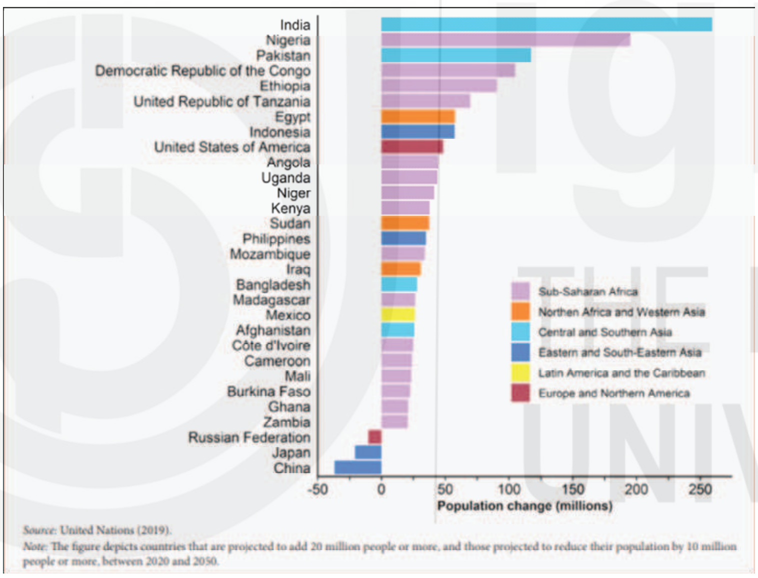

Figure 14.1: Largest Population Changes by Country, 2020-2050 (in millions)

Utilizing the criteria established by the United Nations Development Program (UNDP), Table 14.1 delineates the temporal allocation of India's demographic dividend among states. According to the UNDP definition, this demographic window signifies the period when the percentage of children and youth under 15 years falls below 30%, and the proportion of individuals aged 65 years and above remains under 15%. Notably, India is expected to enjoy a favorable age structure for 22 years, spanning from 2013 to 2035.

A comprehensive examination of Table 14.1 reveals the cessation of the demographic window for Kerala and Tamil Nadu after 26 and 30 years, respectively. Conversely, Rajasthan, Uttar Pradesh, Madhya Pradesh, and Bihar are on track to enter their advantageous period post-2020, persisting until 2040. The majority of states witnessed the commencement of this demographic window in the 2000s, with durations ranging from 20 to 25 years.

Table 14.1: Duration of demographic window based on UNDP definition

	Start	end	1991	2001	2011	2016	2021	2026	2031	2036	Duration
India	2013	2035									22
Himachal Pradesh	2003	2026									23
Punjab	2004	2027									23
Haryana	2011	2036									25
Delhi	2006	2036									30
Rajasthan	2020	2036									16
Uttar Pradesh	2021	2036									15
Bihar	2026	2036									10
West Bengal	2007	2029									22
Orissa	2009	2029									20
Madhya Pradesh	2019	2036									17
Gujarat	2009	2034									25
Maharashtra	2005	2031									26
Andhra Pradesh	2005	2029									24
Karnataka	2005	2031									26
Kerala	1991	2017									26
Tamil Nadu	1994	2024									30
Jammu and Kashmir	2015	2034									19

Note: Duration of demographic window defined as period when proportion of children and youth under 15 years falls below 30 per cent and the proportion of people 65 years and older is still below 15 per cent.
*demographic window phase to continue for few more years

Source: Demographic Dividend and Economic Growth in India: Evidence and Policy Implications, https://ipc2021.popconf.org/uploads/211312

To categorize the states based on the duration of their demographic dividend window, we can create three distinct groups (See Figure 14.2).

Group 1: States Where Demographic Window Has Closed

- **Kerala:** The demographic window closed after enjoying the advantage for 26 years.
- **Tamil Nadu:** The demographic window closed after enjoying the advantage for 30 years.

Group 2: States Entering Favourable Period Post-2020

- **Rajasthan**: Expected to enter the favorable period post-2020, lasting until 2040.
- **Uttar Pradesh:** Anticipated to enter the favorable period post-2020, enduring until 2040.
- **Madhya Pradesh**: Expected to enter the favorable period post-2020, persisting until 2040.
- **Bihar**: Projected to enter the favorable period post-2020, persisting until 2040.

Group 3: States With Demographic Window Initiated in the 2000s

- **Other states (excluding Kerala and Tamil Nadu):** The demographic window initiated in the 2000s, with durations ranging from 20 to 25 years

Figure 14.2: States based on the duration of demographic dividend window

India, despite its promising demographic scenario, faces challenges in realizing a robust demographic dividend due to weaknesses in the current policy landscape. The existing policy environment exhibits hindrances to creating ample growth opportunities. While literacy levels have improved, there is a need for a more concerted effort to meet expectations regarding employment generation.

14.2.2 Problems of Demographic Dividend in India

India stands at a pivotal juncture amid a demographic transition, offering both promises and challenges in capitalizing on its demographic dividend. The window of opportunity, spanning from 2005-06 to 2055-56, presents a substantial timeframe for economic growth. However, realizing the full benefits demands adept navigation through a spectrum of complexities.

1. Low Female Labour Force Participation

India, amid its demographic transition and ambitious manufacturing goals, grapples with the challenge of low female labor force participation. While the sheer size of India's workforce is a competitive advantage, aligning it with the "Make in India, Make for the World" initiative, there exist disparities in gender engagement. This issue requires nuanced strategies to unlock the full potential of India's demographic dividend, particularly among women (Sophie Malin and Ashima Tyagi, 2023).

Alarming gender disparities persist, with rates dropping to 26.4% in rural and 20.4% in urban areas, as per the Periodic Labour Force Survey (2018-19). This data highlights a critical gap in female participation, signaling not only an inequality concern but also the underutilization of a significant segment of the population in economic activities.

To address the challenge of low female labor force participation, a strategic approach is crucial. This involves conducting detailed regional analyses to understand diverse socio-economic factors and tailoring interventions accordingly. Skill development programs should identify specific job-related gaps and take a holistic approach to enhance overall employability. Awareness campaigns play a key role in challenging societal norms and highlighting the benefits of increased female participation. Additionally, policy reforms are needed to support women in the workforce, including flexible working arrangements and equal pay measures. Creating inclusive workplace cultures that prioritize diversity and gender equality is vital. These strategic approaches not only contribute to economic growth but also foster a more equitable and inclusive society as India leverages its demographic dividend and advances manufacturing ambitions (Sophie Malin and Ashima Tyagi, 2023; Business Today News, 2023).

2. High Dropout Rates and Disparities in Education sector

High dropout rates in India, despite primary school attendance exceeding 95%, stem from various challenges, including inadequate infrastructure, malnutrition, and a shortage of trained teachers. The growth rate of the education sector, particularly in ensuring an adequate number of trained teachers for the increasing student population, remains a significant hurdle. Research underscores the positive impact of small class sizes and lower student-teacher ratios on student achievement. However, the pupil-teacher ratio has been consistently increasing, according to the Economic Survey 2022, posing a challenge to educational quality.

Achieving a high standard of education is crucial for unlocking the workforce's potential. A nuanced understanding of dropout rates, regional disparities, and targeted investments in infrastructure and training are essential components of a strategic approach to effectively reduce dropout rates.

3. Concern for jobless or unemployed population growth

Apprehensions about the escalating jobless or unemployed population in India stem from complex factors such as deindustrialization, de-globalization, and the transformative impact of the fourth industrial revolution. Pervasive trends, including the informal structure of the economy and the disruptive influence of Industry 4.0 technologies, have contributed to a persistent pattern of jobless growth over the past two decades. The evolving landscape of industrial activities, coupled with the effects of de-globalization, intensifies concerns about the Indian job market, leading to heightened levels of unemployment.

As of 2022, India's unemployment rate stands at 9.3%, surpassing the global average of 6.8%, as documented by the World Bank. Forecasts from S & P Global Market Intelligence indicate a sustained labour market slack, with unemployment projected to average 11.0% over the next decade. Moreover, the labour force participation rate was relatively subdued at 61.4% in 2021, trailing the global average of 63.3%, according to World Bank statistics.

Addressing the intricate challenge of growth in unemployment necessitates strategic policymaking. Crucial components of an effective approach include advocating for the formalization of employment and directing investments strategically into high-potential sectors. Despite these formidable challenges, India boasts a substantial reservoir of untapped labour, presenting a distinctive long-term advantage. The existence of marginal workers poised to enter the job market offers a potential alleviation of recruitment pressures. This surplus of labour not only sets India apart from nations grappling with shortages but also provides manufacturers with a strategic buffer against the escalating costs associated with employment.

4. Lack of Skills

One of the significant challenges hindering the realization of India's demographic dividend is the discernible skills-gap within the workforce. This gap is poised to widen with the increasing growth of the working-age population, emphasizing the urgent need for enhanced training and skill development opportunities. India's current ranking at 130 out of 189 countries in the UNDP's Human Development Index accentuates the critical nature of addressing skill deficiencies for sustainable economic growth.

To effectively bridge the existing skills-gap and harness the demographic dividend, a strategic approach is imperative. Significant investments in comprehensive skill development programs are essential, ensuring they are aligned with the evolving needs of industries. Promoting vocational training, which aligns education with practical job requirements, becomes pivotal in enhancing the employability of the workforce.

The government has undertaken various initiatives to address these challenges comprehensively. Programs such as Sarva Shiksha Abhiyan, Rashtriya Madhyamik Shiksha Abhiyan, and the National Skill Development Mission, which houses Skill India, Pradhan Mantri Kaushal Vikas Yojana (PMKVY) and the National Apprenticeship Promotion Scheme (NAPS), are instrumental in providing avenues for skill development. Additionally, strategic national policies, including the National Education Policy (NEP) 2020, Startup India, Atal Innovation Mission, National Research Foundation, and the Digital India campaign, collectively contribute to mitigating the challenges posed by the lack of skills in the demographic dividend scenario. These initiatives aim to align education, skill development, and job creation to harness the full potential of India's burgeoning working-age population.

In addition to the aforementioned challenges, other related concerns include regional economic disparities, healthcare infrastructure inadequacies, and the impact of climate change on agriculture, which directly influences livelihoods. Addressing these challenges holistically and adopting an integrated approach is crucial for unlocking the full potential of India's demographic dividend.

14.2.3 Prospects of Demographic Dividend in India

India entered the demographic dividend opportunity window in 2005-06, marking the initiation of a pivotal phase anticipated to extend until 2055-56. Realizing the full potential of this demographic dividend demands the establishment of specific conditions, including the cultivation of a robust and healthy population with a particular emphasis on the well-being of women and children, the promotion of education, and the assurance of gainful employment. The unfolding demographic shift, projected to persist until 2055-56, presents a multitude of key prospects for India's economic growth (Dristi IAS papers, 2023; Business Today news, 2023).

1. ***Increased Economic Activity and Enhanced Productivity:*** India's Demographic Dividend is expected to peak around 2041, coinciding with a forecasted 59% working-age population (20-59 years).This translates into heightened economic activities, increased productivity, job creation, and overall economic growth until 2055-56. With over 600 million people aged between 18 and 35, India's demographic dividend is poised to persist, offering a significant opportunity for harnessing economic potential (Sophie Malin and Ashima Tyagi, 2023).

2. ***Impact of Fiscal Opportunities and Increased Savings Rate:*** The demographic dividend generates fiscal space by redirecting resources from child-centric spending towards investments in physical and human infrastructure. This strategic reallocation stimulates economic development and ensures sustainability. The prime saving period of the working-age population results in a higher savings rate, promoting economic stability and facilitating increased investment across sectors (RBI's latest financial stability report released in December 2022 (Dharmendra Pradhan, 2023).

3. ***Impact of Rise in Women's Workforce:*** A decline in fertility rates naturally leads to increased women's workforce participation, fostering gender inclusivity and contributing to overall economic development (Sophie Malin and Ashima Tyagi, 2023).

4. ***Impact of Aspirational Middle Class:*** The demographic dividend propels a shift towards a middle-class society, characterized by the rise of an aspirational class. This transformative socioeconomic development drives consumer demand, entrepreneurship, and economic prosperity.

5. ***Impact of Historical Precedent:*** Historical data indicates that demographic dividends have historically contributed up to 15% of overall growth in advanced economies. Japan's growth from 1964 to 2004 serves as an illustrative example of the potential impact of demographic transitions on economic development.

6. ***Industrialization and Urbanization:*** A surge in the number of individuals seeking employment fosters rapid industrialization and urbanization, propelling economic activities and contributing significantly to both industrial and urban development.

7. ***Impact of Global Workforce Presence:*** With over 65% of the population falling within the working-age bracket, India is poised to emerge as an economic superpower, supplying over half of Asia's potential workforce. This positions India as a key player in the global workforce.

8. ***Impact of Effective Policy Making:*** Aligning policies with population dynamics enables effective planning and implementation of schemes and programs, resulting in a more substantial socioeconomic impact and benefits for the population. This strategic approach is essential for harnessing the full potential of India's demographic dividend.

Despite these promising prospects, immediate challenges such as regional disparities, youth employability, and skill-mismatches must be addressed. A focused approach on improving health, education, and overall human development parameters is crucial to harnessing the full potential of India's demographic dividend. The strategic navigation of this demographic advantage requires concerted efforts in policy formulation and implementation to ensure sustainable and inclusive economic growth.

14.2.4 State Specific Challenges due to Demographic Dividend

In this sub-section, we explore the unique challenges faced by various Indian states in managing the demographic dividend. From Kerala's ageing population to Bihar's workforce growth, and the broader issue of a diminishing working-age population in several states, specific strategies are needed. The pervasive challenges of the informal economy demand comprehensive policies for formalization. A collaborative effort from policymakers, educators, and communities is crucial for recognizing each state's distinct circumstances. The goal is to tailor interventions that leverage the demographic dividend as a catalyst for sustainable economic growth and prosperity.

The challenges posed by the demographic dividend vary across states in India, reflecting unique demographic dynamics. Here's an overview of state-specific challenges (Sophie Malin and Ashima Tyagi, 2023; and Modi and Aiyer, 2011).

1. **Kerala - Aging Population Challenge**

   – ***Demographic Context:*** Kerala has surpassed its demographic dividend window.

   – ***Challenge:*** Grappling with an ageing population, the state must address the wellbeing and active participation of its elderly citizens.

   – ***Response Needed:*** Tailored policies focusing on elderly care, healthcare infrastructure, and strategic skill utilization are essential to navigate the complexities associated with an ageing demographic.

2. **Bihar - Workforce Growth and Development Challenge**

   – ***Demographic Context:*** Bihar anticipates continued workforce growth until 2051.

   – ***Challenge:*** The state needs strategic planning to channelize this potential, ensuring the creation of quality employment opportunities while addressing infrastructure and education gaps.

   – ***Response Needed:*** Interventions should include planning for skill development, improving education systems, and creating an environment conducive to sustainable employment.

3. **All States - Smaller Working-Age Population Challenge**

   – ***Demographic Context:*** By 2031, projections suggest that 11 of the 22 major states will have a smaller working-age population.

   – ***Challenge:*** Managing this demographic shift is crucial for sustaining economic growth.

   – ***Response Needed:*** Policies must be tailored to the specific dynamics of each state, emphasizing innovation, productivity enhancement, and adaptability to overcome the challenges posed by a diminishing workforce.

4. **Across States - Informal Economy Challenge**

   – ***Demographic Context:*** The informal nature of the economy poses challenges in harnessing the demographic dividend.

   – ***Challenge:*** Formidable hurdles exist in promoting formalization and ensuring social security for workers in the informal sector.

   – ***Response Needed:*** Policies promoting formalization, skill development, and social security measures are crucial components to enhance the resilience of the workforce.

Navigating these state-specific challenges requires a collaborative effort from policymakers, educators, and communities. A nuanced approach that recognizes the unique circumstances of each state is essential to tailor interventions effectively. The ultimate goal is to leverage the demographic dividend as a catalyst for sustainable economic growth and prosperity in every region.

Check Your Progress

Notes: a) Write the answer in the space given below the question.

b) Check your answer with the one given under "Answers to 'Check Your Progress' Questions" of this Unit.

1. Write any 3 prospects of demographic dividend in India.

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14.3 INVESTMENT IN QUALITY OF HUMAN CAPITAL

Investment in the quality of human capital plays a pivotal role in leveraging the demographic dividend in India. As the nation's population structure evolves, with a significant proportion in the working-age category, channeling resources into enhancing the skills, education, and overall well-being of the workforce becomes imperative (The Hindu, March, 2023; Chandrasekhar, Ghosh, & Roychowdhury, 2006; Radhicka Kapoor, 2023; and Sophie Malin and Ashima Tyagi, 2023).

Here are key considerations in the context of demographic dividend and human capital investment:

1. **Education and Skill Development**

   – ***Strategic Investment:*** Allocating funds for robust education systems and skill development programs is crucial to equip the workforce with the necessary competencies.

   – ***Future Employability:*** Quality education and skill enhancement need to ensure that the working-age population is prepared for evolving job-markets, fostering innovation, and increasing productivity.

2. **Healthcare Infrastructure**

   – ***Productivity and Well-being:*** Investment in healthcare infrastructure contributes to a healthier and more productive workforce, mitigating health-related challenges that could impact productivity.

   – ***Reducing Dependency:*** A healthy population is less dependent on healthcare resources, promoting economic sustainability.

3. **Research and Innovation**

   – ***Technological Advancement:*** Investing in research and innovation fosters a knowledge-based economy, driving technological advancements that enhance productivity and economic growth.

   – ***Entrepreneurship:*** Encouraging innovation through investment can lead to the creation of entrepreneurial opportunities, contributing to economic development.

4. **Social Safety Nets**

   – ***Resilience:*** Establishing social safety nets, including unemployment benefits and healthcare coverage, ensures the resilience of the workforce during economic uncertainties.

   – ***Reducing Vulnerability:*** Adequate social support reduces vulnerability, allowing individuals to contribute optimally to economic activities.

5. **Gender Inclusivity**

   – ***Equal Opportunities:*** Investing in initiatives that promote gender inclusivity in education and the workforce creates a more diverse and skilled labor pool.

– ***Maximizing Potential:*** Ensuring equal opportunities for both genders maximizes the potential of the entire population, contributing to a more robust demographic dividend.

6. Lifelong Learning Programs

– ***Adaptability:*** Implementing lifelong learning programs facilitates adaptability to changing job requirements, ensuring that the workforce remains relevant in dynamic industries.

– ***Continuous Improvement:*** Encouraging continuous learning enhances the overall quality and versatility of human capital.

Strategic and sustained investment in the quality of human capital not only maximizes the benefits of the demographic dividend but also lays the foundation for a sustainable and prosperous future. It empowers individuals to contribute meaningfully to economic activities, innovation, and societal development, positioning India for long-term success on the global stage.

Check Your Progress

Notes: a) Write the answer in the space given below the question.

b) Check your answer with the one given under "Answers to 'Check Your Progress' Questions" of this Unit.

2. Write 3 major key considerations in the context of demographic dividend and human capital investment in India.

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14.4 REALISING DEMOGRAPHIC DIVIDEND

In the Indian context, unlocking the potential of the demographic dividend requires a nuanced and comprehensive strategy that considers the country's distinctive demographic composition, socioeconomic complexities, and diverse regional variations. Here, we explore key considerations and tailored strategies for effectively harnessing the demographic dividend in India (NITI Aayog, 2022).

1. Strategic Education Reforms

– ***Contextualizing Education:*** Crafting an education system that is intricately aligned with the ever-evolving demands of the economy is imperative. This involves a paradigm shift towards emphasizing practical skills, vocational training, and fostering innovation within the learning environment. The aim is to produce a workforce that is not only academically adept but also equipped with the hands-on expertise demanded by contemporary industries.

– ***Addressing Disparities:*** To ensure equitable access to quality education, targeted interventions are crucial. Bridging the urban-rural educational divide, reducing gender-based gaps, and enhancing accessibility across diverse regions necessitate strategic initiatives. These may include tailored educational programs, infrastructural enhancements, and policies that address the specific challenges faced by marginalized communities.

2. **Promoting Inclusive Employment Opportunities**

– ***Diversification of Sectors:*** A thriving economy requires a diverse range of skilled professionals. Encouraging a broad spectrum of industries, including technology, manufacturing, and services, creates a dynamic employment landscape. This diversification caters to varied skill-sets within the workforce, fostering adaptability and resilience in the face of economic changes (UNFPA, 2022).

– ***Support for Entrepreneurship:*** Fostering a culture of entrepreneurship is essential for economic vibrancy. This involves not only providing policy incentives but also extending robust support mechanisms for startups, including mentorship programs and access to financial resources. Such measures empower aspiring young entrepreneurs to contribute significantly to economic growth.

3. **Gender Inclusive Policies**

– ***Empowering Women:*** Realizing the full potential of the demographic dividend requires proactive measures to empower women. Policies focused on education, skill development, and ensuring equal participation in the workforce are imperative. By breaking down gender barriers, women can play a more significant role in shaping India's economic future (UNDP, 2022; UNFPA, 2022).

– ***Family-Friendly Workplace Initiatives:*** Encouraging family-friendly workplace policies, such as flexible working hours and maternity support, is crucial for enhancing women's participation in the workforce. This not only promotes a diverse and inclusive workplace but also addresses the challenges faced by working mothers (UNFPA, 2022).

4. **Healthcare Access and Quality**

– ***Preventive Healthcare:*** Prioritizing preventive healthcare measures ensures a healthier and more productive workforce. This involves health awareness campaigns, vaccination drives, and regular health checkups, contributing to reduced absenteeism and increased productivity.

– ***Investment in Healthcare Infrastructure:*** Allocating resources for the development of robust healthcare infrastructure, especially in rural areas, is paramount. This addresses health disparities, ensures timely access to medical services, and contributes to an overall improvement in the wellbeing of the population.

5. **Infrastructure Development for Urbanization**

   – ***Smart Urban Planning:*** As urbanization accelerates, investing in smart urban planning becomes crucial. This involves creating sustainable and technologically advanced urban spaces that can accommodate the growing population while minimizing environmental impact.

   – ***Digital Connectivity:*** Ensuring widespread digital connectivity is a cornerstone for enhancing access to information, education, and job opportunities. Bridging the digital divide is essential for creating an inclusive society where all citizens can participate in the digital economy.

6. **Digital Literacy and Technological Adoption**

   – ***Digital Skill Development:*** Integrating digital literacy programs into the education system prepares the workforce for the demands of the digital era. This includes imparting skills related to technology, data literacy, and digital communication (Niti Ayog, 2022).

   – ***Encouraging Innovation:*** Creating an ecosystem that fosters technological innovation and adoption across sectors is vital. This involves supporting research and development, promoting a culture of innovation, and facilitating the integration of cutting-edge technologies into various industries.

7. **Social Security Measures**

   – ***Enhanced Social Safety Nets:*** Strengthening social security measures, including unemployment benefits, health insurance, and retirement plans, provides a safety net for the workforce during challenging times. This contributes to overall economic stability and individual wellbeing.

   – ***Policies for Gig Economy:*** With the rise of the gig economy, formulating policies that cater to nontraditional work arrangements is essential. A gig economy is a labour market that relies heavily on temporary and part-time positions filled by independent contractors and freelancers rather than full-time permanent employees. Gig workers gain flexibility and independence but little or no job security. Many employers save money by avoiding paying benefits such as health coverage and paid vacation time. Others pay for some benefits to gig workers but outsource the benefits programs and other management tasks to external agencies (https://www.investopedia.com/terms/g/gig-economy.asp). Gig economy ensures that workers in flexible employment structures have access to social security benefits and protection.

8. Regional Disparity Mitigation

– ***Tailored Regional Policies:*** Designing region-specific policies acknowledges the diverse demographic challenges and opportunities unique to each state. This involves understanding and addressing the specific needs of different regions, promoting local industries, and ensuring equitable development.

– ***Promoting Inclusive Development:*** Focusing on inclusive development strategies is key to reducing regional disparities. This includes infrastructure development, educational initiatives, and economic policies that ensure equitable access to opportunities across the nation.

9. Global Collaboration and Diplomacy

– ***International Skill Exchange:*** Facilitating international collaboration for skill exchange programs opens avenues for Indian youth to gain global exposure. This not only enhances their skill-sets but also fosters a cross-cultural understanding that can contribute to a more globally competitive workforce (Sophie Malin and Ashima Tyagi, 2023).

– ***Partnerships for Innovation:*** Collaborating with other nations for joint research, innovation, and technology transfer enhances India's capabilities. Such partnerships can lead to advancements in various sectors, positioning India as a leader in innovation and technology.

10. Continuous Monitoring and Adaptation

– ***Data-Driven Decision-making:*** Emphasizing the importance of data-driven decision-making involves collecting and analyzing relevant data to monitor the effectiveness of policies. This ensures that interventions are evidence-based and can be adjusted as needed.

– ***Adaptive Policy Framework:*** Creating an adaptive policy framework is essential for responding to evolving challenges and opportunities. Continuous evaluation and feedback loops enable policymakers to make informed decisions, ensuring that the strategies remain effective and relevant.

In essence, realizing the demographic dividend in the Indian context demands a dynamic and customized strategy that addresses the country's specific challenges and opportunities. By focusing on education, inclusive employment, gender equality, healthcare, infrastructure, technology, social security, regional disparities, global collaboration, and continuous monitoring, India can unlock the full potential of its youthful population and pave the way for sustained economic growth and prosperity.

Strategic Education Reforms:

- Tailored Learning: Align education with evolving economic needs, emphasizing practical skills and innovation.
- Addressing Disparities: Implement targeted interventions for equitable access, bridging urban-rural gaps and reducing gender disparities.

Promoting Inclusive Employment Opportunities:

- Diverse Industries: Encourage varied industries for a dynamic employment landscape.
- Entrepreneurial Support: Foster entrepreneurship through policy incentives and robust support for startups.

Gender Inclusive Policies:

- Economic Empowerment: Implement policies for education, skill development, and equal workforce participation.
- Work-Life Balance: Support family-friendly workplace policies for women's enhanced participation.

Healthcare Access and Quality:

- Preventive Measures: Prioritize preventive healthcare for a healthier, more productive workforce.
- Infrastructure Investment: Allocate resources for robust healthcare, especially in rural areas.

Infrastructure Development for Urbanization:

- Smart Urban Planning: Invest in sustainable, tech-driven urban spaces.
- Digital Connectivity: Ensure widespread digital connectivity for inclusive access.

Digital Literacy and Technological Adoption:

- Digital Skill Development: Integrate digital literacy into education for a tech-savvy workforce.
- Encouraging Innovation: Foster an ecosystem supporting technological innovation.

Social Security Measures:

- Economic Stability: Strengthen social security measures for workforce stability.
- Gig Economy Policies: Formulate policies for non-traditional work, ensuring social security benefits.

Regional Disparity Mitigation:

- Tailored Policies: Design region-specific policies for diverse challenges and opportunities.
- Inclusive Development: Focus on strategies for reducing regional disparities.

Global Collaboration and Diplomacy:

- Skill Exchange Programs: Facilitate international collaboration for global exposure.
- Partnerships for Innovation: Collaborate for joint research and technology transfer.

Continuous Monitoring and Adaptation:

- Data-Driven Decision-making: Emphasize data-driven decisions for effective policy monitoring.
- Adaptive Policy Framework: Create a policy framework based on continuous evaluation and feedback.

Figure 14.3: Snapshot of Strategies for Realizing India's Demographic Dividend

Check Your Progress

Notes: a) Write the answer in the space given below the question.

b) Check your answer with the one given under "Answers to 'Check Your Progress' Questions" of this Unit.

3. Discuss the proactive measures required to empower women in the workforce for realizing India's demographic dividend. Provide examples.

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14.5 MAXIMISING THE BENEFITS OF DEMOGRAPHIC DIVIDEND: WAY FORWARD FOR INDIA

India stands at a pivotal juncture, poised to harness its demographic dividend for sustained economic growth. To fully realize the potential benefits, a comprehensive and strategic approach is essential. In this regard, the way forward and program-level changes required to optimize India's demographic advantage are explained below in terms of the way forward and related program and policy changes required in respect of different aspects.

1. Strategic Investment in Human Capital

i) Way Forward

- *Prioritize a Holistic Education System:* Revamp the education system to emphasize not only theoretical knowledge but also practical skills; align curricula with industry needs to foster a workforce that meets contemporary demands.
- *Expand Skill Development Programs:* Scale up skill development initiatives to cater to diverse sectors; strengthen partnerships with industries to ensure that the skills imparted are in line with market requirements.
- *Strengthen Healthcare Facilities:* Enhance healthcare infrastructure to provide accessible and quality healthcare; prioritize preventive measures, health awareness campaigns, and technological integration for improved healthcare delivery.

ii) Program and Policy Changes

- *Introduce Reforms in Education:* Implement policy changes that emphasize a shift from rote learning to experiential and practical education; encourage collaboration between educational institutions and industries to ensure curriculum relevance.
- *Scale Up Skill Development:* Increase funding and resources for skill development programs; create a framework that involves private sector participation and encourages industry-relevant training.
- *Healthcare Policy Overhaul:* Implement policies that focus on upgrading healthcare infrastructure, prioritizing preventive care, and addressing regional healthcare disparities.

2. Addressing Complex Challenges

i) Way Forward

- *Create Employment-Centric Policies:* Develop policies that not only focus on creating jobs but also ensure that these jobs are skill-oriented and sustainable; encourage industries to invest in training and development programs for their workforce.

- *Enhance Global Learning:* Establish platforms for knowledge exchange with countries that have effectively managed demographic transitions; adapt successful strategies to India's socio-economic context.

ii) Program and Policy Changes

- *Employment-Oriented Schemes:* Introduce schemes that incentivize businesses to create employment opportunities with a focus on skill development; implement measures to track and ensure the quality of jobs created.

- *Knowledge Exchange Platforms:* Establish partnerships with international organizations and countries to facilitate knowledge exchange programs; encourage collaboration on research and implementation of successful models.

3. Continued Global Learning

i) Way Forward

- *Foster Research and Innovation:* Encourage a culture of innovation and research across industries; create platforms for collaborative research initiatives with global partners to stay abreast of technological advancements.

- *Adapt Global Best Practices:* Identify successful elements from global models and incorporate them into local policies; tailor these practices to align with India's unique demographic and socio-economic characteristics.

ii) Program and Policy Changes

- *Innovation Hubs:* Establish innovation hubs and research centers with a focus on interdisciplinary collaboration; provide incentives for businesses to invest in research and development.

- *Global Best Practices Integration:* Regularly review policies to integrate successful global practices; create dedicated teams or advisory bodies to assess and implement these adaptations.

4. Innovation and Technological Integration

i) Way Forward

- *Digital Literacy Programs:* Expand digital literacy initiatives to ensure widespread access to technological skills; integrate digital literacy into school curricula and adult education programs.

- *Foster Innovation Ecosystem:* Develop a conducive environment for innovation by providing tax incentives, research grants, and infrastructure support.

ii) Program and Policy Changes

- *Digital Skills in Education:* Integrate digital literacy and coding into the standard education curriculum; collaborate with tech companies to create industry-relevant digital skill programs.
- *Innovation Incentives:* Introduce policies that offer tax breaks and grants for companies engaging in research and innovation; facilitate public-private partnerships in creating innovation ecosystems.

5. Social Inclusion and Gender Equality

i) Way Forward

- *Empowerment through Education:* Design policies that specifically address gender disparities in education; promote scholarship programs, mentorship initiatives, and awareness campaigns to encourage female participation.
- *Inclusive Workforce Policies:* Enforce and expand policies that support diversity in the workplace, such as flexible working hours, parental leave, and anti-discrimination measures.

ii) Program and Policy Changes

- *Gender-Sensitive Education Policies:* Implement targeted policies to improve female enrollment and retention in schools and higher education; address socio-cultural barriers hindering female education.
- *Workplace Diversity Programs:* Encourage companies to adopt diversity and inclusion programs; introduce incentives for organizations that promote a gender-balanced workforce.

6. Regional Development Initiatives

i) Way Forward

- *Decentralized Economic Development:* Formulate policies that promote economic activities beyond major urban centers; encourage industries to invest in tier 2 and tier 3 cities.
- *Regional Skill Development:* Tailor skill development programs to the specific needs of different regions foster localized innovation hubs to support regional economic growth.

ii) Program and Policy Changes

- *Regional Investment Incentives:* Offer tax incentives and subsidies for businesses establishing operations in underdeveloped regions; implement policies that address specific challenges faced by different states.
- *Regional Innovation Funds:* Establish funds to support innovation and entrepreneurship in regions with untapped potential; collaborate with local governments to identify and prioritize key sectors.

7. Global Collaboration and Diplomacy

i) Way Forward

- *Strengthen International Partnerships:* Actively engage with international organizations and countries to facilitate collaborative projects; leverage diplomatic ties to create opportunities for skill exchange and technology transfer.

- *Position India as a Global Innovation Hub:* Develop policies that position India as a destination for global talent, innovation, and investment.

ii) Program and Policy Changes

- *Bilateral Skill Exchange Programs:* Establish bilateral agreements for skill exchange programs with countries known for their expertise; facilitate joint research initiatives and technology transfer.

- *Global Talent Visas:* Introduce streamlined visa processes for skilled professionals, researchers, and entrepreneurs; encourage a free flow of talent and ideas across borders.

8. Continuous Monitoring and Adaptive Governance

i) Way Forward

- *Implement Data-Driven Decision-making:* Strengthen data collection mechanisms for continuous monitoring of policy effectiveness; invest in data analytics tools to derive actionable insights.

- *Foster Adaptive Governance:* Develop an agile governance framework that can adapt to changing circumstances; encourage regular policy reviews and adjustments based on feedback and outcomes.

ii) Program and Policy Changes

- *Data Infrastructure Investment:* Allocate resources for building robust data infrastructure; develop platforms for real-time data sharing between government agencies, industries, and educational institutions.

- *Periodic Policy Audits:* Introduce a system of periodic policy audits to assess the impact of implemented programs; establish an independent body for objective evaluations and recommendations.

To make the most of India's demographic advantage, we need a plan that covers everything and can adapt easily. The changes we suggest in programs and policies are meant to create an environment that helps with education, new ideas, including everyone, and long-lasting development. Important parts of this plan include keeping an eye on important things, making strong global relationships, and having flexible governance. These steps are necessary to make sure India can handle challenges well and get the benefits of having a lot of young people.

Check Your Progress

Notes: a) Write the answer in the space given below the question.

b) Check your answer with the one given under "Answers to 'Check Your Progress' Questions" of this Unit.

4. Discuss the specific steps and changes suggested for enhancing human capital in India, focusing on education, skill development, and healthcare.

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14.6 LET US SUM UP

In this unit, we have focused our discussion on exploring the implications, challenges, and prospects of demographic dividend specifically in the context of India. As the first-most populous country globally, India's demographic transition presents both opportunities and challenges for economic growth. We believe that the unit has provided you with a nuanced understanding of India's demographic dividend addressing the complexities, socio-economic factors, and regional variations. We have also emphasized the interplay of prospects and challenges, highlighting the role of human capital investment and suggestive strategies for realizing and maximizing the benefits of the demographic dividend in India.

14.7 ANSWERS TO 'CHECK YOUR PROGRESS' QUESTIONS

1. Three main prospects of demographic dividend in India include:

   - Increased economic activity and enhanced productivity:

     - India's demographic dividend is expected to peak around 2041, coinciding with a forecasted 59% working-age population (20-59 years).

     - Heightened economic activities, increased productivity, job creation, and overall economic growth until 2055-56 are anticipated.

   - Fiscal opportunities and increased savings rate:

     - The demographic dividend generates fiscal space by redirecting resources from child-centric spending towards investments in physical and human infrastructure.

     - A higher savings rate during the prime working-age population results in economic stability and increased investment across sectors.

- Rise in women's workforce:
  - A decline in fertility rates naturally leads to increased women's workforce participation, fostering gender inclusivity.
  - Increased participation of women contributes to overall economic development and societal progress.

2. The three major key considerations in the context of demographic dividend and human capital investment in India are:

- Strategic investment in education and skill development:
  - Allocating funds for robust education systems and skill development programs is essential.
  - It ensures that the workforce is equipped with the necessary competencies for evolving job markets, fostering innovation, and increasing productivity.
- Investment in healthcare infrastructure:
  - Contributes to a healthier and more productive workforce, addressing health-related challenges.
  - Reduces dependency on healthcare resources, promoting economic sustainability.
- Promotion of gender inclusivity:
  - Investing in initiatives that promote gender inclusivity in education and the workforce is crucial.
  - Ensures equal opportunities for both genders, maximizing the potential of the entire population and contributing to a more robust demographic dividend.

3. Empowering women for India's demographic dividend involves proactive measures:

- Education and skills:
  - Implement scholarships for girls.
  - Include vocational training relevant to diverse sectors.
- Workplace policies:
  - Enforce equal pay and flexible hours.
  - Accenture and Infosys exemplify inclusive policies.
- Awareness and mentorship:
  - Launch campaigns challenging stereotypes.
  - Establish mentorship programs for guidance.

- Family-friendly policies:
  - Introduce parental leave and childcare facilities.
- Healthcare initiatives:
  - Address women's specific health needs.
  - Ensure access to reproductive and mental health services.
- Legal reforms:
  - Strengthen laws against workplace discrimination.
- Entrepreneurial support:
  - Provide financial aid and mentorship.
  - 'Stand-Up India' encourages women entrepreneurs.
- Education for equality:
  - Integrate gender sensitivity into curricula.
  - Conduct awareness campaigns challenging societal norms.
- Networking opportunities:
  - Create platforms for networking and professional development.
- Government and corporate initiatives:
  - Collaborate for affirmative action policies.
  - 'Beti Bachao, Beti Padhao' promotes gender equality.

4. The suggested steps and changes for enhancing human capital in India center round a multifaceted approach encompassing education, skill development, and healthcare. In education, the suggested steps involve prioritizing a holistic education system. This includes revamping the educational framework to go beyond theoretical knowledge, incorporating practical skills aligned with industry needs. Policy changes need to shift from rote-learning to experiential education, fostering collaboration between educational institutions and industries to ensure curriculum relevance.

   Regarding skill development, the suggestions emphasize the expansion of skill development programs to cater to diverse sectors. Strengthening partnerships with industries is advised to align skill training with market requirements. Program and policy changes involve increasing funding and resources for skill development, fostering private sector participation, and encouraging industry-relevant training.

   In healthcare, the proposed measures include enhancing healthcare infrastructure to provide accessible and quality healthcare. Emphasis is required to be placed on preventive measures, health awareness campaigns, and technological integration for improved healthcare delivery. Policy changes need to involve implementing reforms that focus on upgrading healthcare infrastructure, prioritizing preventive care, and addressing regional healthcare disparities.

Collectively, the above suggested steps and changes are more likely to create a conducive environment for nurturing human capital in India by aligning education, skill development, and healthcare with the demands of a rapidly evolving socio-economic landscape.

14.8 REFERENCES AND SUGGESTED READINGS

References

Bhagat, R. B. (2014). The Opportunities and Challenges of Demographic Dividend in India. *Jharkhand Journal of Development and Management Studies,* XISS, Ranchi, Vol. 12, No.4, 6099-6113.

Business Today. (2023, August 24). *Inclusive India 2047: Empowering the Demographic Dividend*. Retrieved from https://www.businesstoday.in/indiaat100/story/inclusiveindia 2047empoweringthe-demographicdividend39535920230824.

Chandrasekhar, C. P., Ghosh, J., & Roychowdhury, A. (2006). The "Demographic Dividend" and Young India's Economic Future. *Economic and Political Weekly,* 41(49), 5055–5064. http://www.jstor.org/stable/4419004

Dristi IAS papers. (2023). *India's Demographic Dividend.* Retrieved from https://www.drishtiias.com/to-the-points/paper1/india-s-demographic-dividend

GK Today. (2023, November 9). *Demographic Transition Theory.* Retrieved from https://www.gktoday.in/demographic-transition-theory/

Kapoor, R. (2023, November 19). No high growth Indian demographic dividend without investment in human capital. *East Asia Forum Economics, Politics and Public Policy in East Asia and the Pacific,* ICRIER. https://www.eastasiaforum.org/2023/11/19/no-high-growth-indian-demographic-dividend-without-investment-in-human-capital/

Ladusingh, L., & Narayana, M. R. (2011). Demographic Dividends for India: Evidence and Implications Based on National Transfer Accounts. *ADB Economics Working Paper Series, December 2011.*

Malin, S., & Tyagi, A. (2023). *India's Demographic Dividend: The Key to Unlocking Its Global Ambitions.* Retrieved from https://www.spglobal.com/en/researchinsights/featured/ specialeditorial/lookforward/indias-demographic-*dividendthekeytounlockingitsglobalambitions#:~:text=India % 20is%20home%20to%20more,is%20expected%20to%20hit%2059%25

Mody, A., and Aiyar, S. (2011). The Demographic Dividend: Evidence from the Indian States. *International Monetary Fund working paper,* Volume 2011: Issue 038 DOI: https://doi.org/10.5089/9781455217885.001

NITI Aayog (2022, September 19). *Investments in India's huge demographic dividend can influence human capital formation: Turning challenges into* *opportunities.* Retrieved from https://dmeo.gov.in/article/investments-indias-huge-demographic-dividend-can-influence-human-capital-formation-turning.

Pradhan, D. (2023). Ministry of Skill Development and Entrepreneurship, *PIB News.* Retrieved from https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1961467

Raiser, M. (2023, March 03). South Asia's human capital is the resilience it needs. *The Hindu.* Retrieved from https://www.thehindu.com/opinion/op-ed/south-asias-human-capital-is-the-resilience-it-needs/article66573073.ece.

Ross, J. (2004, September). *Understanding the Demographic Dividend.* Retrieved from http://www.policyproject.com/pubs/generalreport/demo_div.pdf

S & P Global. (n.d.). *India's Demographic Dividend: The Key to Unlocking Its Global Ambitions*. https://www.spglobal.com/en/researchinsights/featured/specialeditorial/lookforward/ indiasdemographicdividendthekey-tounlockingitsglobalambitions#:~:text=India%20is%20home%20to%20more,is%20expected%20to%20hit%2059%25.

UNDP (2021). *UNDP Annual Report 2021.* UNDP.

UNFPA. (2022). *Reaping India's Demographic Dividend.* Retrieved from https://india.unfpa. org/en/news/reaping-indias-demographic-dividend

UNICEF. (2019. November). *Population Dynamics and the Demographic Dividend Potential of Eastern and Southern Africa: A Primer.* UNICEF Eastern and Southern Africa Regional Office (ESARO).

14.9 UNIT-END EXERCISES

In your own interest, you may prepare the answers to the following questions which may be useful as a part of your preparation for your term end examinations.

1. Outline the difficulties related to the lower participation of women in the workforce in India. Suggest detailed plans to address this challenge, and provide examples to illustrate your suggestions.

2. Explain how India's demographic dividend can influence its role in the global workforce. What actions should India take to become a significant player in the global workforce, considering its demographic advantage?

3. Provide a detailed overview of the impact of government programs like Skill India and Startup India on filling the skills-gap in the Indian workforce. Propose improvements or additional steps to make these initiatives more effective.

4. Explore the significance of technological innovation and digital literacy in utilizing India's demographic dividend. Discuss ways in which the government and private sector can collaborate to enhance digital skills, particularly in rural areas.

5. Analyze the specific challenges faced by different states in India regarding the demographic dividend, as mentioned in the document. Offer customized solutions for at least two states with unique demographic situations.

14.10 UNIT-END ACTIVITY

If you like to further enhance your interest, you may attempt to perform the following activity.

1. Review case studies, if accessible, through Google search or available reports and research papers. Focus on specific subjects such as economic growth, the labour force, etc., for India or any particular country, regardless of its size. Perform a comparative analysis between the practical insights gained from these sources and your theoretical understanding of the same topics for India.

UNIT 15 DEMOGRAPHIC DIVIDEND: EXPERIENCES FROM DEVELOPING AND DEVELOPED COUNTRIES

Structure

15.0 INTRODUCTION

In "Unit-13: Demographic Dividend and its Implications" of this Block, you studied the concept and significance demographic dividend, interrelationship between population size and structure, advantages and disadvantages of demographic dividend and implications demographic dividend for development and welfare. In "Unit-14: Demographic Dividend - Indian Context" you have studied the prospects and problems of demographic dividend in India, need for investment in quality of human capital, ways of realising demographic dividend and maximising the benefits of demographic dividend for India.

You can therefore recall that demographic dividend refers to a period, a phase or a stage of economic growth that occurs when a country experiences a significant increase in the proportion of its working-age population relative to that of dependents (children and elderly). This demographic transition typically happens as a result of declining fertility rates followed by a lag in the decline of mortality rates. As a consequence, the ratio of working-age people to dependents increases, creating a window of opportunity for economic development.

During this phase, with a larger workforce relative to the dependent population, a country can potentially experience increased productivity, higher savings rates, and greater investment in education and healthcare. These factors can contribute to accelerated economic growth and development.

The demographic dividend is not automatic; it requires appropriate policies and investments to capitalize on the favorable demographic structure. Investments in education and healthcare are particularly important to ensure that the growing workforce is healthy, skilled, and productive.

Additionally, beneficial economic policies that promote job creation, innovation, and entrepreneurship can further enhance the benefits of the demographic dividend. However, the demographic dividend is a time-limited phenomenon. As fertility rates eventually stabilize and the population ages, the demographic structure shifts again, potentially leading to increased dependency ratios and economic challenges if adequate preparations are not made.

The concept of demographic dividend manifests differently in developing countries compared to developed countries due to variations in their demographic profiles, stages of development, and policy contexts. Here is how demographic dividend unfolds in both developing countries and developed countries.

Unfolding of Demographic Dividend in Developing Countries: It is characterized as follows.

1. ***Youth Bulge:*** Many developing countries experience a demographic dividend characterized by a "youth bulge," where there is a high proportion of young people entering the working-age population due to declining fertility rates but with a time lag in declining mortality rates.

2. ***Economic Growth Potential:*** In developing countries, the demographic dividend presents a significant opportunity for economic growth. The large cohort of young, productive individuals can drive economic development through increased labor supply, consumption, and savings.

3. ***Investment Needs:*** To fully capitalize on the demographic dividend, developing countries need to invest in education, healthcare, and infrastructure to enhance the productivity and employability of their burgeoning youth population. Policies that promote job creation, entrepreneurship, and skills development are essential to harnessing the demographic dividend effectively.

4. ***Rapid Urbanization:*** Many developing countries experiencing a demographic dividend also undergo rapid urbanization as young people migrate from rural areas to cities in search of employment opportunities. Managing urbanization challenges such as housing, transportation, and access to basic services becomes crucial for sustainable development.

Unfolding of Demographic Dividend in Developed Countries: It is characterized as follows.

1. ***Aging Population:*** In contrast to developing countries, developed countries often face the challenge of an aging population and declining birth rates. As a result, the demographic dividend manifests differently, with a shrinking working-age population relative to dependents (children and elderly).

2. ***Labor Force Participation:*** Developed countries may still benefit from a demographic dividend if they can maximize the productivity and

participation of their aging workforce. Policies that encourage workforce participation among older adults, such as flexible retirement options, lifelong learning programs, and age-friendly workplaces, can mitigate the economic impact of population aging.

3. ***Healthcare and Social Security:*** With an aging population, developed countries must also prioritize investments in healthcare and social security systems to support older adults and ensure their well-being. Sustainable funding mechanisms for pension schemes and healthcare services become essential to address the fiscal challenges associated with population aging.

4. ***Innovation and Technology:*** Developed countries often leverage innovation and technology to offset labor shortages resulting from demographic changes. Automation, robotics, and other advancements can enhance productivity and competitiveness in sectors experiencing labor shortages due to demographic shifts.

While both developing and developed countries experience demographic dividends, the specific challenges and opportunities vary significantly. Developing countries benefit from a youthful demographic profile and the potential for rapid economic growth, subject however to stage-appropriate policies and investments, while developed countries must navigate the complexities of population aging and workforce sustainability. These countries should frame policies which are suitable and appropriate for the aging-population.

In Unit-15 here, we will focus our discussion on experiences of harnessing demographic dividend in select countries, namely South Africa, United Kingdom, France and China.

15.1 LEARNING OBJECTIVES

After studying this unit, we expect you to be able to:

- discuss the dynamics of population size, structure and growth rate vis-à-vis demographic dividend in both developed and developing countries;
- analyse the impact of declining death and birth rates on the economic growth of different countries;
- raise the potential to recognize and facilitate the youth to harness the economic development; and
- facilitate addressing of the problems and the challenges of aging-population with suitable policies for sustainable development.

15.2 EXPERIENCES OF HARNESSING DEMOGRAPHIC DIVIDEND IN SELECT COUNTRIES

Several South-East Asian countries in 1950's and 1960's made investment on their youth and expanded their family planning programmes. This caused people to delay childbirth and have fewer children. On the other hand, as fertility fell and the population declined, the resources available to have been directed to increase business expansions, infrastructure and to make profitable investments translated into concrete economic growth and facilitated attainment of the demographic dividend. This resulted in unprecedented economic growth in certain countries in other parts of the globe. Thus, demographic dividend results in diversified experiences to different countries, depending upon how it is managed by them.

15.2.1 South Africa

South Africa is in the process of demographic change. Although almost half of the country's population is under 25, the average age has increased from 18 to 25 in the last 30 years and this will rise to 31 in coming years (United Nations, 2013b) leading to population aging. Since the mid- 1960's and until the beginning of the HIV/AIDS epidemic in 2000, population growth averaged between 2.0% and 2.5% per year, resulting in slow population growth. Fertility rates have been falling since 1960. There was a temporary change in population composition from high fertility and mortality to low fertility and low mortality. Since the decline in mortality rate preceded the fertility decline, the population shift created a boom leading to large population. As the birth rate declines and these large groups enter working age, the work force is less burdened by the consumption of non-working populations like children and elderly. Reducing dependency frees up resources that can be used to improve living conditions, improve investment or savings leading to demographic dividend (https://www.unfpa.org/demographic-dividend#readmore-expand).

The high level of inequality in South Africa society is also reflected in the economy, where high incomes are often combined with low incomes. Although economic growth in the post-apartheid period is generally higher and more stable than growth in the previous two decades, it is not enough to attract the unemployed to work more. Therefore, unemployment, poverty and inequality remain the country's three biggest economic problems. The unemployment rate in 2014 was estimated at 25.2%; (Statistics South Africa Own Census, 2014b). The most recent estimate from 2011 was that 45.5% of the population lived below the national poverty line (Statistics South Africa, 2014a), and South Africa Gini coefficient was 0.631 in 2009, making it most unequal as in 2009 to 2014 (World Bank, 2013).

The aging process and the distribution of the young population therefore represent a significant opportunity for South Africa. However, the country is not in a way to of getting benefit from demographic dividend due to its social and economic problems. In fact, many health issues facing the country often hinder dividend success (https://blogs.worldbank.org/africacan/forever-young-what-africa-can-learn-from-southern-africas-demographic-transition).

Demographic Dividend

Initially, demographic change created a group of large populations, the Boom Generations. The current impact is to create stress for working-age population meeting their needs. However, as the fertility rate decreases and this large group ages, the working-age population also increases. This reduction in dependency frees resources, known as demographic dividend that can be used to improve living conditions, investment in human capital or savings.

Average consumption is only exceeded by income from work at age 30, but by age 60 income falls below consumption again. In other words, as consumption increases, young people's expectations will increase, and dependency will decrease when young people begin to enter the labour market. The average person is financially independent in the early years of employment, but this degree of freedom narrows rapidly in the late fifties and dependence increases in the sixties.

According to National Transfer Accounts (NTA) estimates, South Africa is currently in the middle of the first dividend period. It was expected to be around 35 years of time with the assumption of medium fertility, which was estimated to be stayed in 1970's. Due to decline in fertility, South Africa increased investment in child health and education; this will benefit productivity when these children enter the labor market. However, in spite of accumulation of human capital, without work these cannot be achieved.

South Africa should try to create a supportive environment for the growth of private sector to create more job opportunities. Although the state itself is a significant employer, the private sector will provide realistic opportunities for more increase of job potentials. However, growth is necessary, it is not sufficient for further studies. Though significant progress has been made in education sector, the economic growth is not sufficient to absorb this population of youngsters and thus the demographic dividend.

Summary: According to Statistics, South Africa has spent a large portion of its initial public allocation. Demographic transition lead to increase in the growth of per capita income since 1975 and this is projected to continue until 2040, unless there is increase in fertility.

South Africa is facing the challenges to ensure better result from the investments made particularly on education and health. Despite significant investment in these areas, evidence suggests that this investment may not generate a second dividend. The main reason for this is the risk of inequality in the quality of education and health after the apartheid.

Since there are many health and sanitation interventions such as education, housing, sanitation and water provision, especially those that improve quality of life of the people will have a greater impact on the second dividend.

To maximize the second demographic dividend the country has to productively utilize the first demographic dividend. Although South Africa is halfway through the demographic dividend, appropriate strategic policies should be focused upon so that there is no further delay in ensuring the success. Implementation of these policies will have a positive impact on the country's ability to generate second dividend. There can be additional productivity, due to better investments in human, physical and financial capital which can be related to second demographic dividend. The second dividend can lead to economic growth and better living standards than those of the first demographic dividend.

15.2.2 United Kingdom

In United Kingdom, the demographic situation is pretty distinct as it has a giant percent of aging population with 65 and above. Though there is more or less an equal working-age population, projections suggest that the dependency ratio is expected to grow due to increased life expectancy and declining fertility. But, it is far crucial to note that the United Kingdom's demographic scenario is not the same as that of many growing global countries. Though UK is experiencing a demographic dividend because of its ageing population, there are however components of demographic dynamics which might be suitable to its financial and social strategies.

Aging population: In UK, over the decades, life expectancy has been increasing due to advanced medical facilities and fertility has been declining. As an end result, the proportion of elderly population has been steadily increasing. This demographic trend provides demanding conditions like cost of health care, increasing pressure on pension systems, social services and work-related issues.

Dependency Ratio: The dependency ratio is stirring inside the United Kingdom. It is expected that as the dependency ratio is increasing it may exert more pressure on the working population to take care of the dependents. While the dependency ratio within the United Kingdom is not as high as in other countries, it is still projected to increase, as there is growing old-population. This may need more resources for health care, civic and social services. This may also strain the economic growth and social welfare services.

Economic effect: United Kingdom might not have a conventional demographic dividend like many growing nations, though with growing aging-population the UK has a pretty massive working-age population in comparison to many nations. The elderly populations are still on the workforce, contributing to economic growth and productivity. For prosperous economic growth and better social welfare programs encouraging participation of elderly in the labour force is crucial. There is a developing market, for products and services that are needed to older population, which encompass health care, retirement, and leisure. The countries' policies should include elderly-friendly policies like flexible work patterns, and age-friendly places of work and lifelong learning can help maximize the capability of the labour force.

Immigration: Immigration has helped offset some of the demographic demanding situations associated with a growing older population by way of contributing to work force. Immigration of young workers with varied skills can lead to economic development. However, this has to be cautiously managed as it may have socio-political implications.

Productivity and Innovation: Though demographic elements are critical, there may no longer be the only determinants of financial boom, improving productiveness, fostering innovation and making investments in human capital are vital for making sustainable development. Programs and policies that assist schooling, capabilities, skills, research and improvement, and entrepreneurship can help the UK stay competitive in the international economic system. UK should adopt policies that support:

- Reforming pension for elderly population;
- Making funding in education and skills improvement to equip the workers in tune with the economic growth;
- Implementing regulations for the older adults to be in the labor force;
- Motivating innovation and entrepreneurship, specifically in the sectors that cater to the desires of growing older-population.

Summary: Though the United Kingdom's demographic profile differs from many countries with demographic dividend, if strategic policies and investments are made there may be opportunities to leverage demographic tendencies for economic development.

Primarily, whilst the UK might not enjoy a conventional demographic dividend in identical manner as few growing global countries, demographic dynamics nevertheless play a sizable role in shaping its financial and social landscape. For the growing aging-population comprehensive policies that deal with health care, pensions, labour force and immigration should be addressed. Through properly utilizing the strengths of demographic dynamics and focusing on the challenges effectively, UK can have continued economic development.

15.2.3 France

France, like many other European nations, has experienced demographic transition during recent times. France's population stood at about 67 million in 2020, making it the second-largest within the European Union (INSEE, 2021). But, the population growth has been extremely slow, because of the declined birth rates and growing older-population.

i) **Demographic Trends:** These included the following.

a) ***Aging:*** The significant demographic change in France is the aging population. The proportion of aged people (elderly 65 and above) has been increasing, while the proportion of children (0-14) has been declining. Due to declined birth rates and increased life expectancy France has to face this challenge of aging population. The share of elderly population is increasing, leading to modifications in age patterns and dependency ratios. This shift in age dynamics has implications for healthcare, pensions, and social services, due to increase in the demand for their care and assistance. Furthermore, the increase in old age workers will lead to demanding situations creating challenges for preserving productivity and sustain economic growth.

b) ***Fertility Rates:*** In France birth rates has declined extensively during the last few decades than many other countries. The Total Fertility Rate (TFR) which is the average number of children born to woman during their reproductive period was around 1.84 children per woman in 2020 (INSEE, 2021), which is higher than many countries like Germany and Italy, but less than the replacement level of 2.1 children per woman to maintain stable population.

c) ***Mortality Rates:*** Like many European countries France has rapid decline in mortality rates due to advancement in health care facilities, better nutrition and better quality of life. Expectation of life has been steadily increasing, reaching about 82.7 years for women and 78.7 years for men in 2020 (INSEE, 2021). However, people with low socio- economic status have shorter longevity and chronic diseases leading to significant variations in the population.

d) ***Migration:*** France's demographic dynamics is quite influenced by internal and international migration. From the olden days people from former colonies in North-Africa, Sub-Saharan Africa and from other parts were the immigrants to France. In fact immigration has been beneficial to some extent due to declining fertility and labour shortages in certain sectors of the economic system.

e) ***Demographic Dividend and Economic Implications:*** France which is in demographic transition has to understand the economic implications to harness the benefits of demographic dividend and also for sustainable economic development.

The major economic implications are as follows.

i. Increased economic growth due to more working population in labor force which will lead to higher productivity. This in turn will increase economic performance (Bloom & Canning, 2008).

ii. Though higher working population leads to economic development, providing employment opportunities to all segments of population will be a challenge. Higher youth unemployment and providing access to employment opportunities to all will be a challenge (OECD, 2020).

iii. With a larger percentage of working-age people contributing to the productivity and paying taxes, the tax revenue of the government will be accelerated and there will be decreased expenses on social welfare packages, consisting of pensions and health care for the elderly. This in turn will increase government potential to put money into infrastructure, education and other crucial areas leading to economic development.

iv. During demographic dividend France with more working population specially one which is educated and skilled, can drive technological development, entrepreneurship, and understanding in-depth industries, leading to productivity, profits, promote industrial diversification and economic growth.

v. The demographic dividend also can stimulate customer demand. With growing working-age population, there may be greater call for goods and services, housing, and infrastructure. This extended intake can create possibilities for businesses, promote entrepreneurship, and drive employment growth throughout various sectors of economy.

vi. To increase the skills and abilities of workforce France can invest more in human capital by means of prioritizing schooling, vocational schooling, and lifelong learning according to changing market demands.

ii) **Policy Initiatives:** The policy makers in France have carried out diverse strategies to make use of demographic dividend.

i. France has prioritized investments in education and capabilities improvement to equip its personnel with skills and capabilities vital to conform to evolving labour market demands such as vocational education, apprenticeship schemes, and measures to improve the employability and productivity in higher education (INSEE, 2021).

ii. France has carried out measures such as labour market reforms, which includes employment protection rules, and promoting entrepreneurship and self-employment in order to promote flexibility and adaptability in labour market. By creating more jobs and entrepreneurship beneficial policies, France wants to benefit from the demographic dividend.

iii. France has family-friendly policies such as subsidized childcare, parental leave, and economic assistance for families in work-life balance mainly to sustain the fertility rates.

iv. France has targeted on strengthening its healthcare and social welfare structures to deal with the needs of aging population such as investments in health care facilities, and pension reforms to provide financial security and healthcare services. This way France can also mitigate problems associated with demographic aging (INED, 2020).

Summary: France, like many developed countries, has aging population characterized by increasing expectation of life and declining birth rates. But, France additionally benefits from possibilities associated with the demographic dividend, which includes human capital investments, entrepreneurship, focusing on education, labor market flexibility, family-friendly policies and investing in health care. France has policies targeted on addressing challenges at the same time capitalized on possibilities for sustainable development. Investments in schooling, healthcare, and social welfare, coupled with efforts to spread gender equality, work-existence stability, and environmental sustainability, are vital for navigating demographic transitions successfully (French Government, 2020).

15.2.4 China

China faces enormous challenges due to its diminishing population. It affects China's economy and society and has led to a declining demographic dividend. According to a report released by China's National Population and Family Planning Commission (NPFPC), the population will drop by 850,000 in 2022 (Buckley, Chris, Joy Dong, and Amy Chang Chien, 2023). Since 2012, China's working-age population has been declining, which has been accentuated by COVID-19 pandemic and subsequent economic slowdown.

The National Bureau of Statistics of China (2024) said the total number of people in China fell by 2.08 million, or 0.15%, to 1.409 billion total population in 2023. It is further projected that China's population will decline by 109 million by 2050. Aging population of 60 and over will reach to 296.97 million in 2023 from 280.04 million in 2022. The country's retirement-age population aged 60 and over is expected to grow to more than 400 million by 2035 which is more than the entire population of the United States.

Demographic situation in China: China's population grew quickly after creation of the People's Republic of China in 1949. During 1956, mass contraception was vigorously promoted by the Ministry of Public Health. However, these efforts had little impact on fertility. After the Great Leap Forward, China shifted attention to rapid population growth and realized it as an obstacle to development and strengthened birth control policies. Against this population explosion, the so-called one-child policy was introduced in 1979. Couples with one child were given a "one-child certificate", which provided benefits such as cash incentives, longer period of maternity leaves, better childcare facilities and housing allocation according to their preferences. Rural population constituted approximately 60% of the total population in China; hence the effectiveness of the one-child policy in rural areas was considered important. However, in urban areas, raising a child required a significant portion of the family's income; therefore one-child policy was more accepted than in rural areas (www.britannica.com. 3 January 2024).

In China, by 2050, the number of people over 60 is expected to increase to 430 million. There will be move towards older population, which eventually prompted the government to revise the policy. In October 2015, the existing law was changed to a policy for two children. However, the two-child policy cannot stop the problem of population aging. Hence, China strongly needed suitable fertility policy to optimize the demographic dividend proportional to the working-age population. Another factor which played key role in influencing fertility in China is higher house prices. Rising house prices lead to lower marriage rates and caused other serious social problems (Wang & Mason, 2007).

Crude death rate was observed to be more than 30 per 1,000 and the average life expectancy was only 35 years in 1949. In the early 1950s, the death rate steadily declined; it continued to decline and remained constant until 1987. Though the government assumed this drastic decline in fertility was due to birth control campaign. There are other factors of socio-economic change such as increased female employment in both urban and rural areas and reduced infant mortality may have played a role to some extent. The birth rate rose to a level of over 20 per 1,000 in the 1980s, mainly due to a significant increase in marriages and first-born children. The increase was a sign of problems with the one-child policy of 1979. However, Chinese sources say the birth rate began to decline again in the 1990s and recently reaching to a level of around 12 per 1,000. Population growth eventually fell to 0.06 percent in 2022, most likely affected by the corona virus pandemic. Old-age dependency ratio is expected to increase to 51.5 percent by 2050 from less than 20 at present. This shows that on an average two working-age persons have to support roughly one person over the age of 65 years (Wang & Mason, 2007).

The changing age-structure of population: Like other countries, the declining mortality and fertility in China has led to changes in the age-structure of its population. Over the past half century, the rapid decline in mortality in China has led to a nearly doubling of life expectancy from 42 and 46 years for men and women, in 1950 to 71 and 75 years in 2000. During early 1950s, fertility decline began in parts of urban China (Banister and Preston, 1981). It spread throughout the country in the early 1970s (Wang, 2001). With the help of the government's birth control program, which called for late marriages, longer birth intervals, and fewer births, China's fertility level fell by more than half within a decade. From 5.8 children in 1970, the total fertility rate (TFR) fell to 2.3 in 1980. Despite the newly implemented one-child policy, China's fertility level hovered around the replacement level of 2.1 in the 1980s. However, China's fertility decline continued in 1990's. At the end of the twentieth century, fertility was well below replacement level, at around 1.6 children per woman (Retherford, et al, 2005).

At the beginning of China's economic boom in 1982, the age-structure of the population was predominantly low, with significant proportion of young and growing population. However, in 2000, the age-structure of the Chinese population was made up of the adult population, where the largest numbers were found in the working-age population. With further increase in life expectancy and the maintenance of current declining fertility levels, China's population will be very old. Within a few decades, China's age-structure looks set to shift from a young and growing population to aging population.

Demographic Dividend: The divergence between production and consumption interacts with changes in the age-structure of the population to produce what is called the demographic dividend (Mason, 2001; Bloom, et al, 2002), which has recently been described as two demographic dividends (Mason and Lee, forthcoming). The demographic dividend arises because the demographic transition that brings changes in the age-structure of the population with the increase in the proportion of the population concentrated in the working-age population. Later, the Second Dividend occurs due to public policies' response of the individual behavior to expected changes in the age-structure of the population.

In China, the policies that the country adopts in this changing population scenario decide the demographic dividends. The demographic dividends will result in an increase in the growth rate of per capita income due to the faster growth of the productive population than the total population. However, as the demographic transition continued, the growth of the working-age population will eventually be slower than the growth of the total population, as the proportion of older people increases. This affects the growth of production per capita and consumption per capita.

The GDP per capita increased by 8.4 percent per year from 1982 to 2000 and the demographic dividend led to 15 percent of China's economic growth. During this period, the production per capita increased to 4.0 percent due to first demographic dividend, and from 2014 to 2050, the growth in per capita output will decline by 0.45 percent per year due to changing structure of first demographic dividend (Wang & Mason, 2007).

In China, per capita output is projected to be about 10 percent higher in 2050 than in 1982. This is an event of considerable economic importance in a time of transition. Moreover, this demographic dividend can have long-term effects if the increased income is reinvested in the form of physical or human capital and/ or institutional development.

Population-aging and the Demographic Dividend: China's rapid decline in birth rates in the 1970s brought significant demographic dividends to the country. The demographic dividend along with economic boom further boosted an already fast-growing and dynamic economy. A larger working population combined with a relatively small proportion of younger and older dependents, made China a fast-growing world economy at the turn of the twenty-first century, and also contributed to an increase in per capita output and standard of life. China's unpredicted rapid decline in birth rates indicates that it will also undergo a faster and more severe aging process. China's rapid decline in birth rates and its recent low birth rates and higher life expectancy will quicken China's aging process in the near future.

However, an aging population, with appropriate policies and institutional arrangements, may yield a subsequent demographic dividend for China. This demographic dividend can arise because changes in the age-structure can affect the processes that lead to wealth creation. One possibility is that population aging will lead to rapid capital accumulation. When this happens, the capital intensity of the economy will increase labor productivity, or output per worker.

As life expectancy increases, so does the expected retirement age. People must gather extra wealth or they may have to lead low standard of life in old age. However, wealth can be accumulated in many forms. One possibility is the gathering of extra funds. The second is the assembling of transfer-wealth by increasing the obligations of future generations to provide support in old-age either through public pension plans or as part of family support systems. If the beneficial effects on productivity are not achieved, then the living standards of the elderly will deteriorate. The resources must be redistributed from working-population to children due to changes in the age-structure of the population and increase in resources must be shifted from workers to elderly.

Summary: Demographic transition has positioned China to reap a relatively large demographic dividend. China's demographic dividend from declining birthrates materialized at the same time that China underwent the most radical economic transformations and faced the strongest unemployment pressures. Thus, the demographic factor has been a favorable factor in China's economic growth over the past quarter of a century. But as a result of such forced demographic transition, China will soon enter a long period of declining labor supply and face a rapid increase in the elderly population that cannot be easily and quickly reversed. Assuming current fertility and a modest improvement in mortality, China's urban population will be as old as Japan or Italy today in twenty years, with one-fifth of the population aged 65 and over. In contrast, China's rural population will not reach this level of aging until the middle of the 21st century. The extent to which China's economy will be able to benefit from the capital accumulation associated with the demographic dividend depends not only on the institutional forms of resource allocation, but also on the distribution of allocation and use of those resources among its citizens.

Check Your Progress

Notes: a) Write the answer in the space given below the question.

b) Check your answer with the one given under "Answers to 'Check Your Progress' Questions" of this Unit.

1. What is demographic dividend?

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2. How fertility decline is related to demographic dividend.

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15.3 LET US SUM UP

The demographic dividend in developed and developing countries has its own impact on their economic growth. In South Africa due to demographic dividend increase in young population is visible. However, the country has to provide educational and employment opportunities for this growing population. United Kingdom not only has aging population in work force but also relatively more number of working population. Hence, UK has to regulate its policies to provide facilities to elderly working-population, like flexible working hours, health care and pensions.

Due to demographic dividend France has more elderly population, and also declining population. However, due to internal and international migration, aging-friendly policies and better capital investments on education, health and innovations France is thriving to achieve sustainable development. China with a history of huge population once is shrinking now due to the declining trend of population over the decades. The increasing working-age population has led to economic boom in the early stages. But with increasing life expectancy and declining current fertility the elderly population is projected to become nearly half of its population. China is focusing on the policies like more savings, resource distribution from working-age to dependent population and on capital accumulation. With advanced medical technology along with socio-economic development many countries have to face the challenge of declining fertility and increasing life-expectancy leading to demographic dividend. Effective policy responses tailored to each context are crucial for maximizing the benefits of demographic change and promoting sustainable development.

15.4 ANSWERS TO 'CHECK YOUR PROGRESS' QUESTIONS

1. The demographic dividend refers to the economic advantage derived from changes in a population's age-structure, marked by a higher proportion of working-age individuals relative to dependents. This transition typically follows decline in fertility and mortality rates, creating conditions conducive to rapid economic progress.

2. To have demographic dividend the countries must experience demographic transition from high fertility and high mortality, to low fertility and low mortality resulting in a temporary shift in the composition of the population. Since mortality declines before fertility, due to advancement in the medical technology, demographic transition creates a population explosion. When this large population enters workforce, there will be lesser dependents population. This fall in economic dependency releases resources that can be used to raise living standards, better investments, and savings leading to demographic dividend.

15.5 REFERENCES AND SUGGESTED READINGS

References

Banister, J., & Preston, S. H. (1981). Mortality in China. *Population and Development Review*, *7*(1), 98–110. https://doi.org/10.2307/1972767.

Bloom, D. E., & Canning, D. (2008). Global demographic change: Dimensions and economic significance. *Population and Development Review*, 34(Suppl 1), 17-51.

Bloom, D. E., and others. (2002). *The Demographic Dividend: A New Perspective on the Economic Consequences of Population Change*. Santa Monica, California: RAND.

Bloom, D. E., Canning, D., & Malaney, P. N. (2000). Demographic change and economic growth in Asia. *Asian Development Review*, 18(1), 4-25.

Buckley, C., Joy, D., and Chien, A. C. (2023, January 19). "A Shrinking, Aging China May Have Backed Itself into a Corner." *The New York Times.* https://www.nytimes.com/2023/ 01/18/world/asia/china-populationpolitics.html?searchResultPosition=5/ .

Caldwell, J. C. (2006). *Demographic transition theory*. Netherlands: Springer.

Feng, W., and Andrew, M. (2007). *Demographic Dividends and Prospects for Economic Development in China,* G-PART2_Wang_ EGM_ working _paper12 jan07_ps_PS.doc

Lee, R. (1994). The formal demography of population aging, transfers, and the economic life cycle. In L. G. Martin and S. H. Preston. (eds). *Demography of Aging,* pp. 8-49. Washington, D. C.: National Academy Press.

Mason, A. (ed.) (2001). *Population Change and Economic Development in East Asia: Challenges Met, Opportunities Seized.* Stanford University Press.

Mason, A., and Ronald, L. (forth coming). *Reform and support systems for the Elderly in Developing countries: capture the second Demographic Dividend*. GENUS.

OECD. (2020). *OECD economic surveys: France*. Retrieved from https://www.oecd.org/economy/surveys/France-2020-OECD-economic-survey-overview.pdf.

Oosthuizen, M. (2015). Education and South Africa's waning demographic dividend. *Journal of the Economics of Aging*. Volume. 5, April 2015, Pages 14-22. Retrieved from https://www.sciencedirect.com/science/article/abs/pii/S2212828 X14000267.

Retherford, R., and others (2005). Fertility in China: How Much Has It Really Declined? *Population and Development Review*, vol. 31, No.1, pp. 57-84.

Toulemon, L., & Mazuy, M. (2004). The reversal of the trend of fertility in France: A cohort approach. *Population: An English Selection*, 16(1), 189-214.

United Nations, (2013). *World Population Ageing 2013.* ST/ESA/SER.A/348. ST/SEA/SER.A/348. United Nations: Department of Economic and Social Affairs, Population Division.

Wang, F. (2001). Fertility transition in China. In Smelser, N. J., and Baltes, P. B. (ed). *International Encyclopedia of the Social & Behavioral Sciences*.

Woods, R. (2000). *The demography of Victorian England and Wales.* Cambridge: Cambridge University Press.

World Bank. (2013). http://1.databankfiles.worldbank.org/public/ddpext_download/WDI-2013-ebook.pdf

World Bank. (2023). *World Development Indicators database.* Retrieved from https://databank.worldbank.org/source/world-development-indicators

Websites referred

French Government. (2020). *Climate and environmental protection*. Retrieved from https://www.gouvernement.fr/en/climate-and-environmental-protection on December, 2020.

INED (Institute National d'Études Démographiques). (2020). *The aging of the population.* Retrieved from https://www.ined.fr/en/everything_about_population/demographic-facts-sheets/faq/aging-population/ on November, 2021.

INSEE (Institute national de la statistiqueet des étudeséconomiques). (2021). *Education and training.* Retrieved from https://www.insee.fr/en/statistiques/4244577?sommaire= 4244625# consulter-sommaire on 29/02/2024.

"One-child policy | Definition, Start Date, Effects, & Facts | Britannica". *www. britannica.com. 3 January 2024* -- Retrieved 22 January 2024.

https://www.unfpa.org/demographic-dividend#readmore-expand -- Retrieved on 28 May, 2020.

https://blogs.worldbank.org/africacan/forever-young-what-africa-can-learn-from-southern-africas-demographic-transition -- Retrieved on September 19, 2016.

https://cleartax.in/glossary/demographic-dividend/ -- Retrieved on February 1, 2024.

Suggested Readings

Lee, R. and Mason, A. (2006). *International Monetary Fund: What Is the Demographic Dividend?* Volume 43, Number 3.

Pace, R., and Ham-Chande, R. (2016). Demographic Dividends: Emerging Challenges and Policy Implications, Part of the book series: *Demographic Transformation and Socio-Economic Development* (DTSD), volume 6.

Rahman, E. A., D'Silva, E. M., and Peteranderl, P. (2021). *The Demographic Dividend and the Power of Youth Voices from the Global Diplomacy Lab.* Hardback, 146 Pages, ISBN: 9781785276316.

15.6 UNIT-END EXERCISES

In your own interest, you may prepare the answers to the following questions which may be useful as a part of your preparation for your term-end examinations.

1. Discuss the demographic dividend experienced by South Africa.
2. Elucidate the demographic dividend of UK and its impact on economic growth.
3. Lucidly discuss the policies adopted by France to benefit from its demographic dividend.
4. Briefly explain demographic growth in China.

15.7 UNIT-END ACTIVITY

If you like to further enhance your interest, you may attempt to perform the following activity.

1) Draw the age and sex-specific Pyramids of France and China to know the age-structure of the countries.