



# Beyond Birth and Death: A Clarion Call to Action on Nepal's Demographic Transition

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## Abstracts

*By probing the available literature and models on demographic transitions and population dividends, this essay maps the compelling evolution of population dynamics. Existing models and literature highlight how socioeconomic conditions and biological factors have shaped the realities of demographic shifts. On the one hand, individuals and communities from different societies strive to enhance their living standards through foreign employment, leading to youth migration. On the other hand, they experience alarming changes in mortality and fertility rates, significantly altering the demographic structure. These everyday occurrences have created a “demographic window of opportunity” within the global context of demographic shifts and population dividends, compounded by the prevailing socio-cultural forces of migration and globalization. Although this trend aligns with global patterns, Nepal faces the daunting task of managing both youth migration and an ageing population. Despite their significance, these shifts and trends have been less prominent in the discourses and dialogues initiated by sociologists, economists, and demographers.*

**Keywords:** Demographic transition, demographic dividend, mortality-fertility transition, ageing population.

## Introduction

Socio-economic shifts play a significant role in shaping the demographic transition, a complex, multi-phase process that unfolds as countries seek to improve their living standards. Over the past four decades, Nepal has experienced considerable fluctuations in fertility and mortality rates, which have led to a notable transformation in its age structure. This demographic shift has contributed to both social and economic advancements in the country.

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One of the most pronounced changes has been the increase in the ageing population. Historically, Nepal grappled with a high birth rate and a burgeoning child population, but these figures have now seen a dramatic decline. This decrease in the younger demography has been accompanied by an increase in the proportion of older individuals, aligning with broader global trends.

Simultaneously, Nepal is facing a significant challenge with the rapid rise in outward migration. This phenomenon has resulted in a noticeable absentee youth population, further complicating the demographic landscape. If these abrupt and gradual shifts are not addressed with careful planning and strategic policies, Nepal could confront escalating demographic risks in the future. The country's ability to manage these changes effectively will be crucial in ensuring continued social stability and economic growth.

This is not to suggest that Nepal's demographic situation has not seen improvements. Indeed, there have been notable advancements, such as a significant rise in life expectancy and a marked reduction in the death rate over time. These positive changes, however, do not entirely resolve the current demographic challenges the country faces. This argumentative essay seeks to delve deeply into these complex issues by advocating for comprehensive investigation, debate, and analysis across multiple disciplines, including geography and population studies. The purpose of this essay is to explore and discuss the intricate problems associated with various phases of fertility, mortality, migration, and the ageing population, leveraging both empirical data and theoretical frameworks on demographic transitions.

The essay serves as a clarion call for action and poses critical questions that need to be addressed: To what extent do economic growth, modernization, and demographic shifts influence one another? Additionally, how do these demographic changes impact and shape the demographic dividend and the ageing population in Nepal? By examining these questions, the essay aims to shed light on the multifaceted nature of demographic transition and its implications for Nepal's future.

The debate surrounding demographic shift or transition theory focuses mainly on the relationship between society, the economy, and the subsequent changes in the population. Hodgson (1983) posited two key assertions regarding this relationship: a) As agrarian societies become industrialized, their demographic pattern of high vital rates will gradually shift to a low vital rate regime, and b) this shift will be achieved through a more rapid decline in mortality compared to fertility, resulting in a period of population growth. This theory explicates not only the correlational variations that take place in people's living conditions but also the changes that occur in their worldviews. Moreover, the theory suggests that modernizing beliefs can enhance living standards, emphasizing the importance of mortality and disease control programs for fertility transition and socioeconomic development. There is an intrinsic connection between the theories of

epidemiologic and demographic transitions. According to epidemiologic transition, mortality, a critical population dynamic element, declines before fertility rates as a result of socioeconomic developments and higher living standards. As demographic transition studies have had such a big impact on changes in women's status and gender equality, sociologists and economists are starting to pay more attention to them.

Reduced death rates change population age patterns, increase child survival and longevity, create possibilities for the next generation, and promote societal prosperity (NPC and UNICEF, 2017). As such, it is now imperative for Nepali demographers, sociologists, and economists to collaborate in strengthening academic discourse and formulating actionable policies. The paper is structured into three main sections. The first section discusses the different demographic transition models centering on the various stages by showing the causality of different variables. The second section examines the link between demographic transition and demographic dividend, indicating probable implications for the socio-economic structures. The third section explores how demographic transition leads to population ageing due to lower mortality, higher survival rates among older adults, and improvements in income, education, nutrition, sanitation, and medicine. The paper concludes by examining evidence from Nepal on demographic transition and evaluating the potential for demographic dividend and population ageing.

## **Understanding Demographic Transition**

The theoretical concept of Demographic Transition postulates that societies undergoing a transition from agricultural to industrial economies will undergo demographic shifts akin to those seen in Western societies. However, it is difficult to determine exactly when this theory arose (Hodson, 1983). The theory makes two assertions about the relationship between socioeconomic change and demographic change. Firstly, the demographic pattern of high vital rates associated with an agrarian society gradually shifts to a regime of low vital rates as the society increasingly becomes industrial, and secondly, the demographic shift will be accomplished by mortality declining more rapidly than fertility, thereby producing a period of high population growth.

Theoretical assertion of demographic transition dates to the writing of the first decade of the twentieth century by demographers, socio-economic historians, and other analysts. Hodson in his study emphasizes the various phases based on his assertions, and then further elaborates his ideas based on the expansion and maturation phases. Similarly, the works of Taussig (1911, pp. 220-221) and Willcox (1916, pp. 9-12) are placed in contrast to the first assertion. The works by Ross (1909, pp. 36-37) and MacIver (1926, p. 301) are enlisted in the second assertion. However, Warren Thompson (1929) is accorded for offering the first systematic and comprehensive definition of demographic transition. Thompson (1929) has classified countries across the world into three types based on the

different rates of population growth. However, the work of Thompson was not taken as a generalized theory of Demographic Transition until 1940. He only gave impetus to further exploration according to the country-wise variation in the process of population dynamics. After 15 years of Thompson's work, Landry (1934), with his work *La Re'volution De'mographique*, postulated three stages of population development: primitive, intermediate, and contemporary. Like Thompson, he forecasted that the new regime of transition would spread throughout the world. In his view, in the 'new' countries, in which the transition between mortality and fertility starts later, declines in both birth and death rates would be faster.

Accumulating the experiences of the 1930s and 1940s, Vance (1952) acknowledged the demographic transition model as the development of the integrated theory of a high order to serve as a "binder" for demography's diverse and particularized findings that meet three fundamental criteria: to be dynamic rather than static, takes account of demographic interrelations as between countries and groups within nations, and requires a multi-science approach.

The theory of demographic transition or stages of the population cycle originally propounded by Thomson (1929) and Notestein (1945 & 1953) is elaborated in many versions. The theory of three stages has been expanded into four stage (Sax, 1955) or five stage (Backer, 1949) according to variation in population growth, namely,

- High stationary stage,
- Early explosive Increase,
- Late explosive Stage, and
- Low stationary stage, and
- (in some context) Declining stage.

The fourth or fifth stage of growth resemble in conformity to Blacker's assertion. Further, Caldwell & Caldwell (2006) suggested that future population growth will develop along a predictable four or five stage model, as follows:

Because of the high proportion of rural subsistence agriculture and the slow rate of population growth, birth and death rates were steady for the longest era in human history, known as the high population stationary regime. Inadequate sanitation, a lack of medical care, low living standards, and problems with the food supply beset this first stage. Zero population growth was the outcome of socioeconomic problems and social customs that maintained high birth rates and high death rates, respectively, due to low health and high mortality.

Stage two of the demographic transition, known as the population explosion stage, features a rapid decline in death rates due to improvements in food supply, sanitation, and healthcare, while birth rates remain high. This leads to a significant population increase. Countries in this stage, such as Afghanistan,

see reduced mortality rates from better living conditions and health care, but birth rates stay unchanged due to persistent traditional beliefs and low female literacy. Consequently, the gap between birth and death rates widens, driving rapid population growth and urbanization. Despite economic and technological advancements, the high birth rate continues, characterizing this stage as one of explosive population growth.

In the third stage, known as the late population expansion stage, the population grows rapidly but at a slowing rate. The gap between birth and death rates remains wide, but the birth rate declines faster due to economic development, changing social attitudes, increased costs of child-rearing, and better access to contraception. Factors like higher wages, urbanization, improved women's status, and reduced value of children's work contribute to the lower birth rate. Nepal, currently in this stage, shows a low death rate and the birth rate near replacement level, with a significant population growth potential. This period offers a "demographic window of opportunity," where favorable policies and investments can turn this potential into a "demographic dividend." Population ageing also begins to appear as seen in Nepal since 2011.

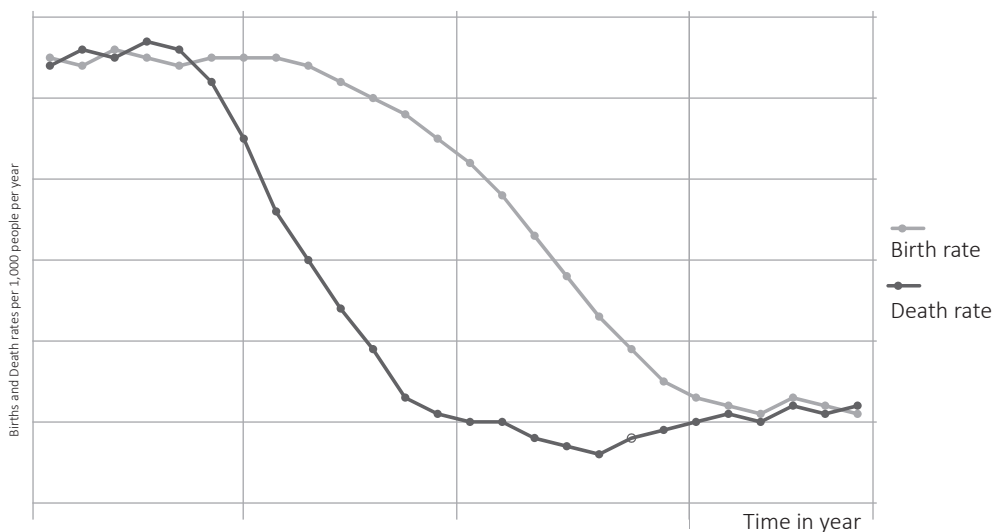
In the fourth stage, known as the stationary population stage, birth and death rates are both low and balanced, leading to minimal population growth. Developed countries often see birth rates fall below replacement levels, causing a shrinking population where deaths exceed births. This trend poses a potential threat to industries dependent on population growth. By the late twentieth century, both birth and death rates in developed nations had stabilized at lower levels (see Figure 1).

Stage five of demographic transition is contested: some believe the transition ends at stage four, while others argue it extends to stage five, characterized by fertility rates falling below replacement levels, death rates exceeding birth rates, and a negative natural increase. Another view is that stage five begins with a rebound in fertility rates.

Golar (2012) identifies two key implications of the demographic transition theory: In countries with similar sociocultural characteristics, fertility decline occurs later than countries with higher income per capita. Within a country, households with higher incomes have fewer surviving children. The processes and implications of the social-economic development of demographic transition described in the stages of transition in the foregoing discussion are well depicted in Figure 2.

The figure outlines the socio-economic changes during demographic transitions, highlighting differences between traditional and modern societies. It shows that historically, both birth and death rates were high, with women averaging 4 to 7 births (Dyson, 2010). Traditional societies promoted early marriage to increase family size, while modern societies experienced lower birth and death rates. High

Figure 1: A Theoretical Prototype of Demographic Transition



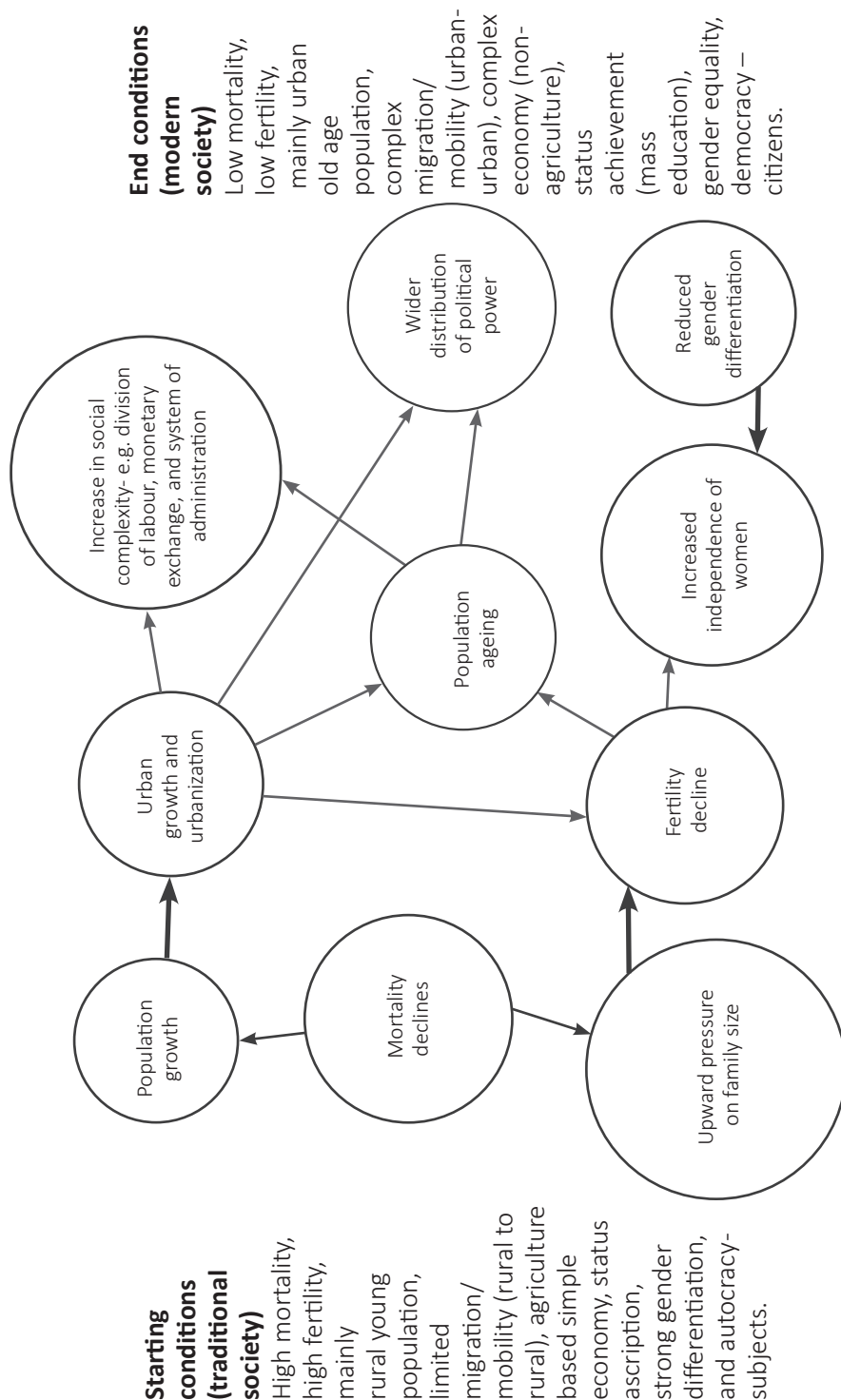
Stage	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup> & 5 <sup>th</sup>
BR	High	High	Falling	Low & very low
DR	High	Rapid falling	Falling in slow rate	Low & increasing
RNI	Stable/low	Rapidly increasing	Increasing in declined rate	Slow increase or go in negative pace
	<i>Early stationery stage: High birth rate is needed to compensate high death rate.</i>	<i>Early expansion stage: Steep decline in death rate but birth rate remains at high level.</i>	<i>Late expansion stage: Steep decline in birth rate but death rate already declined at a low level.</i>	<i>Late or low stationery stage: Both birth and Death rate reaches at lowest minimum.</i>

BR=Birth Rate, DR=Death Rate, RNI=Rate of Natural Increase

fertility in pre-transitional societies was needed to offset high infant and child mortality rates, manage the low cost of raising children versus their benefits, utilize children as labor, and provide security in old age (Hayami & Godo, 2005). In pre-transitional societies, high mortality and fertility rates led to a low average life expectancy of 20 to 40 years and a youthful age composition, with 35-45% of the population under 15. These societies were mostly rural, with migration limited to rural areas. Most people were involved in farming or related work, had minimal access to formal education, and rarely shifted occupations across generations. Status was ascribed, gender roles were distinct and discriminatory, and societal structures were predominantly autocratic.

The “end” conditions of demographic transition, as shown in Figure 2, list vastly different circumstances of life and the overall nature of society in a population that has gone through the demographic transition. In post-transitional societies, the population aged 60 or older often exceeds those under 15. Average life expectancy rises above 75 years, and women typically have one or two children, leading to low birth rates.

Figure 2: Role of Demographic Transition in the Process of Socio-Economic Development – Key Relationships



Adopted from Dyson (2010).

In post-transitional societies, fertility declines due to the increased costs of childbearing, reduced labor value of children, and changes in the parent-child wealth flow. Direct costs include accommodation, health, and education, while indirect costs involve lost opportunities for parents. Child labor regulations and shifting economic roles further contribute to this decline. Educational opportunities expand, and occupations shift from agriculture to diverse industrial and service sectors. Young people receive mandatory education, which influences life outcomes and status. Gender roles evolve towards equality, with women gaining prominence in education, employment, and politics. These societies are typically democratic, though not always perfect (Figure 2).

### **Demographic Transition and Demographic Dividend**

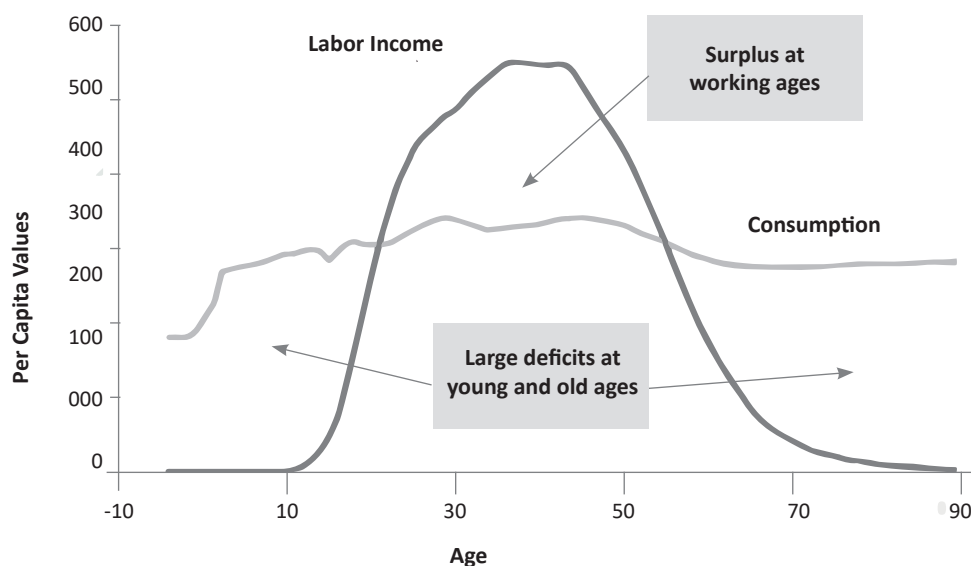
During the demographic transition, as fertility rates decline after mortality rates, the population's age structure shifts towards a larger working-age group. This creates a "demographic dividend," a period of potential economic growth and human development. As Mason (2007) asserts while societies start experiencing demographic transition, they commonly experience and will continue to experience substantial changes in the age structures of their populations. As fertility drops, women can enter the workforce, and a large number of young adults join the labor market. This advantage lasts for 50 to 60 years, eventually leading to an increase in the older population as life expectancy improves.

The macroeconomic implications of these changes have been the subject of considerable interest in the last few years. What is needed for a "demographic dividend" is a larger proportion of people between the ages of 15 and 29 than any other age cohort. An increase in the share of working age has a positive effect on the growth of per capita income, and governmental tax revenues, leading to – the "first demographic dividend" that would last for decades (Mason, 2007). Through the review of a range of literature, Mason (2007) showed changes in age structure in due course of demographic transition having implications in individual and household income and saving, and macroeconomic growth. This way, harnessing demographic dividend in three forms: firstly, demographic factors have a statistically significant effect on aggregate savings and economic growth. Secondly, the East Asian "miracle" provides compelling and consistent evidence that the demographic dividend was an important contributor to the region's economic success. About one-third of East Asia's increase in per capita income was due to the demographic dividend. Lastly, macroeconomic analysis establishes the potential for both the first and second demographic dividends.

The economic lifecycle and population age structure create two dividends: the first arises when a larger share of the population is in the productive working age, leading to increased economic output. The second dividend occurs when a larger share is with the older age, creating a production deficit. As shown in Figure 3, children and the elderly consume more than they



*Figure 3: Production Consumption Lifecycle by Age Structure and Context of Demographic Dividend*



produce, while working-age adults produce more than they consume. Fewer dependents (young and old) per working-age adult result in greater labor income surplus.

Demographic transition creates demographic dividends by lowering birth rates and shifting age distribution. Fewer young dependents reduce the need for resources to support them, freeing up resources for economic development and family welfare. With a higher proportion of working-age adults, the ratio of productive workers to dependents improves, leading to faster economic growth and less family burden.

The demographic dividend, however, does not last forever. For instance, in Nepal, the windows of opportunity started in the early 1990s and are estimated to reach their peak by the end of the decade 2040s (NPC & UNICEF, 2017). Eventually, as the large adult population ages and is replaced by smaller cohorts from periods of lower fertility, the dependency ratio increases. This shift means more resources are needed to care for the elderly rather than the young.

### **Mechanisms of Demographic Dividend**

The demographic dividend is realized through several mechanisms. Firstly, through labor supply, secondly, through per capita income and savings, and thirdly, through human capital (Ross, 2004). As high-fertility cohorts reach working age, they contribute to the labor force, provided they are well-educated and trained. Fewer children allow women to enter the workforce and be

more productive. Governments must create jobs to avoid social unrest from unemployment. Similarly, working-age adults earn and save more, increasing national savings. As these adults age and their children become independent, their savings grow further, supporting industrial investments and economic growth. Likewise, reduced birth rates enhance women's productivity and health, allowing them to contribute more effectively to society. Parents can invest more in fewer children, improving their education and nutrition, which boosts their future prospects and overall human capital. Still, the economic benefits of demographic change depend on policies. Rigid policies can reduce or eliminate potential demographic dividends. To capitalize on the first demographic dividend, investment in health, education, and skills development for young adults is essential.

### **Demographic Transition as the Source of Population Ageing**

A population is considered ageing when the proportion of people aged 60 or 65 and above increases. This results from decreased mortality and increased survival rates among older adults, driven by improved nutrition, sanitation, medical care, and economic conditions. While population ageing reflects significant human progress, it also introduces social, economic, and cultural challenges. This demographic shift affects all aspects of life, from economic and social dynamics to health and cultural practices (Golini, 2007).

Population ageing results from increased income, education, nutrition, sanitation, and advancements in medicine. Despite these benefits, significant inequalities persist within and between countries. Ageing is inevitable as life expectancy rises due to sustained declines in fertility rates, which are unlikely to return to previous levels (UN, 2022). This shift is marked by a higher proportion of people aged 60 and over, fewer children under 15, and a declining share of working-age individuals (defined by the United Nations as 16–59 years).

*The World Population Prospects, 2022*, asserts that the growth of the population at older ages is driven by lower mortality and increased survival (UN, 2022). An upward shift in the population age distribution is caused by a sustained drop in the fertility level.

The three scenarios of population ageing globally are: a) across the world, the share of the global population aged 65 years or above is projected to rise from 10 percent in 2022 to 16 percent in 2050. b) By 2050, the number of persons aged 65 years or over worldwide is projected to be more than twice the number of children under age 5 and about the same as the number of children under age 12, and c) because of the female's advantage in life expectancy, women outnumber men at older ages in almost all populations. Globally, women comprised 55.7 percent of persons aged 65 or older in 2022, and their share is projected to decline slightly to 54.5 percent by 2050 (UN, 2022). Thus, to address current and future population ageing, countries are urged to adapt public policies and programs to enhance the sustainability of social security and

pension systems and to establish universal health and long-term care systems (UN, 2007).

Figure 4 summarizes the demographic machinery of population ageing, including its effects on the individual, family, population, and sub-population levels. The figure illustrates demographic transition and the machinery of ageing, the causes of the ageing process, the consequences of ageing, and policies addressing ageing's determinants and impacts.

As per Golini (2002), the ageing process, driven by declining birth rates and reduced mortality rates, manifests at multiple levels. At the individual level, increased life expectancy means more people live to older ages, including the “oldest old.” At the familial level, multi-generational families become more common, with more grandparents and great-grandparents and fewer children. Families are increasingly vertical with fewer siblings and cousins, and there is a rise in lone-person households, often women. In the realm of population, the proportion of older individuals increases while the share of children and youth declines, disrupting the balance between different age groups. In the sphere of sub-populations, ageing affects all sub-populations, such as those over 60 or working-age adults. The growth of the oldest segment is offset by a decrease in younger segments.

In summary, demographic transition has led to a global increase in the older population. Developed countries have completed this transition and have high proportions of older individuals, while developing countries, including Nepal, are at various stages but also experiencing rising proportions of older adults. As of the 2021 census, Nepal's population aged 60 and above is growing at 3.2% annually, compared to a -1.3% growth rate for those under 15 (Figure 5).

## **The Nepali Experiences**

Over the past seven decades, Nepal has undergone rapid demographic changes due to positive socioeconomic developments, achieving significant declines in mortality and fertility rates, reduced population growth, and increased life expectancy (NPC & UNICEF, 2017). From 1961 to 2021, Nepal experienced significant demographic shifts due to declines in mortality and fertility rates and changes in age structure. These changes, including a lower young age dependency ratio, have macroeconomic implications that could drive faster development if supported by political stability, investment in human capital, and effective governance. For a “demographic dividend,” a larger proportion of the population aged 15-29 is needed. According to Mason (2007), an increased share of working-age individuals positively impacts per capita income and tax revenues, resulting in a “first demographic dividend” lasting decades.

Since 1980, Nepal has seen significant declines in fertility rates, crude death rates, and population growth, with notable improvements in life expectancy. In the 1950s, both birth and death rates were high. Mortality rates began a steep decline in the late 1950s but remained erratic until the 1990s, flattening thereafter,

Figure 4: Conceptual Framework of the Ageing Process

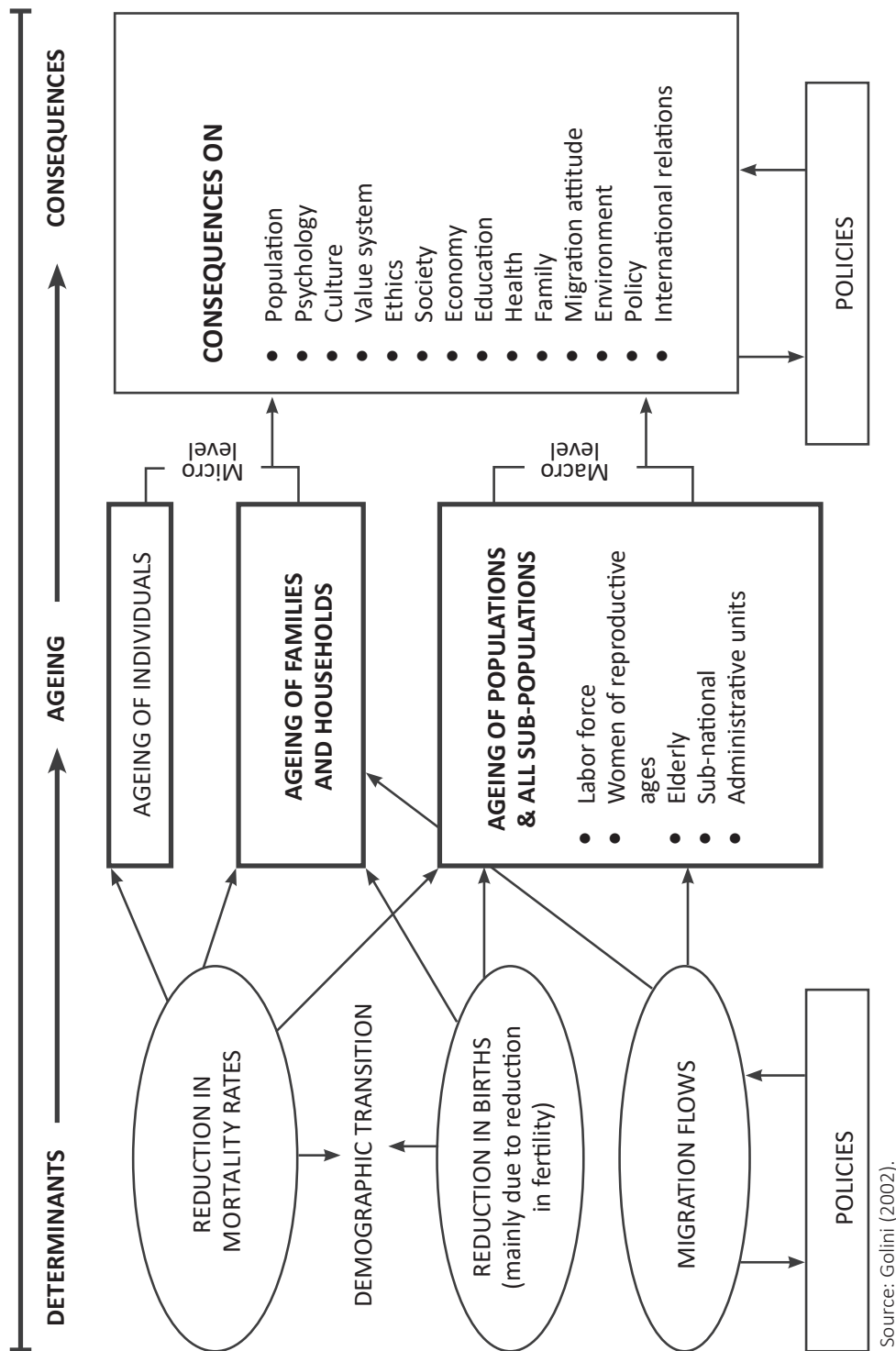
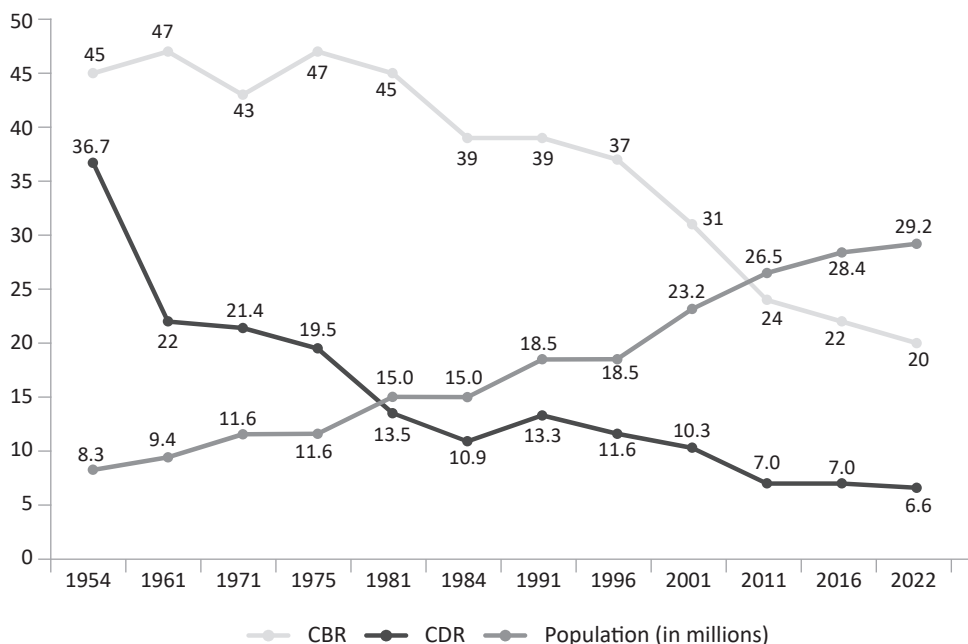


Figure 5: Nepal's Demographic Transition, 1954-2022

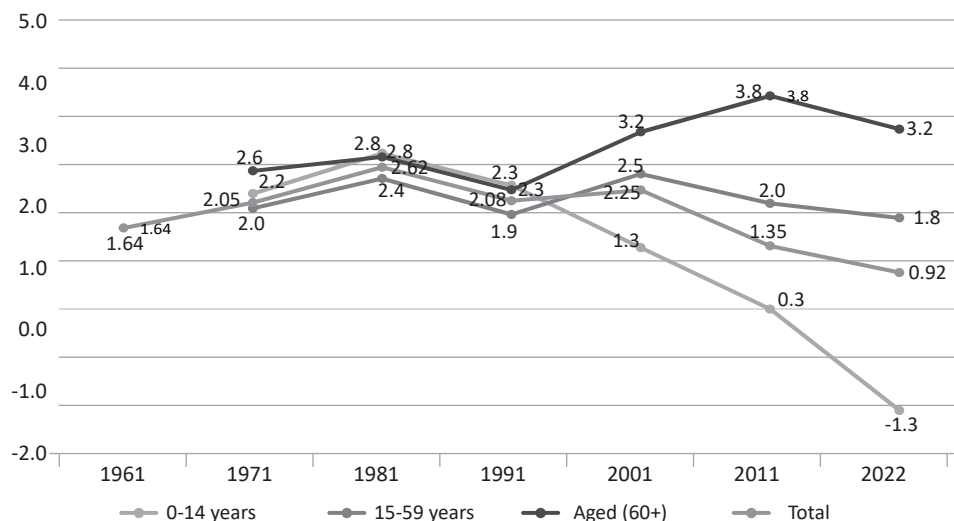


indicating a need for advanced health interventions. Fertility rates also declined erratically until the mid-1980s, then decreased steeply until the early 2000s before leveling off (Figure 6).

From the 1970s to 2000, Nepal experienced rapid population growth. Since then, the annual growth rate has slowed, and the pace of population expansion has decreased. The decline in fertility, *ceteris paribus*, is reflected in the decline of the annual growth rate of the young and total population and the steep increase in the size of the old age population (60 years and above). This is noticed in Figure 7. The annual growth rate of the total population declined to below one person per 100 population (0.92) in 2021 which was 2.62 in 1981 and 2.25 in 2001. On the other, the corresponding growth rate of the young population (below 15 years) declined from 2.84 to -1.3 percent respectively between 1981 to 2021. Contrary to this, the annual growth rate of the population in and above 60 increased from 2.25 percent in 1991 to 3.2 percent in 2021. This indicated that the number of newborn babies during the inter-decade period started to decline substantially in the country in 2011.

Over the past 35 years, Nepal's total fertility rate (TFR) has significantly declined, dropping from 5.6 children per woman in 1980-85 to 2.1 children per woman in 2022. This decline in the fertility rate is well reflected in the shrinking base (below 10 years) bars of the population pyramid for the year 2021. Infant mortality rate (IMR) and Life Expectancy at Birth. Nepal's demographic transition is marked by a more than threefold decrease in infant mortality, dropping from 78 per 1,000

Figure 6: Declining Annual Growth Rate of Total and Young Age Population and Steep Increase of Aged (60+) Population in Nepal



Source: Author's calculation from census datasets.

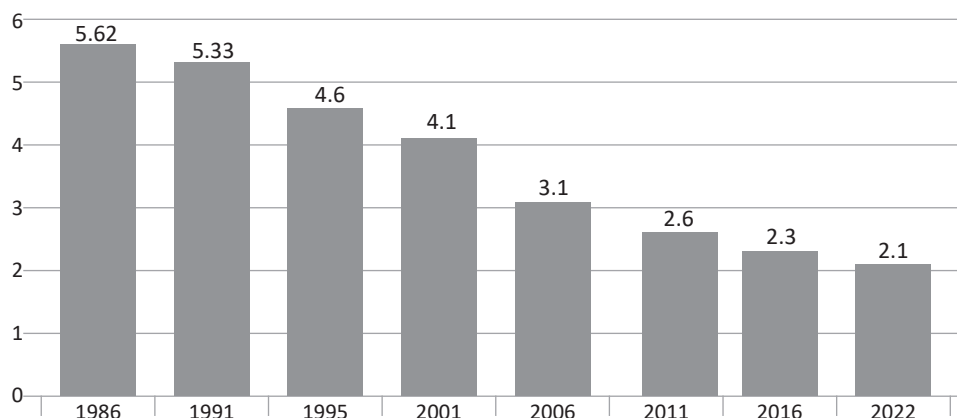
live births in 1996 to 28 in 2022 (Figure 8). The infant mortality rate measures the number of newborns, who die before their first birthday per 1,000 births in a given year.

Life expectancy at birth in Nepal improved significantly over 40 years, rising from 48.3 years in 1980-85 to 71.3 years in 2021. This 23-year increase represents a doubling of life expectancy, a milestone that took Western countries 150-200 years to achieve (Fogel & Costa, 1997).

As a country progresses through the demographic transition, shifts in the age structure cause the working-age population to increase relative to the dependent children and elderly populations (as shown in Figure 9). This opens the period of the potential for a “demographic window of opportunity” and “demographic dividend.” The demographic dividend can drive accelerated economic growth during a favorable demographic period, but it requires strategic investments in human capital and savings to be realized.

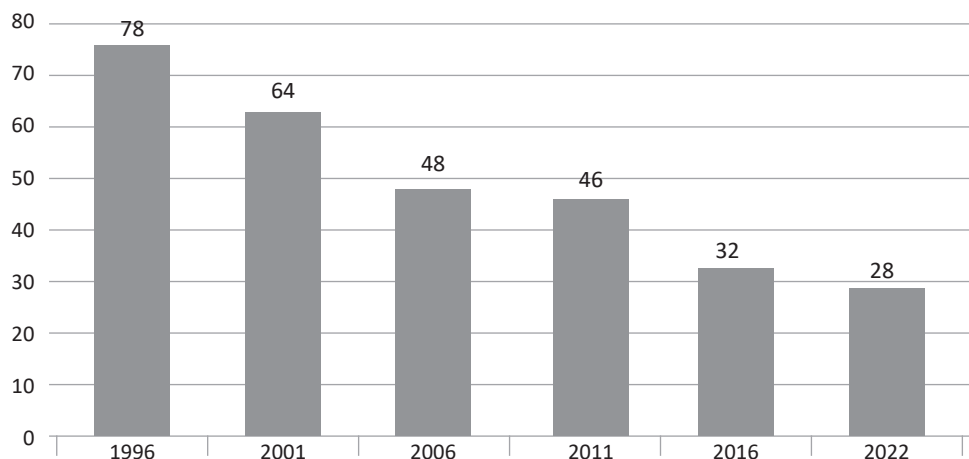
The decline in the share of the young age population and dependency ratio due to fewer births each year, concerning the working-age population (15 to 64) is favorable for demographic dividend. This is well reflected in Figure 10. The decline in the share of the child population and the corresponding increase in the share of the working-age population begins in the country in the first half of 1990. The figure shows a declining share of dependent people to be supported by the working-age population along with the onset of the window of opportunity for rapid economic growth.

Figure 7: Fertility (TFR) Transition in Nepal, 1986-2019



Source: NPC & UNICEF, 2017; MoHP, New Era & ICF, 2022.

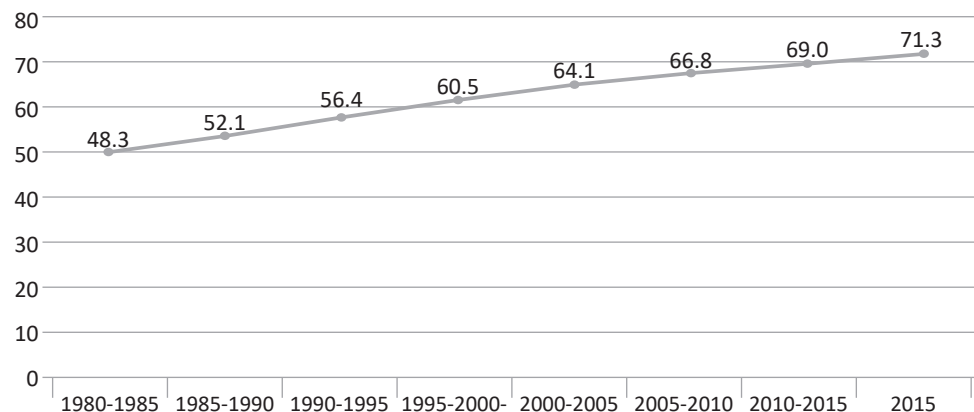
Figure 8: Steep Decline in Infant Mortality Rate in Nepal, 1996-2019



Source: NPC & UNICEF, 2017; MoHP, New ERA & ICF, 2022.

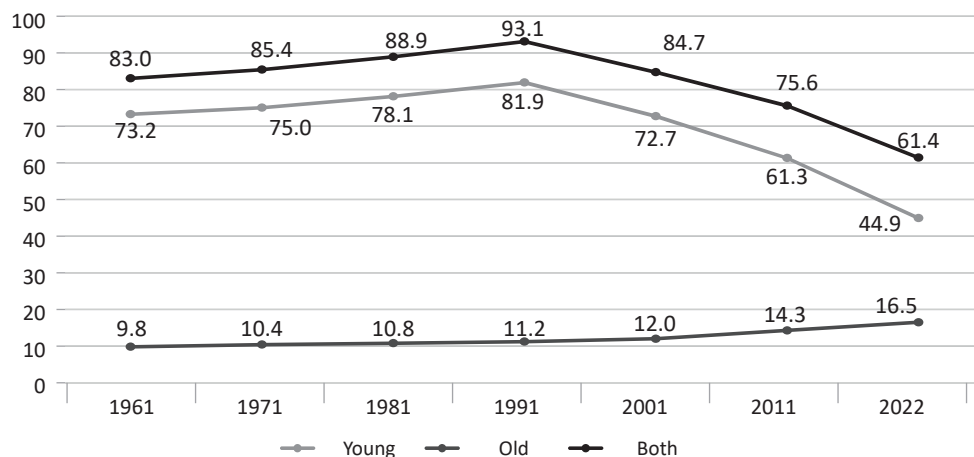
The dynamics of the changes in dependency ratios are key drivers of how long a country's demographic window of opportunity will last (NPC & UNICEF, 2017). The total dependency ratio is calculated as a ratio of the entire dependent population (children and the elderly) to the working-age population. The child dependency ratio is calculated as a ratio of the child to the working-age population. The old-age dependency ratio is calculated as the ratio of the elderly to the working-age population. Figure 10 shows the transition of the dependency ratios between 1961 and 2021. The total dependency ratio reached a peak in the 1990s. Since then, the total and child dependency ratios have declined and there has been a slight increase in the old age dependency ratio. However, it is projected that from

Figure 9: Increase in Life Expectancy at Birth, Nepal, 1980-2021



Source: NPC & UNICEF, 2017; NSO, 2024.

Figure 10: Transition of Age Dependency Ratio, Nepal, 1961-2021



2055 onwards, the total dependency ratio will increase as the child dependency ratio remains stable and the old-age dependency ratio increases (NPC & UNICEF, 2017). This signifies that the window of opportunity for Nepal to take advantage of a favorable dependency ratio is finite.

## Conclusion

By taking into consideration the theory of demographic transition, which provides a framework for understanding how societies evolve as living standards and health improve, we get to know how a typical transition involves an initial decline in mortality rates, followed by a subsequent decrease in fertility rates. Also, it has been understood how this sequence leads to a period of rapid population ageing as the gap between death and birth rates narrows, eventually resulting in a stabilization of population size at a lower growth rate.



Across different societies, the pace and nature of this transition vary, reflecting diverse historical, economic, and social contexts. As described by Lutz and Qiang (2002), regions around the world exhibit unique demographic trajectories influenced by their specific circumstances. Nepal, in particular, is approaching the final stages of its demographic transition. The country has witnessed a significant reduction in both mortality and fertility rates, bringing them close to replacement levels. This progression has produced a substantial working-age population, offering the potential for a demographic dividend—a period when the economic growth potential is enhanced due to a larger proportion of working-age individuals relative to dependents.

However, as Nepal moves closer to completing its demographic transition, it also faces emerging challenges, particularly the onset of population ageing. The growing proportion of older adults will shift the demographic structure and create increased demands for services related to ageing, such as healthcare and social support systems. To manage this complex scenario, it is crucial for policy-makers to strategically harness the advantages of the burgeoning working-age population while proactively addressing the needs associated with an ageing population. This requires a balanced approach that not only capitalizes on the economic opportunities presented by a youthful workforce but also prepares for the inevitable shift towards a higher proportion of elderly individuals. Effective policies and programs must be developed to manage this demographic change, ensuring that Nepal can fully benefit from its demographic dividend while mitigating the challenges posed by an ageing population.

Addressing demographic transition requires a multifaceted approach that transcends the traditional focus on birth and death rates. As societies evolve, the shifts in population dynamics—characterized by ageing populations, declining birth rates, and migration trends—demand proactive and comprehensive strategies. These strategies should encompass not only policies that support sustainable economic growth and social stability but also innovative solutions that address the unique challenges of an ageing workforce and the integration of diverse demographic groups.

To effectively manage this transition, it is crucial to invest in education, healthcare, and social infrastructure that can adapt to changing population needs. Additionally, fostering inclusive policies that promote intergenerational equity and social cohesion will be essential. By embracing these challenges with a forward-thinking mindset and collaborative efforts, societies can transform potential demographic pressures into opportunities for sustainable development and enhanced quality of life for all.

## References

Blacker, C. P. (1949). Stages of population growth, *The Eugenics Review*, 39 (3), 88-101.

- Dyson, T. (2010). *Population and development: The demographic transition*. Zed Books Ltd.
- Fogel, R. W. & Costa, D. L. (1997). A theory of technophysio evolution, with some implications for forecasting population, health care costs, and pension costs. *Demography*, 34(1), 49-66.
- Golar, O. (2012). The demographic transition: causes and consequences. *Cliometrica*, 6(1), 1-28. <https://doi.org/10.1007/s11698-011-0062-7>
- Golini, A. (2002). Teaching demography of ageing. *Genus*, 58(3/4), 135-163.
- Hayami, Y. & Good, Y. (2005). *Development economics: from the poverty to the wealth of nations*. Oxford University Press.
- Hodgson, D. (1983). Demography as social science and policy science. *Population and Development Review*, 9(1), 1-34.
- Lutz, W. & Qiang, R. (2002). Determinants of human population growth. *Philosophical Transactions: Biological Sciences*, 357(1425), 1197-1210.
- Mason, A. (2007). Demographic dividends: The past, the present, and the future. *Contribution to Economic Analysis*, 281, 67-83.
- National Planning Commission (NPC) & United Nations Children's Fund (UNICEF). (2017). *Demographic changes of Nepal: Trends and policy implications*. National Planning Commission and United Nations Children's Fund.
- Ross, J. (2004). *Understanding the demographic dividend*. Policy Project.
- Sax, K. (1955). *Standing room only, The challenge of over population*. Beacon Press.
- Thompson, W. S. (1929). Population. *American Journal of Sociology*, 34(6), 959-975.
- United Nations. (2022). *World population prospects 2022: Summary of results*. United Nations Department of Economic and Social Affairs, Population Division. <https://doi.org/10.18356/91e4e5b5-en>
- Vance, R. B. (1952). Is theory for demographers? *Social Forces*, 31(1), 9-13

## Author's Bio

Professor of Population and Labor Studies at Tribhuvan University, Dr. Keshab Prasad Adhikari has years of experience in conducting large-scale baseline household surveys (post enumeration Survey of 2021 Census, Nepal being recent one), policy research, and evaluation studies.