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Population at Crossroads: Analysis of Demographic Trends and Policy Implications in Contemporary Bhutan National Strategy

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ABSTRACT

Bhutan faces a demographic crossroads marked by rural depopulation, urban migration, and population ageing, challenging its governance model rooted in Gross National Happiness (GNH). This study applies demographic transition theory and policy screening to assess institutional readiness, revealing gaps in youth retention, ageing policy, and coordination. The mixed-methods approach, which combines demographic projections with qualitative analysis, offers a replicable framework for interdisciplinary research and graduate-level pedagogy. It supports curricula in development studies, public policy, and STEM education by fostering systems thinking and culturally sensitive governance. Institutions such as the Royal University of Bhutan can apply these insights to inform curriculum development and capacity building. The study contributes to academic discourse

and equips future scholars to navigate complex societal transitions in diverse contexts.

Keywords: Aspirational mobility, demographic transition, governance, gross national happiness, migration, policy innovation, urbanisation

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INTRODUCTION

In recent years, Bhutan has seen lower fertility, rising life expectancy, and shifting migration patterns that affect the size and shape of its population. These demographic shifts pose multifaceted governance and policy challenges, particularly for a nation guided by the holistic philosophy of Gross National Happiness (Masaki & Tshering, 2021). As Bhutan navigates declining birth rates, accelerated urbanisation, youth out-migration, and economic restructuring, it faces a pivotal moment in which preserving cultural identity must be reconciled with the demands of modernisation and socio-economic adaptation (Jackson, 2024). This study examines how these trends interact and evaluates which policies best uphold well-being under the GNH framework, offering a replicable model for interdisciplinary research and sustainable governance.

Over the past two decades, Bhutan’s Total Fertility Rate (TFR) has declined from 3.59 in 2005 to 1.83 in 2022 and is projected to remain below replacement level through 2047 (National Statistics Bureau, 2018). This decline signals the onset of population ageing and a shrinking labour force. As illustrated in Table 1, the projected TFR from 2017 to 2047 demonstrates a consistent downward trajectory, underscoring the urgency of responsive and forward-looking policy interventions.

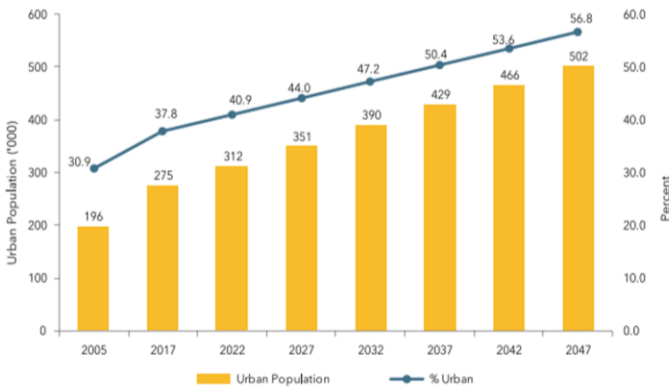
Table 1
Projected Level of Total Fertility Rate, Bhutan, 2017-2047

Year	TFR
2017	1.9
2022	1.83
2027	1.76
2032-2047	1.7

Note. Source: Population Projections Bhutan 2017-2047, National Statistics(NSB) Bureau <https://www.nsb.gov.bt/publications/census-report/>

Similarly, settlement patterns are shifting: the urban population has grown from 30.9% in 2005 to 40.9% in 2022, and is projected to exceed 56% by 2047, raising concerns over rural depopulation, infrastructure pressure, and socio-economic divides (National Statistics Bureau, 2018). Figure 1 further illustrates this trend, showing both the percentage of the urban population and its absolute growth in thousands. Youth outmigration compounds these pressures, with overseas migrants increasing from roughly 5,000 in 2005 to more than 64,000 by 2023, contributing to labour shortages and a reliance on remittances (NSB, 2023), as well as the proliferation of “gungtong,” or abandoned rural villages (Tshering et al., 2023). The research problem at the core of this study concerns the misalignment between Bhutan’s shifting demographic realities and the responsiveness of its governance framework. While GNH emphasises holistic well-being, cultural preservation, and environmental sustainability, its practical application in the context of demographic transition and migration remains underexplored (Lhamo et al., n.d.).

Figure 1
Urban Population (in thousands) and Per cent Urban, Bhutan 2017-2047



Note. Source: Population Projections Bhutan 2017-2047, National Statistics Bureau (NSB) <https://www.nsb.gov.bt/publications/census-report/>

This study investigates how demographic trends interact with policy under Bhutan’s Gross National Happiness (GNH) framework, asking: which policies best support population well-being? Using demographic projections, policy documents, and thematic coding, it applies mixed methods to assess institutional readiness and policy alignment. Findings reveal critical gaps in youth retention,

aging policy, and rural revitalisation, highlighting the need for coordinated, forward-looking governance. The methodology, integrating demographic analysis, thematic coding, and policy evaluation, demonstrates how STEM-based approaches can generate actionable insights for complex societal challenges (Costello et al., 2023). These insights are especially relevant to curricula in development studies, environmental governance, and Asian regional studies, offering a culturally sensitive framework for comparative research and capacity-building, particularly for institutions like the Royal University of Bhutan.

Research Aim

This research aims to investigate Bhutan's ongoing demographic transition, considering its socio-economic impact and the Gross National Happiness (GNH) policy.

Research Objectives

This study aims to pursue the following objectives:

1. To analyse the recent demographic shifts in Bhutan and their socio-economic implications.
2. To evaluate how the Gross National Happiness (GNH) policy responds to demographic shifts.

Research Questions

1. How have recent rural-to-urban population shifts influenced the country's social and economic system?
2. How has international migration impacted the country's socio-economic development?
3. What impact do these demographic shifts have on the GNH policy framework?

LITERATURE REVIEW

Bhutan's demographic transformation, marked by declining fertility, urbanisation, and rising outmigration, has emerged as a defining force shaping its governance and development trajectory. This literature review synthesises existing research published between 2005 and 2025 from Google Scholar, UNFPA reports, the NSB reports, and the Gross National Happiness Commission (GNHC). By situating Bhutan's demographic trends within regional and global contexts, it examines how these shifts challenge the country's Gross National Happiness (GNH) framework and governance systems. Three interlinked dimensions emerge

across the literature: (1) demographic transformation and socio-economic implications, (2) reconfiguration of social structures and migration dynamics, and (3) governance adaptation under the GNH paradigm.

Demographic Transformation and Socio-Economic Implications

Across the literature, demographic change is identified as a structural driver influencing Bhutan's economic productivity, labour dynamics, and social welfare systems. Bhutan's total fertility rate has fallen from 3.6 in 2005 to 1.7 in 2023, well below replacement level (Dorji et al., 2024; NSB, 2023). While this decline reflects improvements in education, healthcare, and gender empowerment (UNFPA, 2022), it also signals the onset of population ageing and potential labour shortages. Dorji et al. (2024) and Suto (2022) emphasise that without a replenishing workforce, Bhutan faces reduced economic dynamism and growing dependency ratios.

At the same time, life expectancy has risen to nearly 75 years, compounding the demand for elderly care and health infrastructure (Gangopadhyay, 2023). Traditionally, elder care in Bhutan relied on extended family systems rooted in Buddhist compassion and filial responsibility. However, rural-to-urban migration and international mobility have weakened these familial structures, leaving many elderly "ageing without care" (Tshering et al., 2023).

In contrast, countries like Sri Lanka have mitigated similar challenges through universal healthcare and community-based social protection (Jayasinghe et al., 2025), suggesting potential policy lessons for Bhutan. Labour market research further underscores the fragility of Bhutan's economic structure. Employment remains concentrated in agriculture and the public sector, with youth unemployment persistently high despite rising education levels (Alaref et al., 2024; UNFPA, 2022). As Bhutan's demographic dividend narrows, the lack of diversification and innovation-driven employment threatens sustainable growth. Comparative evidence from Nepal indicates that youth outmigration, if unmanaged, can hollow out key sectors and slow national productivity (Khanal, 2024). Collectively, these studies highlight a central paradox: Bhutan's demographic progress characterised by better health and education coexists with structural vulnerabilities that demand more adaptive economic and social policies.

Migration, Urbanisation, and the Transformation of Social Structures

Rapid migration and urbanisation are reshaping Bhutan's social fabric, challenging traditional notions of community and belonging. Historically, intergenerational households ensured cultural continuity, mutual support, and elder care. Yet, as Dorji et al. (2024) note, rising rural depopulation and the spread of "*gungtong*" (empty houses) signal a profound erosion of these traditional systems. The NSB (2018) documents that Bhutan's urban population is projected to rise

from 30.9% in 2005 to nearly 57% by 2047, with rural populations shrinking proportionally. Urbanisation has improved access to education, healthcare, and infrastructure, but it has also fragmented extended families and widened rural-urban inequality (Dorji, 2025). Abandoned farmland and the decline of agricultural livelihoods weaken food security and threaten the intergenerational transmission of indigenous knowledge. Government initiatives such as the Youth in Agriculture Programme (YiAP) and community tourism seek to revitalise rural economies, yet implementation remains inconsistent and dependent on limited institutional capacity (NSB, 2022).

Meanwhile, international migration, particularly among youth has accelerated sharply, with the number of Bhutanese migrants increasing from around 5,000 in 2005 to over 64,000 in 2023 (Stahl & Chasan, 2024). Scholars identify both economic and aspirational motivations behind this movement: young Bhutanese pursue education, professional growth, and broader worldviews abroad (Jackson, 2024). However, this outflow risks a brain drain that undermines Bhutan's human capital base and GNH-driven development ethos (Dorji & Hosoe, 2025; Sullivan, 2024). While youth unemployment dropped from 28% in 2022 to 15.9% in 2023, the decline was driven largely by migration rather than domestic job creation (Asia News Network, 2024). Migration thus functions simultaneously as an escape valve for labour pressure and a challenge to the nation's socio-cultural cohesion.

These trends reveal an urgent governance dilemma: how to reconcile the pursuit of individual aspirations and global mobility with the collective vision of GNH, which prioritises community vitality, cultural preservation, and balanced development.

Governance and Policy Adaptation under the GNH Framework

The Gross National Happiness (GNH) philosophy, introduced in the 1970s, redefined Bhutan's development vision by prioritising holistic well-being over material growth. However, existing literature indicates that Bhutan's rapid demographic changes are testing the adaptability of this framework (McGuinness, 2023; Ura et al., 2023; Sullivan, 2024). The 2022 GNH Index of 0.781 suggests steady progress, yet national averages conceal disparities affecting the elderly, unemployed youth, and rural populations (Ura et al., 2023).

Institutional and administrative limitations hinder the translation of GNH principles into responsive policy. McGuinness (2023) and Sharma (2024) note that the GNH Policy Screening Tool, designed to ensure that development projects align with holistic well-being, is inconsistently applied, particularly in sectors such as urban planning, migration management, and ageing policy. Fragmented governance, overlapping mandates, and data deficiencies further constrain policy integration (UNFPA, 2022; Suto, 2022). Large-scale projects such as hydropower expansion, tourism infrastructure, and the Gelephu Mindfulness City illustrate

both the potential and the tension of GNH-era development. While they reflect Bhutan's effort to harmonise spiritual and economic goals, critics warn that such projects may marginalise rural communities and undermine environmental or cultural priorities (Campbell, 2025; Ugyel et al., 2024). More adaptive efforts, including the "Smart Village" program and integrated urban planning in Thimphu, demonstrate innovative attempts to operationalise GNH principles through digital inclusion and sustainability (Van, 2024; Wangdi & Boossabong, 2024; Gyamtso & Seden, 2025). Yet these remain fragmented and lack systemic coordination.

A growing body of scholarship argues that GNH must evolve from an ethical philosophy into a data-driven governance framework (Kamei, 2021; Meuleman, 2021). Incorporating demographic indicators such as ageing ratios, dependency rates, and migration flows into the GNH Policy Screening Tool could enhance its analytical precision and policy relevance. Strengthening institutional collaboration between the NSB, GNHC, and international research bodies would enable more agile policy responses grounded in real-time evidence.

Conclusion and Research Gap

The reviewed literature converges on the view that Bhutan's demographic transition is reshaping its social, economic, and cultural landscape in ways that demand a reimagining of the GNH governance model. While demographic studies document declining fertility, migration, and ageing, and policy analyses examine GNH as a developmental framework, few studies bridge these domains to explore how GNH can be institutionally restructured to address demographic realities. The gap lies not in identifying demographic problems but in articulating governance mechanisms that integrate empirical evidence with GNH's holistic value.

This synthesis underscores that Bhutan's ability to sustain its unique development philosophy depends on aligning its governance institutions with the evolving needs of its population. Doing so requires embedding demographic analysis into policy design, enhancing institutional coordination, and ensuring that GNH remains not only a moral compass but also a practical tool for adaptive and inclusive governance.

THEORETICAL FRAMEWORK

The Demographic Transition Theory (DTT) was the most appropriate framework to guide the discussion of this study's findings. The Demographic Transition Theory (DTT), first introduced by Thompson (1929) and later expanded by Notestein in the 1940s (Kirk, 1996), offers a foundational framework for analysing shifts in population structure through stages of declining fertility and mortality.

The Demographic Transition Theory (DTT) was selected as the theory holds both domestic and international relevance in explaining Bhutan's current demographic trajectory (National Statistics Bureau, 2018; UNFPA, 2022; Dema, 2025). The framework enables a nuanced understanding of how these shifts intersect with current trends, all within Bhutan's unique governance context, shaped by the Gross National Happiness philosophy (Lhamo et al., n.d.).

Its longitudinal and comparative utility (Dyson, 2010; Lee, 2003) allows Bhutan's experience to be benchmarked against regional patterns, offering insights into policy challenges and adaptive strategies relevant to sustainable development and culturally grounded governance (World Bank, 2023; United Nations ESCAP, 2023; Tobden et al., 2023).

RESEARCH METHOD

Philosophical Assumption

This study was guided by three core philosophical assumptions: ontology, epistemology, and axiology, which informed its design and interpretive lens (Scotland, 2012). Ontologically, it adopted a constructivist stance, recognising that reality is socially and culturally constructed, as evidenced by divergent local perceptions of ageing in rural Bhutan compared to official policy narratives (Pretorius, 2024). Epistemologically, the research was grounded in an interpretivist approach, viewing knowledge as co-constructed through the analysis of policy discourses, such as Bhutan's Five-Year Plans and GNH reports (Creswell & Poth, 2018; National Statistics Bureau, 2018). Axiologically, the study acknowledged the value-laden nature of inquiry, shaped by the researcher's positionality and Bhutan's development philosophy, with Gross National Happiness providing a normative framework for evaluating demographic policies through the lens of compassion, sustainability, and equity (Masaki & Tshering, 2021).

Research Framework

This study employed an explanatory sequential mixed-methods design, a form of mixed-methods research in which quantitative data are collected and analysed first, followed by qualitative analysis. The rationale for using this design was to draw on qualitative data to explain, interpret, or provide additional detail on the initial quantitative results. Within the research framework, several design types exist, including convergent parallel, exploratory sequential, explanatory sequential, and embedded designs, each with different sequencing and integration strategies (Creswell & Poth, 2018). This study followed a quantitative to qualitative (quant→qual) direction, consistent with explanatory sequential methodology,

enabling demographic trends to be contextualised through policy and governance analysis.

This approach was well-suited for examining Bhutan's demographic transition, as quantitative trends captured the scale and direction of population change, while qualitative analysis clarified how governance priorities, institutional responses, and national values, particularly Gross National Happiness, shape interpretations of these trends (Creswell & Poth, 2018; Milhorance et al., 2022). Integrating both strands allowed the study to link measurable demographic shifts with the policy narratives influencing Bhutan's governance model (Pretorius, 2024; Masaki & Tshering, 2021).

The research relied entirely on secondary, publicly available data; therefore, no human participants were involved, and formal ethics approval was not required. Ethical considerations were upheld using reputable sources (NSB, 2023; UNDP, 2022; UNFPA, 2022; World Bank, 2023), transparent citation, and evidence-based interpretation. Reflexive awareness of the researcher's positionality and sensitivity to the cultural and political significance of demographic discourse in Bhutan further strengthened methodological credibility and reproducibility (Sharma, 2024; Bowen, 2009).

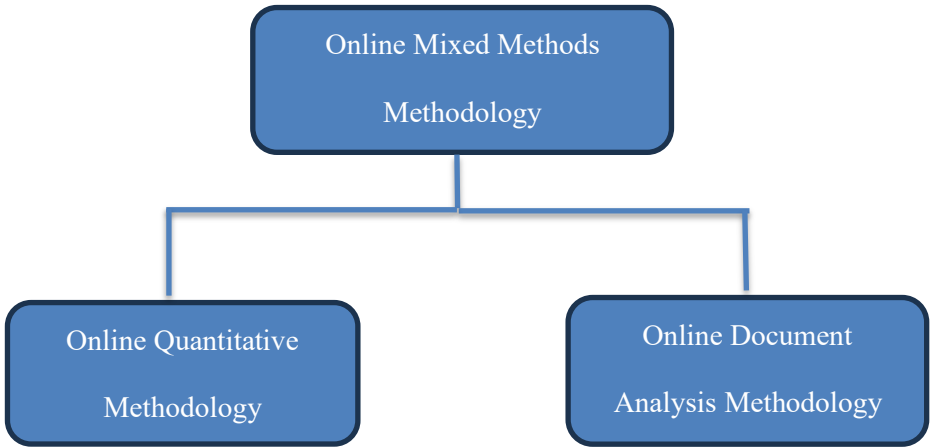
Online Mixed-Methods Methodology

The study employed an online explanatory sequential mixed-methods methodology. Quantitative data were analysed first to identify key demographic patterns, followed by a qualitative review of policy documents to clarify and elaborate on those findings. This sequencing aligns with the rationale of the explanatory sequential design, wherein qualitative evidence is used to interpret or enrich the initial quantitative results (Creswell & Clark, 2018).

Furthermore, the process followed in this study involved first collecting and analysing online quantitative data, followed by the collection and analysis of qualitative data, and finally integrating both datasets to develop a comprehensive interpretation of the findings. According to Creswell and Plano Clark (2018), the limitations of this methodology include its time-consuming nature and its reliance on participants' digital access and digital literacy. However, given the absence of ethical clearance for primary data collection, this online explanatory sequential mixed-methods approach was the most appropriate and feasible methodological choice for this study.

Figure 2

Structure of the Online Mixed Methods Methodology



Note. Created by the authors to illustrate the methodological design of the study.

For the online quantitative, which involved the use of existing datasets to answer new research questions and explore relationships not examined in the original data collection (Kelly et al.,2024). The quantitative strand relied on secondary demographic indicators such as fertility rates, ageing patterns, and migration statistics. Sources included the NSB of Bhutan, UNDP, UNFPA, and the World Bank.

For the qualitative component, the study adopted an online document analysis methodology, a recognised approach within qualitative research for systematically interpreting textual materials to derive meaning, deepen understanding, and extract empirical insights (Bowen, 2009). The analysis focused on key national planning documents, including Bhutan’s Five-Year Plans, Gross National Happiness (GNH) survey reports, and Labour Market Assessments. This method facilitated a structured examination of how governance institutions conceptualised and prioritised demographic challenges within policy narratives and strategic frameworks.

Research Methods

Mixed methods research is an approach to inquiry that combines both qualitative and quantitative forms (Aramo-Immonen, 2011). The quantitative strand of the study used longitudinal datasets covering 2005–2025, sourced from the NSB of Bhutan, UNDP, UNFPA, and the World Bank. Indicators included

fertility, ageing, migration, and urbanisation. Inclusion criteria were: (a) nationally representative coverage, (b) consistency over time, and (c) accessibility through official or internationally recognised platforms. Data were excluded if incomplete, methodologically inconsistent, or limited to subnational samples without comparability.

The qualitative strand employed document analysis (Bowen, 2009), focusing on major governance texts such as Bhutan's Five-Year Plans, GNH survey reports, Labour Market Assessments, and related planning frameworks. Documents were included if they (a) were published by official or partner institutions, (b) explicitly addressed demographic, social, or labour-force issues, and (c) spanned the timeframe 2005–2025 to align with quantitative data. Documents were excluded if they were purely technical (e.g., statistical annexes without interpretive content) or if they fell outside the policy scope (e.g., sector-specific plans without demographic relevance).

Data Analysis

The study followed a thematic data analysis technique (Braun & Clarke, 2006), which involved systematically coding, categorising, and developing themes from the data. The process was guided by the six-phase framework: familiarisation with the data, generating initial codes, identifying themes, reviewing themes, defining and naming them, and producing the final report, which remains central to conducting rigorous thematic analysis (Ahmed et al., 2025).

On the quantitative side, frequency counts of key demographic terms (e.g., “ageing,” “migration,” “youth”) were conducted to track how policy priorities shifted across different cycles. Complementing this, the qualitative analysis examined how demographic challenges were framed within policy narratives, shedding light on Bhutan's governance responses to sensitive issues such as rural depopulation, intergenerational care, and outmigration (Morgan, 2022). The analysis integrated both quantitative and qualitative data, following a mixed-methods approach to provide a comprehensive understanding of the trends and underlying policy narratives.

RESULTS

Quantitative Findings

The quantitative findings are based on data collected and analysed from four primary sources, as described in the data analysis section. Table 2 presents the longitudinal demographic data for Bhutan covering the period 2005–2023.

Table 2*Longitudinal Demographic Data for Bhutan (2005–2023)*

Year	TFR	LifeExp	YouthUnemp (%)	Urban (%)	Migration (%)
2005	3.59	66	12	30.9	0.64
2010	2.8	69	14	34	1.28
2015	1.9	72	18	37	3.19
2020	1.83	74	28	39	5.1
2023	1.7	74.9	19	41	8.16

Note. The table presents longitudinal demographic data for Bhutan, covering the period from 2005 to 2023.

Descriptive Statistics

Descriptive statistics summarise and organise characteristics of a data set. A data set is a collection of responses or observations from a sample or entire population (Bhandari, 2023). They describe the main features of a dataset through measures such as mean, median, mode, standard deviation and variance.

In this study, descriptive statistics were used to summarise the data. This included measures of central tendency (mean) and dispersion (standard deviation and variance), allowing for the identification of key patterns and trends (see Table 3).

Table 3*Descriptive Statistics of Key Demographic Indicators in Bhutan (2005–2023)*

Indicator	Min	Max	<i>M</i>	<i>SD</i>	<i>SV</i>
TFR	1.7	3.59	2.36	0.81	0.65
LifeExp	66	74.9	71.18	3.68	13.52
YouthUnemp	12	28	18.2	6.18	38.2
Urban	30.9	41	36.38	4.01	16.07
Migration	0.64	8.16	3.67	3.05	9.33

Note. *M* = Mean, *SD* = Standard Deviation, *SV* = Sample Variance

As shown in Table 3, the descriptive statistics provide an overview of Bhutan’s demographic indicators between 2005 and 2023. Youth unemployment recorded the highest variability ($SD = 6.18$; $SV = 38.20$), indicating persistent fluctuations and instability in the youth labour market during the observed period. Urbanisation also displayed considerable variation ($SD = 4.01$; $SV = 16.07$), reflecting the rapid transition from rural to urban settlements.

In contrast, the fertility rate demonstrated relatively lower variability ($SD = 0.81$; $SV = 0.65$), suggesting a steady decline below replacement level, though the

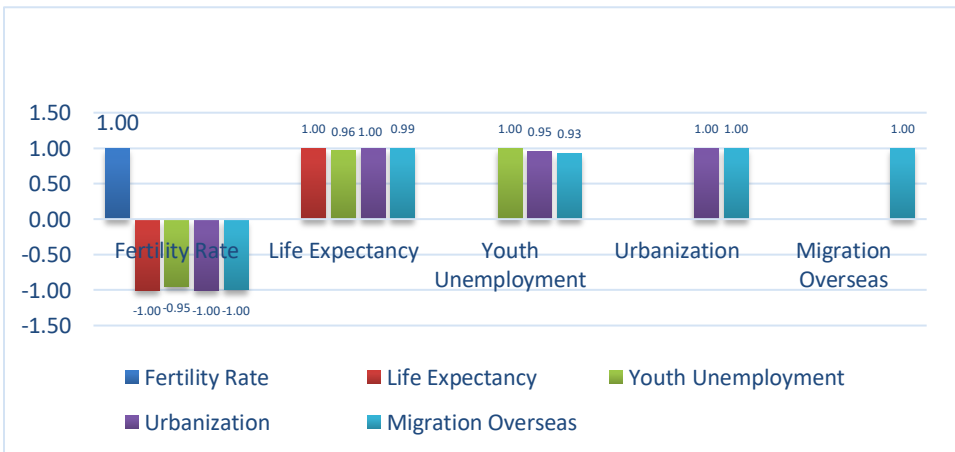
change was more gradual compared to other indicators. Life expectancy ($SD = 3.68$; $SV = 13.52$) showed moderate variation, pointing to consistent improvements in health outcomes with some fluctuations over time. Overseas migration ($SD = 3.05$; $SV = 9.33$) also revealed notable variation, capturing a steadily rising trend but with uneven growth rates across the years.

These findings highlighted that while fertility decline and gains in life expectancy followed more predictable long-term trajectories, youth unemployment, urbanisation, and overseas migration were characterised by higher volatility, signalling areas that require closer policy monitoring and intervention.

Inferential Stats: Pearson Correlations

While descriptive statistics summarise patterns, inferential statistics allow researchers to test relationships between variables (Bhandari, 2023). The Pearson correlation measures the strength and direction of linear relationships between two variables, with coefficients (r -values) ranging from -1 to +1 (Rosenthal & Rosnow, 2008). In this study, Pearson correlation analysis was used to examine statistical associations among key demographic indicators (see Figure 3).

Figure 3
Correlation Matrix of Key Demographic Indicators in Bhutan (2005–2023)



Note. This figure displays Pearson’s correlation coefficients (r -values), indicating the strength and direction of linear relationships between key demographic indicators in Bhutan from 2005 to 2023

The correlation matrix (Figure 3) revealed several notable relationships among Bhutan’s demographic indicators. For example, fertility showed an inverse association with urbanisation, migration, and life expectancy, consistent with

demographic transition patterns observed globally. Similarly, youth unemployment correlated positively with both migration and urbanisation, suggesting that labour market challenges may be more pronounced in increasingly urbanised settings.

However, it is important to stress that correlation does not imply causation. The observed relationships reflect co-occurring trends rather than confirmed causal effects. For instance, while higher youth unemployment coincides with increased overseas migration, the data alone cannot determine whether unemployment directly drives migration. Both may instead result from underlying structural dynamics such as uneven regional development, limited domestic job creation, or changing social aspirations (Turney, 2024). Therefore, these results should be interpreted as indicative associations rather than definitive causal relationships.

To explore potential causal pathways, this study integrates thematic analysis with longitudinal data to argue that demographic shifts exert systemic pressure on Bhutan's governance structures, particularly their capacity to operationalise the principles of Gross National Happiness (GNH). Declining fertility and increasing life expectancy have accelerated population ageing, while youth outmigration and rural depopulation have weakened traditional caregiving systems and community cohesion, core tenets of the GNH framework (Gangopadhyay, 2023; Tshering et al., 2023). These demographic dynamics expose institutional vulnerabilities, including fragmented policy responses and limited intersectoral coordination (Ugyel et al., 2024), thereby constraining the effective translation of GNH ideals into policy practice.

Although the study does not empirically establish causality, it proposes a conceptual model wherein demographic transitions influence governance performance by reshaping the social foundations that underpin GNH. Future research could empirically test this model through policy impact evaluations, time-series analysis, or systems-based modelling to assess interactions between demographic variables and governance outcomes. The present findings should therefore be interpreted as exploratory yet foundational, offering a platform for more rigorous examination of the demographic-policy nexus within Bhutan's development context.

Qualitative Findings

A thematic analysis of the qualitative data revealed how demographic shifts, socio-economic challenges, and GNH policy responses are represented in Bhutanese governance narratives. Table 4 presents a sample of the thematic process undertaken in this study.

The table reveals that Bhutan's demographic transition is multifaceted, affecting social cohesion, economic productivity, gender equity, and policy

effectiveness. By connecting direct narratives to codes and categories, the thematic table provides empirical grounding for understanding how population shifts manifest in everyday life. It also complements quantitative findings by illustrating the human experience behind urbanisation, migration, and ageing trends.

In summary, the thematic table illustrates that demographic changes are not only statistical phenomena but also deeply social, economic, and policy-relevant processes, highlighting areas where targeted interventions can support both rural communities and national development goals.

Table 4
Thematic data analysis sample

Source	Posted Comment	Code	Category	Theme
The Bhutanese (2016)	“I am an old woman; I have spent my whole life in the villages. I like it here,” said Dil Maya Nirola, who now lives alone after her children migrated to urban areas.	Elderly left behind	Social impact of migration	Rural–urban migration and family dynamics
Tshering et al. (2023)	“Elderly residents in Paro report feeling increasingly isolated as children migrate to urban centres or abroad, leaving them without daily companionship or care.”	Elderly isolation	Social consequences of migration	Rural–urban migration and family dynamics
Dialogue Earth (2025)	“Declining agricultural returns and environmental stress forced migration, reducing labour inputs in home villages and changing household structures, thereby impacting older relatives left behind.” (Sonam and Pema)	Environmental and economic push factors	Drivers of migration	Migration and workforce mobility
BBS Bhutan (2025)	“Professionals cite rigid bureaucracy, limited career progression, and modest compensation as major reasons for leaving... a classic case of brain drain.” (Fruman)	Career dissatisfaction / Brain drain	Economic drivers of migration	Migration and workforce mobility

Note. Adapted from the findings of the study

DISCUSSION

This section interprets the study's mixed-methods findings in relation to the three research questions. Quantitative results established statistically significant correlations among demographic indicators, fertility decline, urbanisation, migration, and dependency ratios and while qualitative narratives revealed the human realities behind those shifts. Together, they illuminate how Bhutan's demographic transition is reshaping its social fabric, economy, and governance systems under the Gross National Happiness (GNH) framework.

Research Question 1: How have recent rural-to-urban population shifts influenced the country's social and economic system?

Quantitative analysis showed Bhutan's urbanisation rate rising from 30.9 per cent in 2005 to 41 per cent in 2023 (NSB, 2023). This growth correlates negatively with fertility ($r = -0.91$) and positively with youth unemployment ($r = 0.83$), indicating that migration to urban areas creates both opportunity and pressure within the national system.

Qualitative findings deepen this picture. The Bhutanese reported the story of Dil Maya Nirola, an elderly woman from Samtse who said, "*I am an old woman; I have spent my whole life in the villages. I like it here,*" while explaining that she now lives alone after her children left for towns (Sharma, 2016). Similarly, Tshering et al. (2023) observe that "*elderly residents in Paro report feeling increasingly isolated as children migrate to urban centres or abroad.*" Such testimonies illustrate how internal migration erodes inter-generational care and communal cohesion.

Economically, Dialogue Earth (2025) highlighted that "*declining agricultural returns and environmental stress forced migration, reducing labour inputs in home villages and changing household structures.*" These qualitative insights corroborate quantitative evidence of rural labour shortages and under-utilised farmland.

Overall, Bhutan's rural-to-urban transition embodies the duality of the demographic-transition process: improved access to education, health, and employment in cities co-exists with rural depopulation and social fragmentation. Addressing these contradictions will require integrated rural-urban strategies linking *Youth in Agriculture* programs and smart-village initiatives with equitable urban planning.

Research Question 2: How has international migration impacted the country's socio-economic development?

Quantitative data show that international migration increased from 0.64 per cent in 2005 to 8.16 per cent in 2023 (NSB, 2023). The correlation between youth unemployment and overseas departures ($r = 0.87$) underscores the role of economic insecurity as a driver of outward mobility.

Qualitative accounts confirm this. *BBS Bhutan* (2025) quoted professionals who cited “*rigid bureaucracy, limited career progression, and modest compensation*” as reasons for leaving the civil service. The same report quoted World Bank Director Cecile Fruman describing the trend as “*a classic case of brain drain ... weakening both the civil service and the economy overall.*”

Yet migration is increasingly aspirational. *A recent World Bank study found that Bhutanese migrants are motivated by better education, higher earnings, and established migrant networks abroad. Women also benefit from a narrower gender wage gap in destination countries such as Australia. These findings indicate that migration is driven by aspirations for education, career advancement, and greater gender equity, rather than economic necessity alone* (Alaref et al., 2025).

These findings reveal a dual developmental effect. Remittances strengthen household welfare and investment capacity (UNDP, 2022), but human-capital loss constrains domestic innovation and service delivery. As Dorji and Hosoe (2025) estimate, Bhutan forgoes roughly 0.2 per cent of its GDP annually due to skilled-labour outflow. Consequently, while migration alleviates short-term economic strain, it risks undermining long-term national capacity and the inclusive-well-being aspirations of GNH.

Research Question 3: What impact do these demographic shifts have on the GNH policy framework?

The GNH framework promotes balanced growth, cultural vitality, and ecological sustainability. However, demographic shifts now test its ability to adapt. Fertility has fallen to 1.7 children per woman, and life expectancy has risen to 74.9 years (NSB, 2023), yielding an ageing population and higher dependency ratios.

Qualitative narratives demonstrate how these trends intersect with GNH pillars. Accounts of rural loneliness and declining community participation (Sharma, 2016; Tshering et al., 2023) undermine the pillar of “*preservation and promotion of culture.*” The loss of agricultural labour and local enterprise (*Dialogue Earth*, 2025) strains “*sustainable socio-economic development.*” Meanwhile, *BBS Bhutan* (2025) reports on brain drain, pointing to challenges in “*good governance.*”

Institutional analysis supports this concern. Sharma (2024) found that inconsistent application of the GNH Policy Screening Tool across ministries has limited the government’s ability to anticipate demographic change. Similarly, *UNFPA* (2022) observed that “*limited coordination between line ministries reduces Bhutan’s ability to respond swiftly to migration surges or urban stress.*”

Nonetheless, adaptive innovations such as *smart-village* models and *Gelephu Mindfulness City* illustrate how GNH principles can evolve when demographic planning is embedded in governance design (Van, 2024; Gyamtso & Seden, 2025).

From a theoretical lens, the Demographic Transition Theory (DTT) explains these pressures as the natural outcome of later-stage transitions where ageing, fertility decline, and migration interact to reshape welfare demands (Dyson, 2010). As *Kamei* (2021) cautions, Bhutan's policies still address these trends in silos rather than through an integrated systems approach. To safeguard GNH's long-term relevance, Bhutan's governance must incorporate demographic data into policy formulation, aligning social protection, labour, and migration strategies with real-time population dynamics.

Across all three research questions, findings converge on a central insight: Bhutan's demographic transformation is both a symptom of progress and a source of structural tension. Quantitative data identify the scope and trajectory of change, while qualitative evidence amplified by the voices of citizens and migrants reveals its social depth. The sustainability of the GNH model will ultimately depend on adaptive governance, capable of linking demographic realities with holistic well-being.

As His Majesty the King reminded the nation, "*The nature of GNH will never change, but how we achieve GNH will.*" (Druk Journal, 2022).

Addressing the Research Aim

Guided by the aim of investigating Bhutan's demographic transition and its socio-economic implications within the Gross National Happiness (GNH) framework, this study reveals how declining fertility, ageing, urban migration, and international mobility are reshaping Bhutanese society. These shifts present challenges such as rural depopulation and service delivery gaps and opportunities, including remittance flows and urban growth. While GNH aspires to holistic well-being, its policy tools have struggled to keep pace with demographic change. Gaps in coordination and responsiveness persist, though innovations like smart villages and urban zoning signal adaptive potential. Framed by Demographic Transition Theory, the findings call for integrated planning that aligns demographic realities with culturally grounded governance to sustain Bhutan's inclusive development vision.

CONCLUSION AND IMPLICATIONS

This study investigated Bhutan's demographic transition marked by declining fertility, ageing, urbanisation, and rising outmigration and its intersection with socio-economic systems and the Gross National Happiness (GNH) policy framework. By employing a mixed-method approach, the research contributed to

the literature by contextualising Bhutan's demographic shifts within regional patterns and highlighting the tensions between values-based governance and structural change. Key insights include the socio-spatial impacts of rural-to-urban migration, the dual nature of international mobility, and the institutional constraints facing GNH implementation.

However, the study's reliance on secondary data and document analysis limits its capacity to capture lived experiences and evolving community-level dynamics. The absence of primary fieldwork and the medium-term timeframe further constrain the depth of insight into long-run demographic effects.

The implications are clear as Bhutan requires integrated rural-urban planning, policies that align youth aspirations with domestic opportunities, and greater use of diaspora networks for skills transfer. Strengthening the GNH framework through real-time demographic indicators and cross-ministerial coordination is essential to ensure resilience. Future research should incorporate field-based qualitative studies to capture community perspectives, undertake regional comparisons across South Asia, and examine how remittances affect household well-being and GNH values.

Overall, Bhutan stands at a demographic crossroads where adaptive, evidence-based policies can transform structural challenges into opportunities, ensuring that its values-driven governance remains viable in the face of demographic change.

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