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CENTRE FOR BHUTAN & GNH STUDIES • POST BOX 1111, THIMPHU, BHUTAN
PHONE ◦ 975 2 321111 ◦ 975 2 321007 • FASCIMILE ◦ 975 2 321001
EMAIL ◦ CBS@BHUTANSTUDIES.ORG.BT • WWW.BHUTANSTUDIES.ORG.BT

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EDITORIAL CORRESPONDENCE

Post Box 1111
Thimphu, Bhutan
Tel: 975-2-321005, 321111
Fax: 975-2-321001
Email: cbs@bhutanstudies.org.bt

https://www.bhutanstudies.org.bt/
https://www.grossnationalhappiness.com/

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CONTENTS

The Eight Manifestations of GNH: Multiple Meanings of a Development Alternative

*Ritu Verma**

Abstract

Despite growing recognition that GDP measures everything except deeper and meaningful aspects of life, conventional development approaches continue to centrally measure poverty, implement policy and operationalize practice in narrow economic and technical terms, without adequate attention paid to the holistic and interconnected nature of development as lived and experienced by those intended as its beneficiaries. The Royal Kingdom of Bhutan represents a rare context for the study and operationalization of a living development alternative that challenges GDP-metrics. The nation is best known for the articulation and practice of an innovative alternative and sustainable development path, exemplified in Gross National Happiness (GNH). In the contemporary context, it continues to be at the forefront of developing and advancing GNH as a unique and holistic development approach that values happiness and wellbeing of people and sentient beings. However, GNH is prone to popular misunderstandings of its concept, principles and manifestations within Bhutan, and subject to superficial and problematic scholarly analysis, hurried comprehension and

* Ritu Verma is a senior researcher and strategic adviser at the Tarayana Centre for Social Research and Development, associate professor at the College of Language and Culture Studies, Royal University of Bhutan, visiting lecturer at University of California Los Angeles, and co-founder/coordinator of Network of Bhutan Anthropologists. She has served as member of the International Expert Working Group of the Secretariat for a New Development Paradigm, Royal Government of Bhutan, visiting senior researcher at the Centre for Bhutan & GNH Studies (CBS), and coordinator of the Bhutan+10 conference organized by the Ministry of Agriculture and Forests and National Commission for Women and Children. Email: rvermapuri@gmail.com

limited due diligence in the international context. This paper makes a modest but concerted effort to respond to the dilemmas and challenges of understanding facing GNH by exploring its epistemological and historical foundations, and disentangling multiple meanings manifested in eight different forms. In doing so, it aims to contribute greater clarity to a growing body of multifarious writings on the subject, and more specifically, to an emerging body of scholarly literature on GNH by shedding explanatory light to the way it is conceptualized, operationalized, practiced, understood, internalized, and continuously undergoing change as it is refined and deepened over time.

Introduction

> Now more than ever, the need for a different development approach is highlighted in ecological, social and economic crises: ecosystem degradation, potentially catastrophic climate change, excessive consumption of the affluent and extreme poverty on the other end; and growing inequalities both between and within nations. Underlying all these crises is the lack of a holistic view that would focus on causes instead of symptoms, and the inadequacy of the architecture of global governance to address these problems (SNDP 2013, p.vii).

The world faces its greatest challenge in post-world-war history, with widening socio-economic inequalities, unchallenged growth, and looming environmental crises driven by anthropogenic climate change (Stiglitz et al., 2008). At the heart of this crises lies a stark disconnect between economic and socio-ecological concerns inherent in conventional development approaches. As the SNDP notes above, there is an urgent need for an alternative development approach that is more holistic, sustainable, equitable, and that centrally challenges the problematic use of gross domestic product (GDP) as a measure of progress (2013). In 1968, during in his famous speech at the University of Kansas, Robert F. Kennedy similarly underscored the serious limitations of GDP:

> even if we act to erase material poverty, there is another greater task, it is to confront the poverty of satisfaction purpose and dignity that afflicts us all. Too much and for too long, we seemed to have surrendered personal excellence and community values in the mere accumulation of material things .... Gross National Product counts air pollution and cigarette advertising, and ambulances to clear our highways of carnage. It counts special locks for our doors and the jails for the people who break them. It counts the destruction of the redwood and the loss of our natural wonder in chaotic sprawl. It counts napalm and counts nuclear warheads and armored cars for the police to fight the riots in our cities. It counts Whitman's rifle and Speck's knife, and the television programs which glorify violence in order to sell toys to our children. Yet the gross national product does not allow for the health of our children, the quality of their education or the joy of their play. It does not include the beauty of our poetry or the strength of our marriages, the intelligence of our public debate or the integrity of our public officials. It measures neither our wit nor our courage, neither our wisdom nor our learning, neither our compassion nor our devotion to our country, it measures everything in short, except that which makes life worthwhile (Kennedy, 1968).

Despite the growing recognition that GDP "measures in short, except that which makes life worthwhile" (ibid.), conventional approaches continue to centrally measure poverty, implement policy and operationalize practice in these narrow terms, without adequate attention paid to the holistic and interconnected nature of development as lived and experienced by those intended to be its beneficiaries. With a limited growth-based focus, GDP only measures and aggregates market economic activity based on a competitive model of endless growth, thereby leaving out what matters for the planet and its inhabitants in the face of multiple ecological, social and economic crises: wellbeing, sustainability

and ultimately, cooperation and conviviality.

Within such a context, the Royal Kingdom of Bhutan represents a rare context for the study and operationalization of a living development alternative that challenges GDP-metrics. The nation is best known for the articulation and practice of an innovative alternative and sustainable development path, exemplified in Gross National Happiness (GNH). In the contemporary context, it has been for a great number of years, and continues to be, at the forefront of developing and advancing GNH as a unique development approach that values happiness and wellbeing of people and sentient beings.

Based on larger body of research carried out from 2011 to 2019[1] that explores the way GNH theorizes, intersects with, embodies and operationalizes culture (Thin et al., 2017), degrowth (Verma, 2017a), climate change (Verma et al., 2018), gender differences (Verma & Karma Ura, 2017), ethical tourism (Verma in press a) and strategic research (TCSRD, 2017; CBS in press)[2], the impetus for writing this paper grew organically from questions arising about its multifarious meanings. During the larger study, it became evident that GNH is prone to popular misunderstandings of its concept, principles and other manifestations within Bhutan (Verma in press b). In the international context, it is subject to superficial and problematic analysis in scholarly writing as well as hurried comprehension, especially in the international mass and social media lacking due diligence (ibid.). This paper

[1] The methods used for the study include quantitative and qualitative analysis of the GNH index, collection of survey data, interviews, participant observation and observant participation, and review of and triangulation against secondary sources of literature.

[2] The author is deeply grateful to Dasho Karma Ura, Dorji Penjore and Tshering Phuntsho (formerly) at the Centre for Bhutan & GNH Studies for their encouragement and support in writing this paper, which grew out of nearly a decade of interest and study of GNH. The author is also indebted to Dasho Jigme Y. Thinley, Aum Chime P. Wangdi of the Tarayana Foundation and Pem Lama at the Institute of Happiness and Bhutan Ecological Society, for providing invaluable comments and feedback on earlier drafts of this paper.

represents a modest, concerted effort to respond to the dilemmas and challenges of understanding facing GNH. By setting to explore its epistemological foundations, it aims to disentangle its multiple meanings, thereby contributing to some degree of clarity to a growing body of multifarious understandings and writing on the subject.

While GNH has gained traction and influencing power in Bhutan and beyond, multiple sources of misunderstanding are exemplified by confusion and conflation regarding its definition, meaning, intention, articulation, justification, operationalization and effects. For instance, among other issues in the international context, GNH is sometimes confused with other wellbeing and happiness indices. Within Bhutan, the rapidly changing development and political landscape in a new era of democracy has meant that "the precise meaning of GNH and how to best achieve it has become a subject of democratic debate" (Hayden, 2015, p. 177), including misunderstanding of roles and responsibilities between and among individuals, society and the state. During some historical moments in Bhutan's break-neck transition to democracy and middle-income country status, it has sometimes been appropriated internally for political means or externally for academic gain. Hence, expectations regarding the ability of the state to generate GNH are high, but understanding of mutual responsibility and roles, including that of individuals and enabling conditions created by the state in the pursuit of happiness, remains unclear and somewhat muddled.

To gain some degree of clarity about GNH concepts, guiding principles and its functionalities in different spheres, levels and contexts, this paper sets to overview its emergence within context-specific and historical circumstances, before analyzing its various meanings, aspects and articulations, or put simply, the way it manifests itself in eight different forms. In doing so, the paper aims to contribute to a growing body of scholarly literature on GNH, by shedding explanatory light to the way it is conceptualized, operationalized, practiced, understood, and continuously undergoing change as it is refined and deepened

over time.

Emergence of GNH: Brief overview of history and context

A small land-locked country nestled in the Greater Himalayas with a population of 734,374 inhabits and a land area of 38,394 km^2 (NSB, 2019), Bhutan predominantly follows Vajrayana Buddhism (Kumagai, 2015). Its innovative development policy priorities are informed by historical, spiritual influences and socio-cultural values that were not ruptured by the impacts of colonization common in most other countries of the South[3]. Its historical trajectory as a nation began with the existence of small agricultural communities independent of a higher single authority, to their unification by Zhabdrung Ngawang Namgyal into a single administrative apparatus founded on a two-fold system *(lugs gnyis)* of religion and secular government from 1626 to 1651 (Sonam Kinga, 2009; Ardussi, 2004). This was followed by the creation of its first legal code in 1652, with the subsequent legal code in 1729. A hereditary monarchy was established in 1907, which eventually led to the formation of its first national assembly in 1953 by the Third King Jigme Dorji Wangchuck (Sonam Kinga, 2009). Through all these transformations, Bhutan remained isolated over many years, with limited and purposively controlled exposure to the outside world from its geographically remote location in the Himalayas.

Bhutan fundamentally shed its isolationist policy in 1959 in reaction to Chinese invasion and occupation of Tibet, which generated fears about sovereignty. Henceforth, political and development priorities became a function of national security concerns, sovereignty and self-reliance triggered by a shift in the regional balance of power (Priesner, 1999). The 1960s were characterized by the cautious opening up to the outside world politically and economically through the establishment of diplomatic ties with India and other countries. In 1962, Bhutan became a member of the Colombo Plan Group, soon followed

[3] Bhutan is amongst a few Asian countries that were never colonized, including Nepal, Thailand and Brunei.

by its joining the International Postal Union in 1969, and its admission as a member of the United Nations in 1971 (Karma Phuntsho 2013; Lham Dorji, 2008). In 1998, the Fourth King Jigme Singye Wangchuck relinquished sovereign power through the election of the Council of Ministers by the National Assembly to govern the country (Karma Phuntsho, 2013; Sonam Kinga, 2009). In 2005, His Majesty declared his intention to hold the first national democratic elections in 2008. He also announced his abdication of the throne to his oldest son in 2006. Soon after, the accession of the Fifth King Jigme Khesar Namgyel Wangchuck to the golden crown was celebrated nationwide in 2008 (Lham Dorji, 2008). Thus, in just under four centuries, the country went from a collection of loose feudal communities to a constitutional democratic monarchy with a ground-breaking vision of development.

Bhutan's coming of age as a modern nation and cautious emergence on the global stage occurred in the context of rapidly shifting geopolitics of the region, with emerging superpowers flexing their political reach directly to its north and to its south. The volatile politics of the region were further exacerbated by conflicts between and within neighboring countries, with spill-over effects in Bhutan. Further, amidst insurgencies on its southern border, Bhutan's ability to defeat, overcome and push back against threats to its sovereignty, national identity and social fabric proved critical in maintaining its status as a modern nation. These complex issues have been the subject of substantial discussion, debate and critique, as noted by Schroeder (2018) and Karma Phuntsho (2013), for example. Most relevant to the discussion on GNH is Bhutan's ability to encapsulate its unique cultural identity as one of the defining strengths of its sovereignty. This has allowed for the existence of Bhutan as a nation-state, its cultural and political integrity (Karma Phuntsho, 2013), as well as its ability to develop an alternative development path.

Its focus on happiness evolved organically from historical features of social and cultural relations embedded in Buddhist

and feudal values of a nation that was for many centuries isolated from the outside world (Priesner, 1999). The initiatives Bhutan has taken towards addressing various development issues highlights the existence of a distinctly indigenous and organic vision of development – one that evolved from Bhutan's unique socio-cultural, political-economic, demographic and historic circumstances (Priesner, 1999). Rather than an "intellectual construct detached from practical experience", it is results from the translation of a cultural, social and spiritual consciousness into development priorities (ibid., p. 27).

Without the colonial baggage of other countries in Asia, its embracing of modernization was on its own terms, with an explicit focus on prosperity and happiness as the objective of development for its people. In 2008, Bhutan became a democracy, with the adoption of the constitution that ensures "the State shall strive to promote those conditions that will enable the pursuit of Gross National Happiness" (RGoB, 2008, article 9). Its alternative development approach is exemplified by its status of being the only country in the world that is carbon negative, absorbing three times more carbon than it emits (Nelson, 2015; NEC, 2015). This is enabled by Article 5, section 3 of it constitution which specifies that sixty percent of its land must be under forest cover in perpetuity (RGoB, 2008). Other notable policies that exemplify GNH, for example, are its aim to rely predominantly on organic agriculture, reliance on environmentally clean sources of revenue such as run-of-the-river hydro-power, high value-low volume tourism that limits the number of tourists into the country on an annual basis, and jurisdiction over international development organizations, foreign capital, development aid and foreign experts within its borders that enable the stewardship of its own development path.

Eight manifestations of GNH

GNH can be considered many things at once. More specifically, the central argument of this paper is that it manifests itself

in eight different forms elaborated below: a moral concept, guiding principles for holistic development, a development conceptual framework, an index of measurement, policy and project screening, individual practice, global influence, and the secularization of Buddhist concepts (Verma, 2017a, Verma & Karma Ura, 2017).

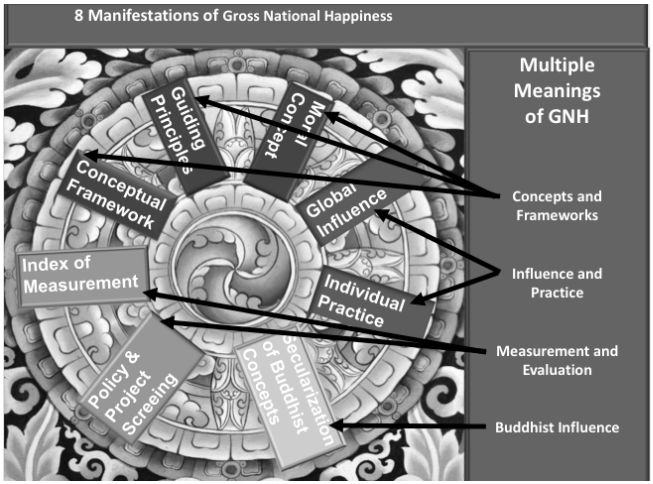

Figure 1. Eight manifestations of GNH

Moral concept

GNH is a moral concept that establishes the foundational influence for its other manifestations. Although a secular moral concept that has influenced and been adapted in different countries around the world, it is implicitly anchored philosophically in Buddhist morality and ethics, as discussed below (Verma, 2017a, 2017b; Givel, 2015; Tashi Wangmo & Valk, 2012; Phuntsok Tashi, 2004). At its moral center, GNH is about happiness, or wellbeing. Rather than a utilitarian approach to wellbeing, the essence of GNH is a higher, meaningful purpose. Such a pursuit of happiness is consistent with moral and ethical notions, which strive to bring about collective happiness and a deeper meaning of happiness in society. Jigmi Thinley (2012) articulates the collective essence contained in the concept of

GNH which differentiates it from conventional individual-centric approaches:

> If every individual were assumed to want happiness for himself [or herself], GNH would be no different from the concept of the well-known utility for maximizing figures in economics, motivated only by their need for personal satisfaction. The pursuit of GNH means the endeavor to create a society or nation in which the facilitation of progressive collective happiness is the goal of governance. To serve this purpose, society, which adopts and adapts to changing goals and thereby defines itself, must want it against barriers and competing ideas that may have the force to push society in different or opposing directions. The meaningful enjoyment of life as a whole is hindered not only by individual circumstances, cognitive fallacies and our lack of positive will, but also by the legacy of past generations in the form of structural conditions which can either prevent – or help us – in achieving harmony of existence or certain pursuits. Thus, building consensus, motivating, creating and maintaining a truly conscious wish to pursue collective happiness among the people becomes a major function of government (p. 11).

Given these ethical and moral roots, GNH strives for the happiness of all human beings, as well as that of all sentient beings, which are critical to a sustainable and thriving environment. Happiness, in this sense, is distinct from "fleeting, pleasurable and 'feel good' moods so often associated with the term [happiness]" (Jigmi Thinley, 2009, cited in Karma Ura et al., 2012a, p. 7). Hence, GNH strives for deeper, meaningful and long-term attainment of happiness, rather than temporary and superficial forms (Verma, 2017a). It focuses on inner-contentment, peace and non-attachment, rather than material comfort and fleeting pleasures alone (ibid.). Collective happiness, concern and service towards others, and harmony with nature and all sentient beings, distinctly sets GNH apart from GDP and mainstream notions of development normally concerned with an

individualistic and material sense of happiness, a hollow pursuit of perpetual growth, and narrowly defined notions of material progress (ibid.).

The moral concept is further elaborated through a focus on balancing both material and spiritual wellbeing, while recognizing the mismatch between unchecked consumerism and the desire to buy, produce, build, employ and borrow, and the limits to all these activities (Schneider et al., 2010; Martinez-Allier et al., 2010). Interdependence plays an important role in attaining this balance. As such, happiness is a public good, although it is experienced subjectively based on and influenced by a person's frame of reference, experiences with respect to others or to the past (Jigmi Thinley, 2012). It is perhaps more relational than relative in character "because the quality and depth of relationships with others influence our happiness far more than a comparative possession of a commodity" (ibid., p. 6). Rather than the diminishment of annihilation of the individual in favour of interdependence, GNH follows the post-structural notion of multiple realities, where both individual and collective happiness co-exist but in an inter-relational manner. It is logical that one cannot exist without the other, as captured by both the aggregation and disaggregation of the index measurement discussed below. At the same time, individualism and egocentric greed that has come to mark the current era of neoliberalism are challenged, while keeping mind that all nation-states, including Bhutan, are based on a collective imaginary.

GNH is distinct in its approach of equating development with moral values. As such, the set of values that promote happiness as the end goal of development comprise of holistic social, physical, material and spiritual needs; balanced progress; collective happiness as an all-encompassing phenomenon; sustainable wellbeing for the sake of current and future generations; and equitable distribution of wellbeing (Karma Ura et al., 2012b). From this perspective, GNH is a middle path between culture and modernization, in order to counter the strong homogenizing effects of globalization (Karma

Ura, 2005). Given that Bhutan's independence had existed without diplomatic links and participation in the international community for a long period (Karma Ura, 2005), it nonetheless felt the acute impacts of modernization, which often involved the introduction of exogenous ideas and items that did not always blend well with its indigenous practices and cosmology (Karma Phuntsho, 2013). Hence, in order retain its sovereignty and to adhere to its distinctively alternative development path, it has been common for Bhutan to reject development aid due to external conditionalities imposed by western donors, or external pressures to relegate foreign experts as advisors (Priesner, 1999).

Guiding principles for development with values

The conceptualization of GNH as guiding principles for development has its roots in the unification of Bhutan in 1729, where the legal code by Zhabdrung Rimpoche declared: "if the Government cannot create happiness (*dekid*) for its people, there is no purpose for the Government to exist" (Karma Ura, 2010, cited in Karma Ura et al., 2012, p. 6). In the early modern era, there is some written evidence of decrees pertaining to happiness as a general, recurrent theme for development at the highest policy-making level (Priesner, 1999). In the late 1960s, the late 3rd King of Bhutan, Jigme Dorji Wangchuck, signified his view that the overall objective of development was to make "the people prosperous and happy" (Kuensel, 1968, in Priesner, 1999, p. 28)[4]. He further elaborated that there would be no point in developing the country if the people were to suffer (Karma Ura, 2005). He similarly expressed the importance of "prosperity and happiness" in his keynote address upon the occasion of Bhutan's admission to the United Nations in 1971 (Priesner, 1999, p. 28).

This unique historical legacy regarding the centrality of happiness was meaningfully and purposively placed at the heart of contemporary development and policy-making in Bhutan, as

[4] Priesner, then a program officer at UNDP, Thimphu, Bhutan, cites this quote reported on page 7 of Kuensel Vol. 2, No. 9, May 1-15, 1968 (1999, p. 28).

the vision of the Fourth King, Jigme Singye Wangchuck, who in his early reign declared "our country's policy is to consolidate our sovereignty to achieve economic self-reliance, prosperity and happiness for our country and people" (Priesner, 1999, p. 28). This vision of happiness-oriented development was first articulated between 1971 and1972 by the 4th King when he ascended the throne and before his coronation in 1974 (GNHC, 2013; Jigmi Thinley, 2012; Karma Ura et al., 2012b; Karma Ura, 2005; Priesner, 1999). He expressed his growing concern over problematic GDP metrics commonly used to guide development. To achieve this, he introduced an innovative vision for Bhutan by drawing on moral concepts of happiness outlined above. The term GNH was first explicitly expressed internationally upon the return of the Fourth King from the 1979 Non-Aligned Summit in Cuba, in response to a question posed by Indian journalists regarding the GDP of Bhutan, whereby he enunciated that Gross National Happiness was more important for Bhutan than Gross Domestic Product (Karma Phuntsho, 2013). The concept of GNH was reported in the international media in 1980, in two articles published by the *New York Times* (Kaufman, 1980a, 1980b), followed in 1987 by an interview given by the Fourth King published by the *Financial Times of London* (Elliott, 1987). In the expression of GNH as a guiding compass for development, the happiness of Bhutanese women and men took precedence over economic-centric growth. The far-sighted wisdom of this approach is based on the understanding of the problematic inter-relation between happiness and income, supported by research that income does not result in happiness in the long term (Easterlin, 2010). Continuing the legacy of happiness-oriented development, in his coronation speech in 2008, His Majesty the Fifth King Jigme Khesar Namgyel Wangchuck, stated "I have been inspired by the way I look at things by Bhutan's development philosophy of Gross National Happiness…to me it signifies simply 'development with values'" (Karma Ura et al., 2012b, p. 6).

From the moment GNH was first enunciated as a reaction to GDP, its elaboration as a moral concept further developed and deepened

over time. GNH is a response to Bhutan's critical engagement with the prevalence of GDP in mainstream development. At its core, it questions the validity of the singular belief in GDP as a measure of societal progress (Jigmi Thinley, 2012), based on the critique of economic-centric role of human relations and society (Sekulava et al. 2013). As O'Neill (2012) suggests, "GDP has undermined the goal of economic welfare that it was supposed to support because people have ended up serving the abstract (but quantitative) indicator instead of the concrete (but qualitative) goal" (p. 222). Within GNH, bias towards consumption found in dominant development approaches is countered by the fact that detachment from the proliferation of wants can lead to happiness. A recognition of social, cultural, environmental and human needs, and how they differ from wants, is critical for this perspective. This holistic and balanced approach led to the formulation of the ground-breaking conceptual framework at the heart of GNH.

A conceptual framework for alternative development

Without a unifying conceptual framework, GNH could not be studied or operationalized as it has been, nor could it be compared or juxtaposed against other dominant development approaches to understand its unique contributions towards theorizing human progress. The articulation and composition of the GNH conceptual framework was spear-headed by Jigme Y. Thinley, then chairperson of the Council of Ministers and who would later become the first democratically elected Prime Minster of Bhutan in 2008, during the 1998 Millennium Meeting for Asia and the Pacific in Seoul, South Korea (Karma Phuntsho, 2013; Jigmi Thinley, 1998). The moral concept and guiding principles of GNH was thus elaborated through a conceptual framework that brings together four concrete pillars that include: sustainable and equitable socio-economic development, good governance, environmental conservation, and the preservation and promotion of culture.

The four GNH pillars translate the moral concept and guiding principles into strategic objectives for development in several

ways. They are founded on the belief that holistic development cannot be achieved by any of the pillars in isolation. Hence, the four pillars are accorded equal weight and mutually support one another. Indicating the growing weight the development alternative was accorded in Bhutan, in 2005, the country's main planning authority was renamed the Gross National Happiness Commission, charged with the writing and implementation of Bhutan's five-year plans, which were first initiated in 1961 (Karma Puntsho, 2013). Hereafter, the four pillars began to influence and shape Bhutan's ninth (2002-2007), tenth (2008-2013) and eleventh (2013-2018) five-year development plans that directed national policies, programs and practices, as well as operationally structured GNH within development planning (Schroeder 2018). Munro (2016) quantifies the increasing emphasis of GNH over the five-years plans (FYP) in terms of the number of times it was referenced, from seven in the 9th FYP, eighty in the 10th FYP, to fifty in the first chapter alone in the 11th FYP which also began to use GNH as its core concept as well as included the analysis the GNH index survey findings discussed below.

As captured by its four pillars, GNH genuinely challenges GDP in terms of its goal of ecological sustainability, social equality and wellbeing, and the incorporation of subjective dimensions towards these goals that GDP fails to capture (Schneider et. al., 2010). The pillar of sustainable and equitable socio-economic development is founded on the principle that qualitative measures of the means and nature of economic activities are as important as their quantitative measures and results (Karma Ura et al., in press). As elaborated in the Strategic Research Agenda for CBS (Karma Ura et al., in press), it goes beyond conventional GDP measures that narrowly measure what is deemed 'productive', while ignoring equally important aspects of life leading to wellbeing such as social and economic services of households and communities, such as free and leisure time, care-giving activities, sleep time, etc., all of which are important factors in happiness.

The pillar of conservation of the environment rests on the principle that happiness and wellbeing are deeply connected to people's relationship with a healthy, vibrant, sustainable and wholesome natural environment. GNH centered development is not only concerned with the quantity of forest cover, for instance, but also the quality of the forest, including diversity and health of biodiversity and the trees themselves, and how this impacts the socio-cultural spiritual-ecological interactions with humans and all sentient beings. This grave concern for the environment in the context of anthropogenic climate change is mounting, given the growing number of climatic events and shocks. For instance, fires raging in 2019 and 2020 in Australia, Brazil and California in altered climates released unprecedented amounts of carbon into the earth's atmosphere, raising fears of an irreversible tipping point (Foley, 2020; Rosen, 2019). As humans enter a new era in which we have drastically altered the climate and ecosystems across the globe and transgressed four of the nine planetary boundaries related to earth-system processes where the planet and its resources are finite, the need for development alternatives has never been more urgent or pressing (O'Neill, 2012). Our development, to date, has been exploitative and unsustainable, due to consumption patterns that have used up resources at a pace far out-stripping their replenishment (SNDP, 2013). The pillar of good governance is as much about the form and power of institutions, as it is about the motivational values that drive them. Securing collective wellbeing and happiness of all people relies on good governance, and is exemplified by Bhutan's transition from an enlightened monarchy to a system of parliamentary democracy in 2008, which may be the most peaceful of its kind in the world.

The pillar of cultural preservation and promotion is a priority area and distinctly sets GNH apart from other development philosophies and approaches that exclude culture. Its importance can be traced back to Bhutan's isolationist history characterized by the near absence of outside contacts as result of a deliberate foreign policy strategy[5], and an exceptionally strong political,

[5] During the 19th century, only three British missions were ever sent

social and cultural identity (Priesner, 1999). Contemporary concerns with the preservation of culture are related to the critical imperative of maintaining sovereignty as a distinct nation within a geopolitically charged context, and in light of rapid changes resulting from multiple drivers of change such as globalization, development and countering of the negative effects of modernization. It also takes a pro-active approach to cultural promotion, while balancing it with voluntary social responsibility and the recognition of virtue in indigenous culture and social relations. However, as further discussed below it is still evolving in its efforts to integrate the notion that culture is not static, but dynamic and changing.

GNH is distinct from dominant development approaches that focus solely on economic-drive solutions founded on the principles of GDP. It is more holistic than prevailing development conceptual frameworks, such as the Sustainable Development Goals (SDGs), which only include three aspects of sustainable development, including social, environmental and economic pillars (United Nations 2012). Despite the concerted efforts of various scholars, activists and organizations to push for the inclusion a fourth pillar on culture to the SDGs, culture failed be included as a stand-alone pillar, nor was it featured in any meaningful way.

Index of measurement

In order to foster and enable measurement of a holistic range of GNH values (Karma Ura, 2015), the moral concept and conceptual framework of GNH is further translated into a multi-dimensional index of measurement. A domain-based framework has been developed, piloted and implemented over time by the Centre for Bhutan & GNH Studies (CBS). The index is elaborated through nine domains, including classic areas of measurement normally found in dominant international development indices including i) health, ii) education, iii) living standards, new

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to Bhutan, a fact that is perhaps related to the fact that its rulers never agreed to the establishment of British representation in the country (Priesner, 1999).

domains encompassing iv) time use, v) good governance and vi) ecological diversity and resilience, and innovative domains including vii) psychological wellbeing, viii) community vitality and ix) cultural diversity and resilience (Verma & Karma Ura, 2017). In the GNH Index, happiness is assessed through the nine domains, which in turn are elaborated through 33 clustered indicators that inform numerous survey questions (see Figure 2). The indicators reflect relevant aspects of life in a holistic way that is vital to the concept and practice of GNH (Karma Ura et al., 2012a). GNH seeks to convey more fully the breadth and texture of people's lives than the standard welfare measure of GDP per capita, and other dominant indices used in the West such as Human Development Index (HDI) (Karma Ura et al., in press, 2012a; Metz, 2014). It is operationalized in important and innovative ways that help to track GNH progress through time and determine GNH policies (Karma Ura et al., 2012a). Most relevant to this paper, GNH has been operationalized into indicators of measurement, and therefore responds to the interest of the development community for the engagement of new, non-monetary indicators (including subjective indicators) to assess development in terms of holistic social, cultural and environmental values (O'Neill, 2012).

Figure 2. The 9 Domains and 33 Indicators of the GNH Index
Source: Karma Ura et al., 2012a

The first nation-wide GNH survey was carried out in Bhutan in 2008 (with a pre-pilot in 2006), followed by the surveys in 2010 and 2015. GNH surveys allow the government of Bhutan to assess happiness over time, across different regions and districts of the country, across different social domains of difference (i.e. gender, age, marital status, rural/urban, pastoral/agricultural, etc.), and according to the nine domains of GNH. It is an important tool for evaluating happiness and wellbeing within a nation, and for policy-making. The summarized results of the survey illustrate happiness as it is aggregated nationally and therefore can be compared over time, as well as disaggregated to analyze particular trends. Based on the 2010 GNH Survey findings, several differences in happiness require policy attention in the future, including the fact that men are happier than women; people living in urban areas are 50% happy, whereas those living in rural areas is 37%; unmarried and young people are the happiest; civil servants and monks are the happiest; and unemployed people are happier than corporate employees, house-managers and farmers (Verma & Karma Ura, 2017; CBS 2016). These statistics counter dominant assumptions about modernity, corporate-centred development and society in a globalized world.

Policy and project guidance, screening and evaluation

The common set of indicators in the GNH index enables Bhutanese citizens to hold accountable leaders, evaluating whether government policies are effective and being fulfilled, and assessing current and future support for the conditions of wellbeing and happiness in relation to policy contexts (Karma Ura et al., in press). As the comparison between the 2010 and 2015 survey findings illustrate, the GNH Index is attuned to policy-making. It reflects changes over time in response to public action and policy priorities, and reflects strengthening or deterioration in the social, cultural, economic and environmental fabric (CBS, 2016; Karma Ura et al., 2012a). Beyond the GNH survey results and findings being incorporated into Bhutan's national five-year plans, GNH assesses policies and projects. GNH policy and project screening tools, based on the indicators elaborated

above, contribute to policy coherence of government programmes and projects in terms of GNH principles (Karma Ura et al., in press). Although similar in structure, the policy screening tool is made up of twenty screening questions, whereas the project screening tool has been adapted for sixteen sectors (Schroeder, 2018; Karma Ura, 2015). They are used by government agencies such as the GNHC (Gross National Happiness Commission) to determine whether they are aligned with GNH (ibid.). For instance, the GNH policy screening tools were used to assess the National Youth Policy and the National Forest Policy (GNHC, 2011). They systematically assessed the possibility of Bhutan's accession to the World Trade Organization (WTO), resulting in the conclusion that entry into the WTO was not GNH favorable (ibid.). On the other hand, the National Human Resource Development Policy was assessed using the screening tools, resulting in the evaluation that it was GNH-favorable and within the GNH screening tool threshold (ibid.).

GNH principles and policies are linked by providing feedback and guidance on the effectiveness of existing policies and programmes and 'feed-forward' into programme implementation, thereby allowing the principles they embody to be infused into policies and programmes in a broad-based manner (Karma Ura et al., in press). Thus, in the case of using GNH indicators as evaluative tools, they are intended not only to check whether programmes are consistent with GNH indicators but also to create conditions for a coherent, organic relationship between professed values on the one hand and actual policies, programmes and projects on the other (ibid.). Information collected through the indicators have enabled policy makers to make informed decisions about happy people, to what degree, and how to bolster the conditions towards happiness (ibid.).

Individual practice

GNH focuses attention on collective wellbeing, as well as the simultaneous and mutual responsibility of both the state and the individual in striving for happiness and wellbeing. Hence, while other manifestations have focused on the role of the state in this

regard, this is an area where GNH influences development in its translation into individual practice. While the State's central concern with happiness plays an important key role in ensuring enabling conditions for the realization of wellbeing, happiness and enlightenment, it is important to highlight the responsibility of individual citizens as active participants in the development process.

A central responsibility of the Bhutanese state is to ensure the conditions necessary for individuals to seek happiness, in line with the Buddhist concept of cause and condition. GNH then is considered a collective responsibility, where citizens are expected to participate actively in their own development as well as that of their nation. This is supported through social and development services by the Bhutanese state such a free health care, education, extension services, paid maternity leave, etc. (also exemplified in other social democracies such as Canada, Norway, Sweden, etc.), which illustrate the importance the middle-income country places on balancing economic development with social, cultural, spiritual and environmental issues[6]. In Bhutan, the main of goal of development is the collective happiness of people, whereby happiness reflects the creation, support and provision of enabling conditions by the State, wherein people are able to pursue wellbeing and attain happiness in sustainable and balanced ways (Ura et al. 2012a, Ura 2009). While the State has an important role in providing such enabling conditions, individuals also have a responsibility towards the attainment of both individual and collective happiness, as well as inner and outer conditions for happiness. This individual role entails understanding the central tenets of GNH, as elaborated above, and putting into practice in everyday life the behaviours, attitudes and practices that are central to achieving happiness and wellbeing, both individually and collectively. In Bhutan, the government, the central monastic body, the media and CSOs

[6] Revenue generated for these services are sourced from taxation, donor inputs as well as income generated from industries such as hydro, tourism, agriculture, etc.

plays an important enabling role in this process[7].

Global influence

Although the focus in recent years has been to focus on GNH within Bhutan, the country has influenced other countries and scholars around the world. This influence ranges from influencing the United Nations in terms of integration of wellbeing into the SDGs, to indirectly influencing increased attention and uptake by development scholars and practitioners in regards to GNH, as well as wellbeing and happiness as the ultimate objective of development. Most notably, in June 2012, Bhutan set up a two-year project aimed at developing a New Development Paradigm (NDP) and the Secretariat for the New Development Paradigm (SNDP) for coordinating the initiative. The aim was proposing a new development paradigm based on the principles of Gross National Happiness, as a submission to the United Nations. An International Expert Working Group (IEWG), composed of distinguished scholars from around the world working on various aspects of happiness, wellbeing and development was convened to contribute to this effort. The initiative worked on the translation of different manifestations of GNH into a new development paradigm that is relevant beyond Bhutan. It also elaborated specific suggestions for policy objectives and strategies for its implementation.

Two separate international meetings were convened to elaborate and put forward the new development paradigm, including a High Level Meeting on Wellbeing and Happiness at U.N. Headquarters in New York in April 2012, and a meeting of the International Expert Working Group in Bhutan in January-February 2013. A smaller sub-group of distinguished scholars of the IEWG with a wide range of expertise and disciplines, wrote background papers on each of the nine domains and other emerging issues pertaining to GNH (CBS, 2017; SNDP, 2013), which provided valuable inputs into the submission of the report *Happiness: Towards a New Development Paradigm* by the Royal Government

[7] New CSOs such as the GNH Centre also help individuals and in particular, foreign tourists, in understanding and practicing GNH.

of Bhutan to the United Nations General Assembly in December 2013 (SNDP, 2013). The in-depth background papers were aimed at over-viewing the state-of- the-art issues, identifying gaps as well as elucidating practical and policy implementation of the GNH domains within the framework of the New Development Paradigm (CBS, 2017).

In addition to the international meetings in 2012 and 2013, the GNH surveys in 2010 and 2015, eight different international conferences in relation to GNH have been organized to-date, including: Development (2004), Rethinking Development (2005), Towards Global Transformation (2007), Practice and Measurement (2008), Implementation and Practice (2009), Policy and Praxis (2015), GNH of Business (2017), and Community Vitality (2018). The cumulative effect of these meetings has been the proliferation and spreading of the various manifestations of GNH to different parts of the world.

The concept has been adopted, adapted and integrated in contexts such as Brazil, Japan, Thailand, Canada, Bolivia, Ecuador, France, etc., in terms of national policy making, wellbeing and happiness measures, institutional contexts, and individual as well as collective practice. Such processes, in turn, have also induced the creation of programmes, centres and associations for the study and practice of GNH. Most recently in November 2015, an international association for the scholarly study of GNH was established[8], including the preparation of its launch conference in Oxford in January 2019 and a peer-reviewed journal on GNH. The cross-pollination of GNH with other indigenous concepts that place wellbeing at the center of development is evident in reciprocal sharing of ideas and exchange visits with Ecuador and Bolivia (Buen Vivir), at international conferences on degrowth (Verma, 2017a), and members of the French parliament developing a bill that seeks an alternative measure to GDP, who for example, presented at the GNH conference in November 2015 in Paro, Bhutan (CBS, 2015). More recent conferences sought ways to operationalize GNH into

[8] The International Society for Bhutan Studies.

real-world scenarios, such as the business and corporate sector (CBS, 2018), while attempting to maintain a delicate balancing act compatible with its central tenets of degrowth, steady state economics and holistic development. Similar to the degrowth movement, this cross-cultural exchange and learning of ideas demonstrates the necessity of the South influencing the North in terms of the way development might be envisioned and practiced, as well as the way the North can learn from the South in altering unsustainable development away from growth-based GDP and the dominant western lens.

Securalization of a Buddhist concept

The focus on happiness-centred development evolved organically from historical and socio-cultural features embedded in Buddhist and feudal values of a nation that was for many centuries isolated from the outside world (Priesner, 1999). Contemporary Bhutan is predominantly a Vajrayana Buddhist nation that follows the Nyingma and Drukpa Kagyu schools of Buddhism (Kumagai, 2015). Although GNH is a secular moral concept that has influenced and been adapted in different countries around the world, its holistic nature integrates central moral elements of Buddhism. In particular, it is implicitly anchored by socially engaged Buddhism and Buddhist moral and ethical engagement with happiness (Verma in press b, 2017a; Givel, 2014; Tashi Wangmo & Valk, 2012; Phuntsok Tashi, 2004).

Buddhist engagement with happiness is at the core of GNH. As suggested earlier, happiness, in this sense, is distinct from fleeting and superficial forms … "we know that true abiding happiness cannot exist while others suffer, and comes only by serving others, living in harmony with nature, and realizing our innate wisdom and the true and brilliant nature of our own minds" (Jigmi Thinley, 2009, cited in Karma Ura et al., 2012a, p. 7). Its holistic nature integrates moral elements of Buddhism, such as a middle-path of avoiding extremes and maintaining a balanced view (GNHC, 1999a, 1999b). The *middle way* also highlights the importance of balancing the needs of the mind and the body. This is contrast to GDP-centred development that

promotes economic growth to the exclusion of spiritual and mental development and subjective wellbeing (Jigmi Thinley, 2012). GNH aims to balance economic needs with spiritual and emotional needs, maximize wellbeing with minimizing suffering, and nuance outer happiness with inner happiness and material wellbeing with non-material wellbeing. The Buddhist notion of the inter-connectedness of all phenomenon influences GNH in its holistic vision of inter-dependence between human beings and their environment, a belief that centrally influences its conceptual framework. It emphasizes inter-dependence of all phenomena through its multi-dimensional nature and equal weighting of its nine domains discussed further below, which are themselves inspired by Buddhism (Tashi Wangmo & Valk, 2012). Although specific elements of the inter-relation between Buddhism and GNH are detailed elsewhere (Verma in press b,; Givel, 2014; Tashi Wangmo & Valk, 2012; Phuntsok Tashi, 2004), GNH is the secularization of a Buddhist concept that places meaningful happiness and deeper values in life as its central purpose. Prominent Buddhist leaders such His Holiness the 14th Dalai Lama promote the drawing upon Buddhist values in the engagement of a meaningful life, without necessarily taking refuge in the religion (HH the Dalai Lama, 2005). As such Buddhist principles, values and practices such as meditation are adapted by people with diverse backgrounds and spiritual beliefs, that do not require them to be Buddhist per se. Similarly, GNH has been adopted and encouraged as a set of secular concepts that are applicable to many contexts around the world. As illustrated in a paper that compares the central tenets of GNH with degrowth, the similarities are indeed striking (Verma, 2017a), thus indicating the universal applicability of GNH in attempt to shift development away from the dominance of GDP.

Conclusion: Deep wisdom against the backdrop of a troubled world

That the eight manifestations of GNH evoke deliberation of the eight manifestations of Guru Rinpoche cannot be overlooked. As it may be evident by now, the purpose of this paper is not

to literally translate or correlate each GNH manifestation with those of the manifestations of Guru Rinpoche. Rather, it is to reflect on their greater purpose. Just as the eight manifestations of the great scholar, philosopher, missionary, mystic and Buddhist master Padmasambhava (Guru Rinpoche), considered by some as the second Buddha (Hirshberg, 2018), reflect his ability to appear according to different needs and demands as steps to aid meditation and in support of the path to realization and enlightenment (Hirshberg, 2018; Altman, 2016)[9], GNH manifests itself according to different objectives, principles and requirements to achieve the greater purpose of development with values. In doing so, it reveals eight different yet mutually supportive meanings of the development alternative. These multiple meanings simultaneously support a common purpose: a holistic development alternative that balances spiritual and material needs, while aiming to avoid the socially and environmentally destructive path of conventional development approaches and current market-oriented wants.

The ability of GNH wisdom to survive against the powerful forces of GDP and globalization depends on its ability to address various challenges. First and foremost, paramount amongst them is disentangling its multiple meanings, as well as the skillful means that are engaged to call out the ways it is misunderstood. And for this, it is critically important that the nature of GNH, manifested in its multiple meanings, is understood by the public at large, as well as those who are tasked with its development, safeguarding and implementation. During a time of global political turmoil, widening economic inequalities spurned by deep-seated individualism, and critical questioning of failed capitalist, GDP-centric and business-as-usual development approaches, the conceptualization and operationalization of GNH provides important wisdom, lessons, reflections, directions and healing for a deeply divided and fractured world.

[9] As such, the eight manifestations do not depict *different* Padmasambhavas, but can be interpreted as his ability to appear in varied forms to serve different purposes, which are also known according to the eight different names of the Guru (Atlman, 2016).

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Beyond Modernity: An Anthropological Approach to the Concept of Gross National Happiness

*Jorge Armand**

Abstract

This paper analyses the concept of Gross National Happiness (GNH) and its implementation in Bhutan, in relation to the epistemology lying behind the present global ecological and social crisis of the planet. This analysis is preceded by a discussion of anthropological notions such as Culture, Cultural Foundational Myths, and Modernity as a Specific Type of Culture, as well as of the Future of Mankind.

Introduction

My work *Beyond Modernity, From the Myth of Eternal Progress to the Myth of Eternal Return* (Armand, 1998) is an approach from the perspective of anthropology, of that phenomenon commonly known as *Modernity.* In that work we argue that as a social phenomenon, modernity cannot be regarded any longer after the 19th century Theory of Social Evolutionism, as the last stage of a supposed general evolution of mankind, but rather as a specific type of culture.

As we know, modernity originated in Western Europe between the last decades of 17th century and the end of 18th century, as the outcome of the economic, social, intellectual and political changes known as the Enlightenment, the French Revolution and the Industrial Revolution. Due to the fact that its emergence is a much localized occurrence in both ethno-geographical and chronological terms, the phenomenon of modernity should be regarded restrictively as a *cultural phase* of Western Civilization.

* Jorge Armand is a Professor of Anthropology and Archaeology at the University of Los Andes, (ULA), Merida-Venezuela.

Hence seen as a culture, modernity is but one of the many types of culture that compose the *Etnodiversity* of the planet. From the same point of view, the so-called 'universal history', regarded as a succession of evolutionary stages beginning with the pre-Classical Age, passing through the Classical Age to the Middle Age and the Renascence and ending with the Modern Age, is no more than an expression of deep-seated ethnocentric prejudice. Moreover, the concept of 'universal history' is based on the wrong idea that humankind has progressed in a unilineal fashion, with western modern culture in the vanguard, providing the model for the rest of the world to follow.

Nevertheless, based on their comparatively great technological, military and economic power, some Western countries, during the last 300 years, have expanded in various degrees of depth and extension the culture of modernity to a large portion of humanity, and in certain cases, entirely transplanted it to vast areas of the world, as for instance, the North American Continent, and Australia. This was done, in most cases, after disseminating or displacing both physically and culturally the autochthonous populations. And of course, this was how Modernity came to be wrongly viewed until now as a' universal culture'.

The foundational myths of modernity

Before describing the foundational myths of the culture of modernity let say that *in general a culture is essentially an epistemological system*. A system that is shared by the members of a given social group, be it a nation, a corporation, a socio-economic class or other. Each separate culture represents a unique system of epistemology, which has meaning and functions only for and within each of them. In this sense, *culture can be defined too as the collective mind of a given social group*. Hence there is no such a thing as a 'universal culture'. We also claim that a cultural epistemology is made up basically of an articulated set of non-rational premises, which we call Foundational Myths (of the culture) for they condition directly or indirectly both the origin and the traits of each culture.

What are the foundational myths of that culture we call Modernity? As we know, the 17th and 18th centuries' French and English thinkers Descartes, Bacon, Newton and others, established the philosophical basis for the French Revolution and the Industrial Revolution. Simultaneously, their ideas became the seeds for the emergence of the culture of modernity, as they rapidly permeated the collective mind of western societies, where they sprouted as new socio-archetypical ideas or foundational myths of the emerging culture. Such foundational myths can be roughly described as follows:

1. The belief in Reason as the Way to Knowledge or *Myth of Rationalism*, replacing Religion and Magic.

2. The belief in an All-powerful Rationalistic or Cartesian type of Science and Technology or *Myth of the Techno-Scientist Reason*.

3. Man as Center of Cosmos or *Myth of Anthropocentrism* (which is a modern version of the biblical myth of Genesis). This myth replaced the Myth of Man as Part of the Cosmos.

4. Individual human being as the Center of Society or *Myth of Individualism*.

5. The conception of Progress as a Perpetual Movement towards a Promised Earth (by definition impossible to reach) called *Future*. This includes the conception of time as rectilinear. This myth we call *Myth of Eternal Progress* and is opposed to the *Myth of Eternal Return,* in which time is conceived as circular.

The ideas of progress and future became socially generalized in western societies only after the 18th century. Before these societies were rooted in the myth of Eternal Return, as it has always been the case for the rest of human societies. In fact, in all traditional non-western societies the idea of future and social progress, if they do exist, they have no social or practical

significance.

From 17th century onward the growing requests for new inventions to be used in industry and overseas military conquests provided positive feedback to western societies for increasing technological changes. These changes combined with the occupation of new continents, produced great modifications in western life-style and in the prevailing ideas about the world, and of course in the way Westerners saw themselves. In the short span of two centuries, the West underwent deeper social and intellectual bouleversement than in the previous two thousand years. The pastoral stability that characterized European economy, technology, social organization and politic in their Middle Age, and that was associated with the concept of Time and History as symbolized by the Myth of Eternal Return, was disrupted by the rapid succession of such changes. The final result was the birth in the collective mind of western societies of the ideas of Progress and Future, as well as of Science and Technology as a new Absolute.

The first-hand experience that Nature could be modified scientifically and technologically as Man saw it fit, was interpreted by 17th and 18th centuries Westerners as a death-blow to the traditional magical and religious concept, whereby Man was an interacting part of something greater and more transcendental than himself (God), and as such he was to surrendered to the Cosmos. This traditional attitude was replaced with an anthropocentric vision of Cosmos, with Man seen as an independent element, but powerful on account of his newly acquired scientific and technological knowledge and abilities, and thus free to exercise these as he saw useful exclusively for him.

During the pre-Modernity cultural phases of Western Civilization, as in all non-western cultures, what was magic or whatever necessary to obtain power over this world was not seen as distinct from the Divine or transcendent. Both were inextricably connected in a conceptual unity. The western Renascence and

the scientific and technological revolution of 18th century made a radical distinction between these two aspects of reality, burying the divine aspects of science and labeling them as 'occult' or esoteric and discrediting them as non-scientific.

The origin of the separation of reality into two opposed halves lies in the Cartesian concept of Science, which take as its starting point the supposition that the world is a set of discontinuous and essentially unrelated systems. This 19th century non-rational premise or dogma continues to dominate scientific thought until our days, in spite of the discoveries that are being made since mid-20th century in the fields of quantum physic and ecology. The Cartesian paradigm of the separateness of reality marks the beginning of the existential antagonism between Man and Nature, as well as the profound sense of individual isolation and loneliness that man of modernity feels not just in the cosmos but in human society itself. On the other hand, in the pre-modernity western cosmos vision and in all non-Western peoples, the dominant concept is that everything is connected and man is subject to fundamental religious and natural laws according to a holistic concept of the cosmos. From the last 2000 years, Western Civilization has been strongly influenced by the biblical dogma of man as lord and master of nature. Thus, long before the advent of Cartesian Philosophy, this dogma created an insurmountable distance between man and nature and this clearly facilitated the development of Cartesian Science.

Now, all of the above described foundational myths- acting separately or as a whole, directly or indirectly, constitute the root-causes of typical materialism of modernity, which manifests particularly in its tendency to consumerism and heavy emphasis on industrial production and economic growth. This tendency and disproportionate emphasis on some variables of the social system constitute the factors that nurtured during centuries and triggered recently the present global ecological crisis.

Our contemporary global crisis

The gravest single effect of this crisis is the phenomenon known as *global warming* or *climate change*. But there are as well other ecological effects accompanying global warming, such as the critical reduction of *biodiversity*, the depletion of world natural resources (especially the hydric resources), the increasing contamination of soils, seas and rivers, and the pollution of air, particularly in big cities, to mention just few well known examples of the ecological impact of modernity or modern way of life.

It would be a mistake to think that the global impact of modern culture is only on the ecological sphere. Related to the same foundational myths are also the growing number of suicides, drug consumers and chronic stress, common to the dwellers in modern cities, to mention a few of the social foes associated to modernity. Historically, the same myths are responsible for the 18th and 19th centuries human migrations in Europe from the countryside to the cities, which ended in the formation of hypertrophied cities or megalopolis. In Latin America, Asia and Africa, this type of migration created those huge sub-urban areas of chaos and poverty known as *slums*, *favelas or ranchos*. The same phenomenon can be seen today in Western Europe, where vast masses of Africans, Eastern Europeans, Latin Americans, etc. are flooding France, Germany, Spain, etc., driven mainly by the poverty and unemployment prevailing in their nations.

In 2014, the well-known International Panel on Climate Change (IPCC) organized by UN, concluded that present global warming is a consequence of an abnormal accumulation of CO2 in the atmosphere created by industrial plants and vehicles using oil or carbon as source of energy and thus producing the so-called *greenhouse effect*. As a result, the planet mean temperature is 1.5 centigrade higher today that it was before the Industrial Revolution. This Panel also declared that if the volume of CO2 in the atmosphere keeps accumulating at the same pace - pushed by permanent encouragement of economic growth, the planet

mean temperature may reach the level of 4 centigrade above pre-industrial temperature, before the end of 21th century, which would be catastrophic for both global ecology and socio-economic conditions of humankind.

The future of mankind

The future of mankind is uncertain and disturbing. It could be that we have reached a crossroads where it is still possible to choose a direction, or it could be too late, or perhaps the possibility to choose a historical direction was simply never part of human condition. We have no idea in any case. But gazing at the horizon from my mountain high dwelling facing the sea, I imagine humanity as if it were a fragile boat, sailing a rough and dangerous sea, sticking stubbornly to the same course. But where is it going?

We have gone beyond the time of dogmatic forecasts- Marxist, Comtien, Positivist, etc. However, extrapolating current world trends, it seems clear there are three courses open to this fragile boat (the possibility of going back to the past can be dismissed because of the inertial movements operating over the centuries). These three possible courses or scenarios we have called the *Apocalypse, the Brave New World* and *the Utopian.*

The apocalypse scenario

On the base of studies of the dynamic of systems (Meadows, 1976), researchers have been predicting for decades that an exponential worsening of the current global environmental crisis, particularly of global warming, coupled with the emergence of new world pandemics, famines, wars , massive human migrations, etc. - all of which being associated to the current environmental crisis, will unquestionably culminate in an acute and irreversible systemic chaos, or state of generalized entropy , of the social, economic and political world order, the consequences of which, in terms of human suffering, will be apocalyptic. To reiterate warnings that go back to several decades, this alternative seems not only possible but also highly probable. If the current pace of

change of the global variables is maintained, the world will find itself in the state we have described at some point of the second half of present century.

To end our examination of the Apocalypse scenario, we shall look briefly at the use of nuclear energy. From some decades this form of energy has been touted as the only realistic alternative in 21th century to fossil fuels, since these are being exhausted or making their polluting effects too obvious. From the conventional point of view, alternative sources, such as wind, solar power, tides, etc., cannot generate power on a large enough scale to satisfy the growing demand for power in a world conceived of by modern civilization as one of perpetual economic growth. However, the radioactivity released by disasters occurred not long ago in nuclear plants in Japan, USA and Russia will continue to affect the genetic system of plants, animals and people for centuries to come, which is as nothing compared to the escape of radioactivity from nuclear waste dumps which the hundreds of projected stations will necessarily release.

At the same time, the possibility of a nuclear war, which would swiftly finish off the human *genus,* in spite of the almost universal agreement that this would be the height of madness, has not disappeared, as some would like to think, with the end of the Cold War. Although many of the nuclear warheads capable of destroying almost all life on the planet have been disarmed, they can be rearmed at a moment's 'notice. At the present time it seems that the danger of a thermonuclear war was disappeared, but if take into consideration the resurgence of fanatical and powerful Islamic terrorist organizations, the emergence of new nuclear nations rival to the West, and certain new fascist tendencies in Europe, it seems unwise to discard completely a thermonuclear war.

Although many scholars naively try to forget the fact, this would not be the first time a great civilization has collapsed. The Greco-Roman Civilization is a well-known example. The difference lies in the magnitude of the factors at stake. In the case of Greco-

Romans the technology had no effect on the basic mechanisms of the biosphere, nor did it attempt to affect them. Also, the peoples who made up this civilization were limited to the European Continent and a few colonies in Africa and the Middle East. On the other hand, Western Modernity extends over almost the whole planet, affecting more than 6 billion people, and its technological power is affecting the very foundations of life on earth-human life not excluded. Hence the collapse of modern civilization would affect to a greater or lesser degree all nations and all types of life on the planet. This, of course, would be a quicker process of disintegration and fall of present civilization, if compared to the relatively slow process of disintegration and fall we have outlined.

Just as the collapse of Greco-Roman Civilization led to the European so-called Dark Ages, so the collapse of Modern Civilization would usher in a new Dark Ages, which according to Morin (1980) would have a planetary dimension. The period following a collapse of Modern Civilization would exhibit sociological characteristics of a Dark Ages, such as autonomous local centers of power being the norm rather than national governments as we have now. These centers would follow ethnic lines, or would be simply forms of defense for traditional communities. In relation with this we could also have permanent wars between these centers and between different mafias, as well as a general banditry. It is also probable that there would be a recrudescence of planetary epidemics similar to the plagues of the Middle or Dark Ages as a result of the decay or disappearance of international health controls. We would also predict that the middle classes would disappear and that poverty would be the normal way of life, including in countries of the so-called First World. As a result of all this, the world population would shrink dramatically. The perceptive reader will have realized that all of these features typical of the Dark Ages have already begun to appear, and though alarming they are so far in embryonic form. For instance, the resurgence of Islamic fundamentalism, the unprecedented power of mafias in Russia, the rampant increasing of crime in many big cities, the steady unemployment

and impoverishment of middle classes, etc.

However, although the collapse of Modern Civilization might appear terrifying, the survivors would at least preserve a human psychology. For after an initial period of chaos and uncertainty, they will eventually develop new foundational myths leading to new types of cultures. Thus, the fall of Modern Civilization might mean a drastic change in all areas, but nevertheless mankind would keep its human nature, which is not of minor importance as we will see next.

The brave new world scenario

The Myth of Techno-Scientist Raison lies in the collective mind of man of modernity as an unconscious archetype, just as the myth of divine power of Nature or God is present in the collective mind of members of cultures that differ from the modern. Hence man of modernity trusts blindly in the power of science and technology to control anything that threatens his world. From this it is obvious that in the mind of modern man the solution to all the problems arising from the natural or social environment are to be found in science and technology. *Its inexorable and predictable progress will put an end to all facets of the contemporary global crisis,* or so modern man feels. The logic of the Cartesian view of the cosmos that underlies the culture of modernity leads, at least in theory, to a total control of the *biosphere*. Hence *e*ventually science and technology will be able to replace the biosphere by the *Technosphere,* in which ecological problems are impossible. Taken to its last consequence, the Cartesian Science leads also to control even that non-tangible aspect of the biosphere represented by human soul, that is the emotions, feelings, thoughts, hopes, concerns, conscience, etc., that make up a human being.

Substituting the human brain and soul for mechanisms that are more efficient and pliable from the technological point of view, and achieving what we might call the *Rationalization of the Human Phenomenon,* is no longer the stuff of science fiction. Cybernetics is replacing the natural faculties of the

human brain with computers that are more powerful every day. Genetic engineers are right now in the position to mass-produce genetically pre-selected human beings by cloning. In a non-far away future, Biochemistry, Psycho-Pharmacology and Behavioral Psychology will be capable of conditioning totally the human soul, determining what moods, desires and tendencies in the individual are socially convenient and blocking those which are not. All of this, chiefly by ever-more efficient psychotropic drugs, creating consumer or political needs by subliminal and hypnotic suggestion on television radio, etc. A few more steps towards perfecting these social technologies and rationalizing of the human phenomenon, and modernity will have gained control over that subtle part of biosphere called human soul, in that it will control those psychic tendencies that cause social problems, such as rebelliousness, the critical or questioning spirit and the need of freedom. To sum up, from the perspective of modern man, the final and establishment of the kingdom of science and technology, apart from being the definitive triumph of Reason over Nature, will mean the end of all crisis that beset mankind, beginning the ecological crisis, the population explosion, hunger, poverty, maladies, unemployment, wars, crimes and even psychological depression, stress and spiritual emptiness. Would this not be a Brave New World?

Now, even after an apocalyptic disaster demolishing present civilization, people would certainly go on being human. But in that Huxleyan 'Brave New World', this option is ruled out. A world made up of beings created and manipulated by Technology, even if these beings were really happy, would not be a human world. And although this possibility seems too many to be far-reached or impossible, this is where the logic of modern culture is leading us. So, unless disaster intervenes to prevent this goal being reached, men will cease to be humans and become robots or elements of a system governed by the most perfect, efficient and irreversible totalitarian political system: *Technocracy.* By way of consolation to people like myself (and I am sure there are many like us), the possibility of a Brave New World is much less than that of the destruction of present civilization. If Aldous

Huxley did not see things this way, it was because when he wrote his famous novel (1932) he could not predict the ecological crisis of our time. Perhaps this is why in his novel, *John the Savage*, who represents the last real human being on earth ends up committing suicide in his refuge away from civilization.

The utopian scenario

A question arises: Is it realistic to avoid the apocalyptic destruction of civilization or the dehumanization of this creature ironically labeled Homo *sapiens?* Is there a third choice? We cannot say with any certainty, but on the basis of current trends, this possibility seems the least likely, or rather, it is utopian. Paradoxically, however, it is only a utopia that can save Humankind from extinction. Under these circumstances, utopia must cease being something unattainable and become an over-riding necessity. In the words of Edgar Morin (1980):

> All great changes, all great leaps forward, both in the history of life and the history of mankind, have been victories of the improbable. In the biological as well a is the social world, exponential curves sooner or later become 'S' curves, with the intervention of regulating forces that are either external (environmental pressures) or internal (self-control). Thus, the predicted collision course with catastrophe is no more than an abstract vision. Moreover, the apocalyptic warning is a concrete help in correcting the course (p. 273).

In our opinion, up to a point, there are reasonable grounds for believing that the ability of man to overcome our contemporary global crisis is realistic. Indeed, the self-correcting feed-back mechanisms of human species, which have worked in other periods of human evolution to avoid cataclysmic disasters, are fortunately starting to work today. As Berman (1987) rightly points out: "The emergence of holistic thinking in our time can be considered in itself as part of the process of self-correcting feed-back" (p. 187).

Bhutan or the path that leads beyond modernity

Before we analyze the case of Bhutan, let us say that there is no such thing as the *neutrality* of Technology and Science, for each culture develops its own type of technology and science in concordance with its own foundational myths and relative needs and social values. Furthermore, let us add that there may exist in future a specific type of technology and science corresponding to a Post-*Modernity Culture and Civilization.* Hence technology and science cannot be neutral. In this respect we have already explained that all of our world ecological and social problems are not, as commonly assumed, of technological nature, but rather of anthropological nature - or let us say it more precisely: of ethnological origin and nature. Hence the only way to escape from a global ecological and social catastrophe or of avoiding a dehumanized future, is by means of a radical change of the social values and foundational myths of present world civilization. Precisely this is what, essentially, a tiny and until very recently not well-known nation called the Kingdom of Bhutan or *Kingdom of the Thunder Dragon, is* modestly intending to do.

In 2008, a new Constitution was adopted by Bhutan democratic Parliament, in which a new paradigm of development, denominated Gross National Happiness or GNH Index has been introduced in place of the conventional Gross Domestic Product or GDP Index. This is the first time that a concept such as this has been established as a central *desideratum* in any national Constitution in the world. This concept has been defined by the Bhutanese themselves as a holistic and sustainable approach to development, which balances material and non-material values with the conviction that humans want to search for happiness. Gross National Happiness (GNH) is a global indicator of progress, which measures both sustainable economy and social development, while protecting the environment and culture. The GNH is a concept realized in Bhutan by the former king, who is known for challenging the conventional materialistic nations of humankind. It is based on four pillars and nine dimensions. The four pillars describe the promotion of sustainable development,

the preservation and promotion of cultural values, the conservation of the natural environment and the establishment of good governance. The nine dimensions are as education, psychological wellbeing, health, time-use, cultural diversity and resilience, good governance, community vitality, ecological diversity and resilience, and living standard (CBS, 2015).

Bhutan has pledged to remain CO2 neutral and to ensure that at least 60% of its landmass will remain under forest cover in perpetuity. In the last 20 years Bhutan has doubled its expectancy of life, enrolled almost 100% of its children in primary school and overhauled its infrastructure. Psychologist Adrian White, a researcher from Leicester University, published the World Map of Happiness (White, 2006). Bhutan ranked in it 8th, while USA was 23th, and other large countries included: China 82th, India 125th and Russia 167th. In 2012, the GNH concept has been endorsed at UN by 68 countries.

With the political implementation of the concept of Gross National Happiness, Bhutan entered the path that leads *beyond modernity*. This implies the development of a new kind of society characterized by *optimizing* instead of *maximizing* the variables that make up the social system. An *optimizing type of society* is a self-perfectioning homeostatic system, that tends to balance all the variables of the social system, while a *maximizing type of society* tends to what Bateson (1972) calls *cysmogenesis* or a state of permanent crisis (at all levels). This last is in the very nature of modernity, and is reflected by the exacerbated emphasis this culture puts on some specific variables of the social system, such as economic growth, industrial production and consumerism. The new kind of society Bhutan is trying to develop search for equilibrium, perfectioning and perpetuation of the *Great Global Ecosystem*, which comprehends both Nature and Society. To achieve this holistic ideal is the essential meaning of the *Myth of Eternal Return* or *Myth of the Self-Perfecting Circle*.

The question now is: can Bhutan's social experiment be replicated in other nations? Bhutan is a peculiar nation and so

can hardly be imitated. This country remained until about 1960 politically and economically secluded, and thus beyond western influences. In fact, television for instance, was introduced only in 2000. Besides, its population is less than one million, mostly living in rural areas, out of which 83% are of Buddhist according to 2015 GNH survey. Therefore, for its simplicity and small size, Bhutanese society is ideal for attempting this experiment. Nevertheless, whatever be the results of its experiment, Bhutan has become a light that may guide humanity to a new and happier World Civilization. In this sense, it is very significant that in 2012 a group of 68 nations at the UN endorsed Bhutan Gross National Happiness as a way to development. Finally, let's hope, that as was the case for some past natural species, our present human species can mutate, in our case culturally, in order to survive.

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Scientific Productivity and Citation Analysis of the Bhutan Journal of Research and Development, 2012-2019

*Lingchen Dorji**

Abstract

This paper uses bibliometric methods to study the status and development trends of the Bhutan Journal of Research and Development (BJRD). Firstly, the general characteristics of the journal are investigated through the analysis of descriptive statistics. Then, the subject matter of the articles are explored. Finally, the impact factor score and h-index of the journal are determined by using ISI's JCR formula and Harzing's Publish or Perish (PoP) citation analysis program.

Introduction

The Bhutan Journal of Research and Development (BJRD) is a peer-reviewed bi-annual research publication of the Royal University of Bhutan. The journal aims to advance research and scholarship in the fields of social, physical and biological sciences, and humanities relevant to Bhutan. The first publication of BJRD appeared in 2007 with 12 articles. However, the publication stopped for the next four years for "unknown" reasons. The journal resumed its publication in 2012. Since then the university has consistently published a total of 16 volumes of the journal spanning a period of 8 years from 2012 to 2019. Therefore, it is necessary to conduct a comprehensive analysis and summary of the journal from the perspective of bibliometrics. The lone publication of the year 2007 was excluded from this study due to the inconsistent nature of the material.

Bibliometrics is a set of mathematical and statistical methods

* Deputy Chief Librarian, Sherubtse college, Royal University of Bhutan

used to analyze and measure the quantity and quality of scientific publications (Durieux et al., 2010). Bibliometric analysis helps determine trends and patterns of scientific publications within a research discipline, identifying the focus of research and the national and international strengths and biases (May, 1997). Note that persons who spend their professional time doing science are called scientists or researchers (Rousseau et al., 2018). Thus, here and further on in this work the word "science" refers not only to the natural and biomedical sciences, but also to applied science, the social sciences and the humanities.

There are two types of bibliometric indicators: quantitative indicators that measure the research productivity of the publication and performance indicators that measure the quality of a researcher's output (Joshi, 2014). Bibliometric indicators are especially useful for researchers and organizations. Many of the appointments, promotions, deciding which grants are awarded, and even the fates of scientific institutions are based on these indicators. The most popular performance indicator in bibliometric studies is citation analysis. It was first developed by Eugene Garfield when his company, the Institute for Scientific Information (ISI), introduced the ISI Web of Science citation database and published the Journal Citation Report (JCR) in 1976 (Smith, 2009). Citation analysis is widely used to evaluate the performance of different actors in the academic and scientific arena, ranging from individual scholars (Hirsh, 2005; Egghe, 2006), to journals, departments, universities (Evidence Ltd., 2007), and national institutions (Kinney, 2007; Pouris, 2007), up to whole countries (King, 2004). Citations are the main factor determining the scientific impact of a journal, as expressed by the journal impact factor (Falagas et al., 2008). The journal impact factor (JIF), originally developed by Garfield and Sher (Garfield, 2006), is the average number of times articles from the journal published in the past two years have been cited in the JCR year by the total number of articles published in the two previous years. If, for instance, in 2015 the items issued in 2014 and 2013 by journal X were cited 100 and 150 times, respectively, and if the total number of citable items published

in that journal in 2014 and 2013 was 70, then the 2015 IF of journal X would be:

IF(X) =(100+150)/70=3.57

Another bibliometric indicator is the h-index, which is considered a counterpart to the journal impact factor. It was introduced by Jorge Hirsh in 2005 and is defined as follows: "A scientist has index h if h of his or her N_p papers have at least h citations each and the other (N_p – h) papers have ≤ h citations each (Hirsch, 2005). An h-index of 7 means that an author has published seven papers that each have at least seven citations. Another journal-level metric is the *immediacy index,* which indicates the speed with which items published in journals are cited in other literature (McVeigh, 2004). A high immediacy index indicates that the content of this journal is quickly noticed, highly valued and topical within the field of study (Davarpanah & Aslekia, 2008). Another index for measuring and comparing the output of scientific researchers is the g-index, which was introduced by Leo Egghe in 2006 as an improvement of the Hirsch-index (Woeginger, 2008).

Common bibliometric databases used for citation analysis include Web of Science, Scopus, Google Scholar, and PubMed (Falagas et al., 2008). Web of Science and Scopus are the most prominent citation index databases. They are owned by Clarivate Analytics and Elsevier respectively. Google Scholar has become a very popular alternative data source for citation analysis (Harzing & Wal, 2008; Delgado et.al, 2017). The most common way to calculate the h-index and other measures of impact from Google Scholar is to rely on "publish or perish" (PoP), a computer program developed by Anne-Wil Harzing which provides a graphical interface to Google Scholar data for bibliometricians (Baneyx, 2008; Dinkel, 2011).

Materials, methods and tools

This study systematically analyzes a total of 119 full-text articles

published in the Bhutan Journal of Research and Development (BJRD) from 2012 to 2019. First, the quantifiable bibliometric characteristics of the articles such as the year-wise distribution of the articles, article length, keywords, cited references and author details were compiled for analysis using descriptive statistics. Next, as BJRD was not indexed in Web of Science or Scopus, Google Scholar was chosen for the citation analysis of the articles. Harzing's Publish or Perish (PoP) software program was used for this purpose.

A Google Scholar (GS) query was carried out using the keywords "Bhutan Journal of Research and Development" in the Journal search box of Harzing's Publish or Perish tool and limiting the year of publication from 2012-2019. 76 articles were generated by PoP. Two of the articles did not belong to BJRD and were hence cleaned from the data. Therefore, the GS query returned an output of 74 articles published by BJRD. This constituted 62% of the total number of articles (119) published by BJRD between 2012 and 2019. These articles were retrieved by Google Scholar and PoP from the following URLs: http://www.rub.edu.bt; http://www.researchgate.net; and http://www.academia.edu.

There are many other software programs that are used for analyzing and visualizing bibliometric data. The popular ones include VOSViewer, BibExcel, Citespace, HistCite, CitNetExplorer, SciMat, and Sci^2 Tool. The data sources used by these tools are mostly Web of Science, Scopus, Crossref, or PubMed. The limitation of this study has been that these tools could not be used as BJRD was not indexed in any of these databases. Thus the data for the present study was analyzed using Google Scholar, Harzing's PoP, Excel 2016 and some basic features of Tableau 2020.

Results and discussion

Bhutan Journal of Research and Development published a total of 119 articles between 2012 and 2019 with an average of 7

articles per issue. It published a total of 16 volumes between 2012 and 2019 with an average of 15 articles per year (Table 1).

Table 1. *Year and volume wise distribution of articles*

Sl. No.	Year	Vol 1	Vol 2	No. of articles	% of records
1	2012	9	7	16	13.45
2	2013	7	6	13	10.92
3	2014	8	5	13	10.92
4	2015	6	22*	28	23.52
5	2016	5	6	11	9.26
6	2017	5	8	13	10.92
7	2018	5	6	11	9.25
8	2019	8	6	14	11.76
		Total		119	100

Note: *This special edition was printed as Spring 2015, Vol 4

BJRD published a special edition in 2015 with 22 articles. The research articles in this issue were predominantly devoted to Science and Technology and Engineering. Most of the contributing authors and institutions in this edition were from Japan. This special edition was also the issue with the highest number of articles (28), which constituted 23.52% of the total articles published in BJRD 2012-2019.

Page length

The page length of articles varied between 3 pages to 28 pages long. The typical articles in BJRD were those between 10-16 pages long which constituted over 65% of the total articles published in BJRD 2012-2019. The highest numbers of articles were those with 12, 10 and 11 pages long, which comprised of 22, 18 and 12 number of articles respectively.

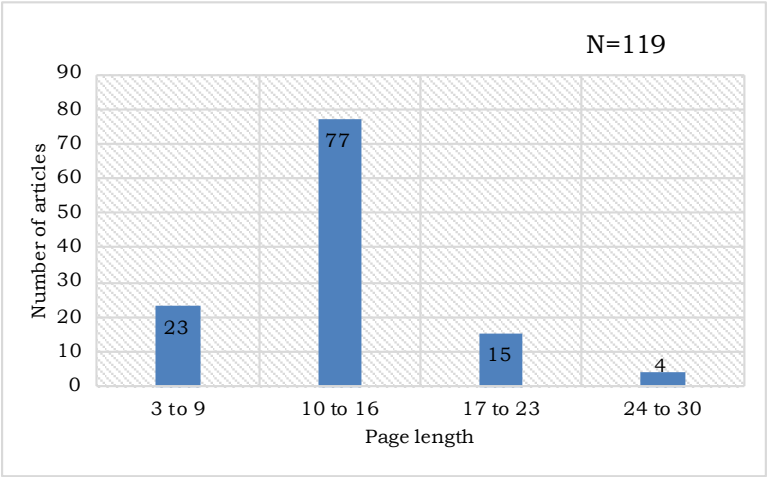

Figure 1. Article page length

Authorship pattern

A total of 228 authors contributed 119 articles to BJRD from 2012-2019. Gender wise, two-third of the authors were male and one-third (29%) was female. By nationality, 57% of the authors were Bhutanese nationals and 43% were foreign authors. The collected data showed that out of 119 articles, over 50% of the articles were contributed by single author, 17% by two authors, 15% by three authors, and 11% by four authors. The rest were collaboration of five or more than five authors (Figure 2). The rise in multiple authorship is indicative of the increase in the number of collaborative researches appearing in the journal over the past 8 years. This result is consistent with the findings of previous research conducted in the field (Lipetz, 1999; Weller, 2001; Schubert, 2002). Oromaner (1975) found an increasing relation between the number of authors and the number of citations received. Gordon (1980) proved that the probability of acceptance (of a submission to a journal) increases with the number of authors.

By occupational status, majority of the contributing authors were college/university professors, educators/lecturers, and

school principals/vice-principals and teachers. The other professional group included research officers, undergrad, PG, masters, and Phd students, Deans of colleges, professional counselors, engineers, project managers, directors from different organizations, forestry officers and some other practitioners from different fields.

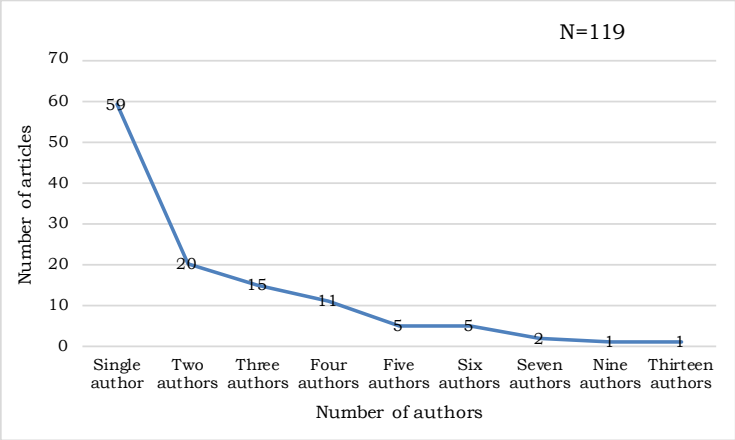

Figure 2. Authorship pattern

Ranking of authors

Figure 3 shows the ranking of authors who had published four or more than four articles (either as author or co-author) in BJRD 2012-2019.

The accumulated count for each author revealed the top 4 authors as T W Maxwell (8), Kezang Sherab (6), P.S. Waiba (4), and D.C. Gyamtsho (3). Twenty-five authors contributed at least twice to BJRD during the time of study (either as first author or as a co-author). This growth in author productivity was in conformation with Lokta's law of author productivity in bibliometrics, which states that the number of authors producing n contributions is approximately equal to $1/n^2$ of the number of authors that produce only one contribution (Bellis, 2009). In other words, for every 100 authors publishing a single study in a given field, 25 authors would have published twice.

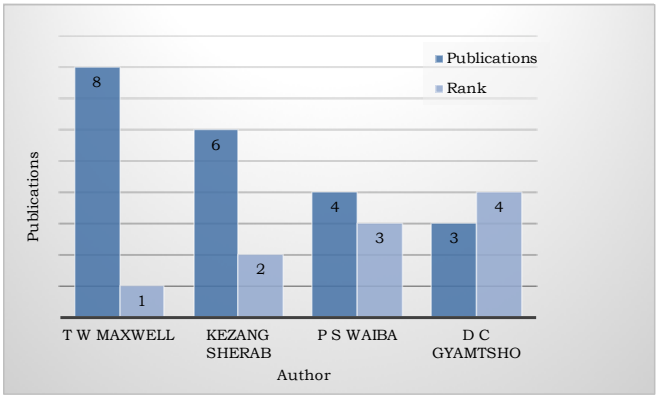

Figure 3. List of most prolific authors

Participating countries and institutions

Based on the collected data, an analysis of countries and their participating institutions was carried out to determine the distribution of countries/institutions in BJRD 2012-2019. As shown in Figure 4, 80 different institutions from 11 countries contributed articles to BJRD from 2012-2019: 34 institutions were from Bhutan, 22 from Japan, 6 from India, and 5 from Australia. The rest were from USA (3), Canada (2), Nepal (2), Netherlands (2), Norway (2), Finland (1) and South Africa (1).

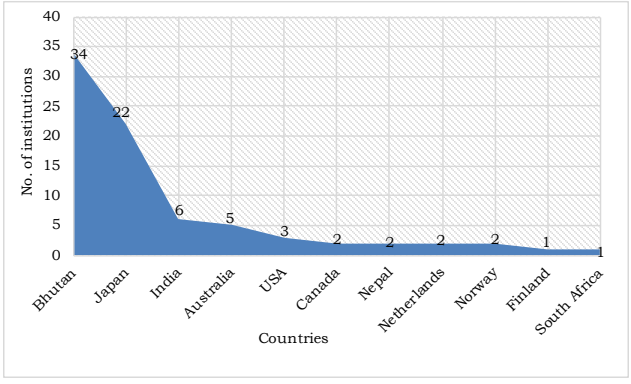

Figure 4. Countries and their participating institutions

The participating institutions included universities, colleges, schools, research institutions, business companies, and government ministries and departments.

Most productive institutions

Table 2 shows the list of most productive institutions which have contributed at least three articles to BJRD between 2012 and 2019.

Table 2. *Most productive institutions*

Institution	Frequency	Rank
Paro College of Education, RUB	18	1
Sherubtse College, RUB	13	2
Samtse College of Education, RUB	13	2
University of New England, Australia	8	3
Office of the Vice Chancellor (OVC), RUB	7	4
College of Language and Cultural Studies, RUB	6	5
Royal Thimphu College, Thimphu	6	5
Gedu College of Business Studies	5	6
College of Science and Technology, RUB	4	7
College of Natural Resources, RUB	3	8
Jigme Namgyal Engineering College, RUB	3	8
Naropa University, USA	3	8
Ministry of Labour and Human Resources, Bhutan	3	8

By institution productivity, Paro College of Education contributed the highest number of articles (18), followed by Sherubtse College and Samtse College of Education with 13 articles each. The University of New England, Australia ranked 3rd with 8 articles, followed by the Office of the Vice Chancellor (OVC), RUB (4th) with 7 article contributions. The College of Language and

Cultural Studies (CLCS) and Royal Thimphu College (RTC) each contributed 6 articles to BJRD during the period under study. Among the RUB colleges, Yonphula Centenary College (YCC) and Gyelpozhing College of Information Technology (GCIT) have not contributed any article to BJRD 2012-2019.

Citation distribution

Out of the 119 articles published in BJRD 2012-2019, 62% (74) articles were indexed in Google Scholar and 38% (45) were not indexed. Of these 74 articles, 31% (23) articles received a total of 94 citations over the period of eight years of BJRD publication. 69% (51) of the articles were never cited. The number of citations received by the articles ranged between 1-13 citations (Figure 5).

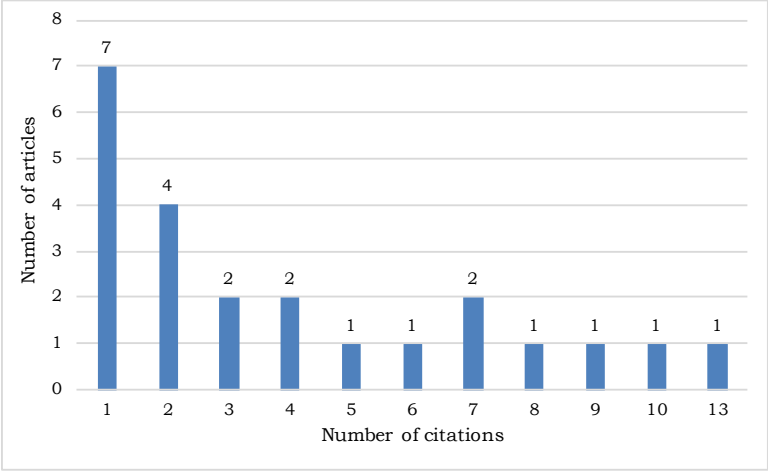

Figure 5. Citation distribution

Frequency of citation

The frequency of citation by year shows that BJRD articles published in the year 2012 received the highest (34) number of citations. The trend line then declined steadily over the years (Figure 6). This trend in BJRD was inconsistent with the findings of previous research conducted in similar fields (Lee, Cassano-

Pinché, & Vicente, 2005; Ogden & Bartley, 2007), whose works showed that the citation frequency in the journals they studied appeared to experience separate peaks at the interval of 3-4 years after publication. This trend in fluctuation of citation frequency was not observed in BJRD.

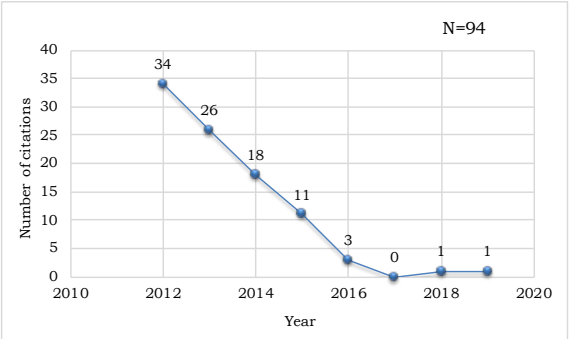

Figure 6. Frequency of citation

The BJRD articles published in the year 2017 did not receive any citation. The journal issues that were published in 2018 and 2019 received only one citation each. However, the citation forecast for the year 2020 and 2021 shows an upper confidence bound of 6.24 and 12.22 citations for 2020 and 2021 respectively (Figure 7).

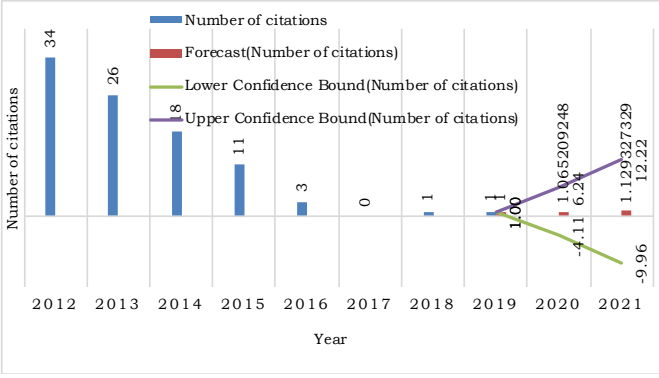

Figure 7. BJRD citation forecast for 2020 and 2021

Most cited authors

T.W. Maxwell was the most cited author in BJRD 2012-2019 with 18 citations to his articles. M.J. Schuelka ranked the second with 13 citations, followed by Rinchen Dorji (8), Deborah Young (7), and Kinley Dorjee (4). D C Gyamtsho, P.Ahonen, and P.Kucita each received four citations during the period under study (Table 3). It should be noted that self-citations were also considered as citations in this paper. According to Bellis (2009), self-citations are not an evil in themselves. Scientists usually cite their own earlier contributions upon which ongoing work is built, thereby reinforcing in the audience the sense of continuity between present and past accomplishments. Yet, beyond a certain threshold, they are suspected of deceitfully inflating the citation impact of the unit under assessment (paper, scientist, journal, institution).

Table 3. *List of most cited authors*

Author	Total Citations	Rank	h-index	g-index
T.W. Maxwell	18	1	3	4
M.J. Schuelka	13	2	1	1
Rinchen Dorji	8	3	2	2
Deborah Young	7	4	1	1
Kinley Dorjee	5	5	1	2
Deki C. Gyamtsho	4	6	1	1
P. Ahonen	4	6	1	1
P. Kucita	4	6	1	1

Most cited articles

Top-cited articles can provide insights into how research fields have evolved over time, and identify those researchers who have made high impact in a research field (Ho, 2012). Although citation rate is not a direct measure of the impact or importance of a particular scholarly work, it does provide a marker of its recognition within the scientific community (Shadgan et al.,

2010). Frequently, the best manuscript can be considered the one most cited in peer-reviewed journals (Robinson & Callen, 2010). BJRD articles that emerged as most cited were from the issues published in the year 2012 (4 articles), 2013 (1 article), 2014 (2 articles) and 2015 (1 article). The four most cited articles are given below:

1. Education for youth with disabilities in Bhutan: past, present and future by M J Schuelka - 13 citations

2. Improving the research output of academics at the Royal University of Bhutan: an action research reconnaissance and early initiatives by T W Maxwell & P Choeden - 10 citations

3. Implementation of Gross National Happiness in Bhutan: the case of an efficacious Zhabdrung Primary School by K Sherab, T W Maxwell and R Cooksey - 9 citations

4. Exploring 'disability' and 'inclusive education' in the context of Bhutanese education by R Dorji - 8 citations

It can be noted from Table 4 that the studies on 'education for disabilities' has caught a wider attention of scholars in 2013 and 2014. This implies that the researchers paid more attention to this topic in that time. Other popular subject matter included research promotion at the Royal University of Bhutan, implementation of Gross National Happiness education, enhancement of teaching pedagogy, study of zoological species, and research in Bhutanese linguistics.

Table 4. *Most cited articles*

Cited title	Author	Year of publi-cation	No. of citations
Education for youth with disabilities in Bhutan: Past, present, and future	M.J. Schuelka	2013	13
Improving the Research Output of Academics at the Royal University of Bhutan: A Reconnaissance and early initiatives	T.W. Maxwell and Phintsho Choeden	2012	10
Implementation of Gross National Happiness Education in Bhutan: The case of an efficacious 'Zhabdrung' Primary School	Kezang Sherab, T.W. Maxwell and Ray W. Cooksey	2014	9
Exploring 'Disability' and 'Inclusive Education' in the Context of Bhutanese Education	Rinchen Dorji	2015	8
Odonata of Samdrup Choling Dungkhag in Samdrup Jongkhar, Bhutan	Mitra et al.	2012	7
How we teach versus what we teach: Why a contemplative critical pedagogy is central to Bhutan's success as a GNH democracy	Deborah Young	2012	7
The impact of the Bhutanese Multigrade Attachment Program (BMAP)	T.W. Maxwell	2012	6
Linguistic landscape of Bhutan: An overview of number of languages, language policy, language education, and language use in Bhutan	Kinley Dorjee	2014	5

Analysis of high-frequency keywords

Keyword analysis is a type of content analysis that uses quantitative description to analyze the content of scientific or other types of articles (Kassarjian, 1977). Keywords are used to highlight the central focus of a given paper and are also useful for readers to learn its main researching contexts (Jin et al., 2019). Thus, keywords in BJRD articles were also explored and analyzed to demonstrate the keywords with a high frequency as well as keyword relationships. One-fourth (29) of the BJRD articles lacked any keywords at all. Most of these articles were from the 2012 and 2013 publications. However, the number of papers without keywords decreased from five in 2014 to three in 2016. It seems that from 2017 onwards, the provision for keywords in BJRD articles was made a requirement. The scenario has since changed with all the articles published from 2017 to 2019 containing the keywords. As many journals and citation databases these days require authors to supply keywords for their articles, this practice by BJRD is likely to persist in the future.

A total of 429 keywords were studied from 90 articles which contained the keywords. The threshold of the keyword frequency was set at 2 and 17 out of these 429 keywords were filtered, as described in Figure 8. Same word carrying different meanings in two different papers (e.g. integration) was filtered from the list to avoid any inaccuracy in the result.

Apparently, the core keyword of the journal papers was 'Bhutan'. The result indicated several key topics attracting wide attention, which can be related to different dimensions, such as higher education (students, competence, service quality, unemployment); education (action research, efficacy, competency), and Gross National Happiness (Gross National Happiness education, perception, policy). The interrelationships among these keywords is helpful for understanding and reflecting the knowledge structure and developing trends of research domains in BJRD.

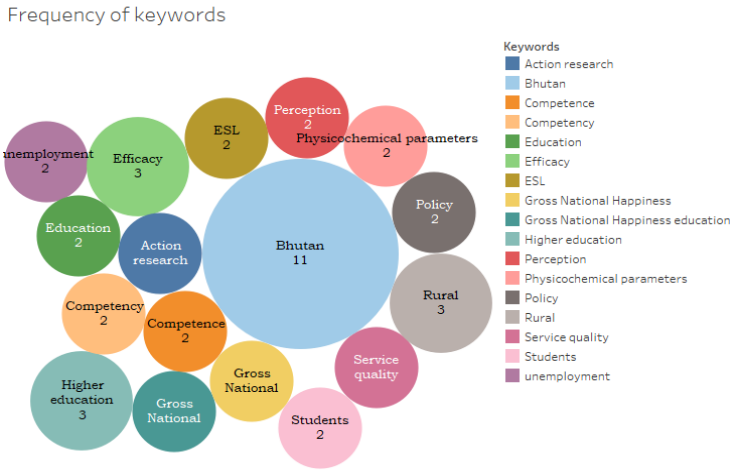

Figure 8. Frequency of keywords in BJRD 2012-2019

Number of bibliographic references

The 119 articles published in BJRD during the period under study contained a total of 2981 bibliographic references. The number of references in each article ranged from 3-98 references in an article. The typical papers in BJRD were those that cited between 11-20 references (34) [Figure 9]. This was followed by those that cited between 21-30 reference (28). Twenty-one BJRD articles contained 10 or less references. Majority of these papers belonged to the field of science and technology. This shows that research in the field of social sciences and humanities tend to cite more reference as compared to those in the field of science and technology.

Of the total 2981 bibliographic references 15% were from Bhutanese sources, which consisted of journal papers, books, reports, magazines, newspapers and websites. 85% of the references were cited from international journals and other sources. From the perspective of reference in general, the self-citation rate was relatively high among many of the BJRD

authors.

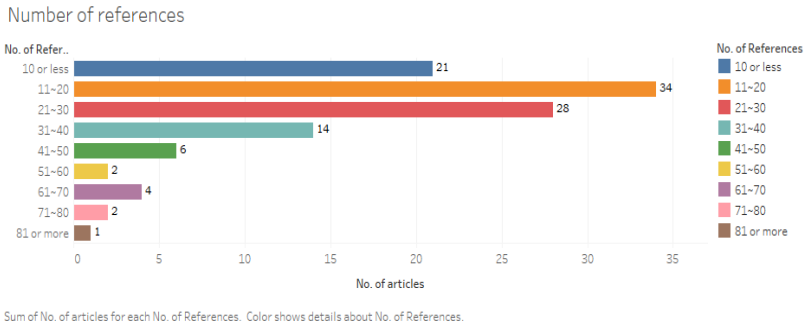

Figure 9. Range of number of references with number of articles

Impact factor

Garfield's journal impact factor (JIF) provided in ISI's Journal Citation Reports (JCR) continues to be one of the most widely used and understood journal-level metrics.

The two-yearly impact factor of BJRD (calculated in the consecutive third year) was found out to be 2.068 in 2014, 1.692 in 2015, and 0.707 in 2016. The overall impact factor was 0.842 (Table 5). The immediacy index for 2014, 2015 and 2016 was 1.384, 0.392 and 0.272, respectively. Because many articles take more than a year to start generating citations by other scholarly works, immediacy indices for journals tend to be quite low, with few reaching higher than a value of 1.000.

What is a good impact factor? Gann (2019) observed that out of 12,298 journals tracked by the JCR (in 2017), only 239 titles, or 1.9% of the journals tracked by JCR, have a 2017 impact factor of 10 or higher. The top 5% of journals have an impact factor approximately equal to or greater than 6 (610 journals). 39.4% have impact factor equal to or greater than 2 (4840 journals), and approximately two-thirds of the journals (8757) have a 2017 impact factor equal to or greater than 1. It can be observed from Table 5 that BJRD's impact factor score was greater than 2 and

greater than 1 in 2014 and 2015, respectively. The impact factor has decreased to less than 1 from 2016 onwards.

Table 5. *Impact factor for BJRD 2012-2019 by year*

Journal/ publication year	Total citations received in the past two years	Total number of articles published in the past two years	Impact factor	Immediacy index
BJRD 2012	-			2.125
BJRD 2013	-			2
BJRD 2014	60	29	2.068	1.384
BJRD 2015	44	26	1.692	0.392
BJRD 2016	29	41	0.707	0.272
BJRD 2017	14	33	0.424	0
BJRD 2018	3	24	0.125	0.090
BJRD 2019	1	24	0.041	0.090
Overall			0.842	0.621

It is important to note that the scientific worth of an individual article is not measured by the impact factor of a journal. According to Garfield (2003), "What one means by quality can vary. There are undoubtedly some high quality articles that appear from time to time in low impact journals, but human behavior being what it is, scientists generally know when they have something really important to report, and send those articles to the better known, higher impact journals" (p. 365). Thus, a great number of literature (Wolfram, 2003; Ogden & Bartley, 2007; Petsko, 2008; Simons, 2008) has criticized the impact factor (IF) for its bias, limitations and contradictions.

The faults manifested by the journal IF when applied to research evaluation has pushed scientists to adopt an equally handy but hopefully less biased indicators of individual research achievement (Bellis, 2009). This is the h-index proposed by Jorge Hirsh in 2005. The advantage of h-index over impact factor is

that the Hirsch's measure provides a joint characterization of both productivity and cumulative research impact of a paper. In other words, it combines an assessment of both quantity (number of papers) and quality (impact, or citations to these papers) (Glanzel, 2006).

H-index

H-index is calculated by using the number of articles an author has published to date (*h*) to determine a citation count threshold, which the author's articles must meet or pass over (also *h*) to be included as part of the index (Roemer & Borchardt, 2015). Thus, if a researcher has published 50 articles over the course of his/her career, and if 20 of those papers have been 20+ times, his/her h-index would be 20. If any of the other 30 papers with less than 20 citations receive 21 or more citations in the future, the h-index will correspondingly increase. The more prolific the author, the higher the potential for the final index value. This index cap can be frustrating for junior academics, whose h-indexes may appear low, despite having authored one or more articles that have generated a very high number of citations. Thus, Harzing (2011) recommends that for junior academics, the impact factor of the journal they publish in might be a more realistic measure of eventual impact. She states that the h-index should, however, provide a more realistic assessment of the academic achievement of academics that have started publishing at least 10 years ago.

Table 6. *Results of BJRD 2012-2019 analysis using Harzing's PoP*

Metrics	Result
Publication years	2012-2019
Citation years	8 (2012-2020)
Papers	74
Citations	94
Cites/year	11.75
Cites/paper	1.27

Metrics	Result
Authors/paper	2.39
h-index	6
g-index	8
hI, norm	5
hI, annual	0.63

The h-index of BJRD 2012-2019 was 6 with an average of 11.75 cites per year, 2.39 authors per paper and 1.27 cites per paper (Table 6). Hirsh (2005) indicates that there will be large differences in typical h-values in different fields. As a general rule of thumb h-indices are much higher in the Natural Sciences than in the Social Sciences and Humanities, although there is a large variability even within these fields. He estimated that after 20 years a "successful scientist" would have an h-index of 20, an "outstanding scientist" would have an h-index of 40, and a "truly unique" individual would have an h-index of 60.

Conclusion

This study presents a bibliometric analysis of the Bhutan Journal of Research and Development (BJRD) over the period 2012-2019 and provides helpful insights into the distribution of articles, page length, authorship patterns, distribution of countries and institutions, citation analysis, and content analysis of the journal. The results of the analysis produce the following major findings:

a. BJRD published a total of 119 articles between 2012 and 2019 with an average of 15 articles per year.

b. The typical articles in BJRD were those between 10-16 pages long which constituted over 65% of the total articles.

c. A total of 228 authors contributed articles to BJRD from 2012-2019. 57% of the authors were Bhutanese nationals

and 43% were foreign authors.

d. 50% of the articles were contributed by single author and the rest 50% were collaboration between two or more than two authors.

e. The most prolific BJRD authors were T.W. Maxwell, Kezang Sherab, P.S. Waiba, and D.C. Gyamtsho. Twenty-five authors contributed at least twice to BJRD during the time under study.

f. Eighty different institutions from 11 countries contributed articles to BJRD from 2012-2019.

g. Paro College of Education contributed the highest number of articles to BJRD 2012-2019, followed by Sherubtse College and Samtse College of Education.

h. BJRD received a total of 94 citations over the period of 8 years of its publication.

i. The trend line in the citation frequency of BJRD showed no peaks in citation in any of the succeeding years after its publication.

j. The most cited authors in BJRD were T.W. Maxwell, M.J. Schuelka, Rinchen Dorji, Deborah Young, Kinley Dorjee, D.C. Gyamtsho, P. Ahonen, and P. Kucita.

k. The most cited article in BJRD was "Education for youth with disabilities in Bhutan: past, present and future" by M.J. Schuelka.

l. The most frequent keywords used in BJRD were Bhutan, rural, higher education and efficacy.

m. BJRD 2012-2019 contained a total of 2981 bibliographic references. 15% of the references were cited from Bhutanese

sources and 85% were cited from international sources.

n. Self-citation rate was relatively high among BJRD authors.

o. The impact factor of BJRD was 2.068 in 2014; 1.692 in 2015; and 0.707 in 2016. The overall impact factor of BJRD was 0.842 as of April 2020.

p. The h-index of BJRD was 6 as of April 2020.

This paper has attempted to raise awareness on the research trends pertaining to the scientific productivity and characteristics of BJRD through the bibliometric analysis.

For a career academic, it is essential that these metrics be understood accurately and in context by administrators and faculty members who may not be familiar with a given researcher's discipline or sub-discipline. Otherwise, a lack of understanding may lead to unfair comparisons to highly disparate fields when used for high-stake evaluative situations like applications for tenure, promotion and research funding. It is hoped that this analysis can help scholars better understand the academic trends, trigger more research interest, and help make informed decisions for future works.

Currently, the most authoritative and comprehensive sources of bibliometric impact measurement of scholarly journals are Web of Science, Scopus and Google Scholar. Sadly, few institutions can afford to publish in, or subscribe to Web of Science or Scopus. In order to expand the visibility and improve the impact factor of BJRD, it is recommended that the journal be made available through a wider network of free or low-cost web-based bibliometric (or its recent counterpart, altmetrics) tools. Some of these citation databases are Open Science Index, Semantic Scholar, Zenedo, openAIRE, BASE, Sherpa/Romeo, Mendeley, Microsoft Academic, Altmetric.com, and Dimensions.

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The Legislative Capacity of a Small-State Parliament: An Analysis of the Parliament of Bhutan

*Gerard W. Horgan**

Abstract

As part of its decades-long transition from absolute- to constitutional- monarchy, the Himalayan Kingdom of Bhutan in 2008 established a new, bicameral, parliament. Very little analysis has been conducted on this institution; this article begins to fill this lacuna by investigating the legislative potential of the parliament, and placing it in the comparative context of parliaments in other 'small' states. Embracing Arter's distinction among studies of legislative capacity, operation and performance, the article pursues the former, using aspects of Lijphart's work as an organizational framework. The analysis reveals a first chamber designed along majoritarian lines, and which, due to its small size, cannot be expected to exhibit great legislative capacity. However, it also reveals a second chamber that, while small, is both 'symmetrical' and 'incongruent', and that therefore greatly enhances the overall legislative capacity of the parliament, and boosts its comparative position among parliaments of small states.

Introduction

In 2008, the Himalayan Kingdom of Bhutan took two significant steps in its decades-long transition from an absolute monarchy to a constitutional monarchy. First, the country established a bicameral parliament; second, that body then endorsed the new, democratic constitution that had been years in the making. In 2013 and 2018 subsequent parliamentary elections took place, which resulted in smooth transfers of power in both cases. While there exist small literatures on Bhutan's democratic transition

* Department of Political Science, St. Thomas University, 51 Dineen Drive, Fredericton, N.B., Canada E3B 5G3. Email: gehorgan@stu.ca

(For example: Gallenkamp, 2010; Sonam Kinga, 2010; Masaki, 2013; Turner, Sonam Chuki, & Jit Tshering, 2011; Turner & Jit Tshering, 2014) and on the new constitution (For example: Lungten Dubgyur, 2008; Lee, 2014; Sonam Tobgye, 2015), very little analysis has been carried out on the new parliament itself. This paper will begin to fill this lacuna, by investigating the legislative capacity of this institution, and placing it in the comparative context of 'small' parliaments in other 'small' states.

We proceed in the following manner. After setting the framework for the study, we consider the new Bhutanese political system from four perspectives: the party system, the degree of concentration of executive power, executive-legislative relations, and the electoral system. In each area, we consider what these tell us about the legislative potential of the parliament, and, in particular, the first chamber, i.e. the National Assembly (NA). We then consider the division of legislative power between the NA and the second chamber, the National Council (NC). We will find that this final perspective provides a quite different outlook on the legislative potential of the parliament, as opposed to considering the NA alone. We end with some concluding comparative notes.

Framework

Arter has reasonably succinctly set out the difficulties involved in comparing legislative bodies:

> The problems of comparing democratic assemblies are legion. Legislatures operate in countries with differing regime histories, differing constitutional rules and represent societies that differ, sometimes appreciably, in structure, wealth and wellbeing. They display differing levels of institutional development, work according to differing rules of procedure and function in polities with differing degrees of executive stability. They may for convenience be 'clustered'... but each has its own individuality and distinctive legislative culture. (Arter,

2006, p. 247)

In the case of Bhutan, just a few of its characteristics would serve to highlight the potential pitfalls: it was only in the first decade of the 21st Century that it completed a transition from absolute monarchical rule to constitutional democratic rule; its transition was initiated internally and from above – by the monarchy itself – rather than externally or from below; it has no history of colonization, and thus no externally imposed inheritance of a particular model of democratic structure; it is the only country to hold the Vajrayana version of Mahayana Buddhism as its state religion.

Despite the difficulties, however, Arter does not counsel despair. He noted three streams in legislative studies research: work on the 'legislative capacity' of parliaments, which deals with the inputs that give such bodies 'differential potential'; work on the 'legislative operation' of a parliament, which deals with processes of 'the way parliaments work in practice'; and work on the 'legislative performance' of parliaments, dealing with the outputs of such bodies, which then allows classification based on 'policy power or influence in the policy process' (Arter, 2006, pp. 249-250). The present paper proceeds from the view that work on the latter two of these areas, the last most particularly, for any specific legislature, is to a significant degree dependent upon a prior understanding of the first area. That is, work on the superstructure – operation and performance – can only proceed once the foundation – an understanding of the likely capacity – has been established.

Legislative capacity may be conceived of as a legislature's 'potential to make decisions independently of the executive' (Arter, 2006, p. 248). This capacity can be affected by a variety of factors, ranging from the 'macro' level – such as constitutional rules themselves, or the structure of the legislature – to the 'micro' level, including legislative enactment procedures, or the existence and rights of legislative committees. In combination, these factors can provide greater or lesser potential for the

legislature to initiate and pass legislation on its own, or effectively to scrutinize or influence legislative initiatives of the executive. Thus, an evaluation of a legislature's capacity begins with an evaluation of this constitutional and institutional context. This, then, is the primary purpose of this paper: to investigate the legislative capacity of the new Bhutanese parliament.

It will not be sufficient, however, to consider the Bhutanese parliament in isolation. A secondary aim of the paper is to place this institution in a comparative context. Keeping in mind Arter's cautionary note, we will nevertheless seek to situate the Bhutanese parliament in the realm of systematic inquiry. To do so, we will utilise the relevant parts of one of the broadest and most well-recognised frameworks in comparative politics, i.e., the variables identified in Lijphart's work on majoritarian and consensus democracy (Lijphart, 1984, 1999, 2012). Why this framework? First, Lijphart investigated many of the sorts of macro-constitutional and institutional structures and arrangements that are germane to the determination of legislative capacity. Second, he used a variety of standard measures in his work, producing scores for, in his later books, the legislatures of 36 democracies; these scores provide useful benchmarks for comparison. Third, the data in the latest edition of his *Patterns of Democracy* overlap the period in which Bhutan's parliament was established, thus aiding in the comparisons.

One further aspect of our comparisons is worthy of note. As Arter noted, 'clustering' of cases for comparison is common practice. The unusual character of Bhutan as a country makes this particularly challenging. There is one category into which, however, both the country and its parliament clearly fall: they are small. It is of course the case that, as is well-documented by Maass, agreement on what constitutes a 'small' state has been elusive (Maass, 2009). However, Bhutan would count as 'small' on any of the most commonly used quantifiable criteria surveyed by Maass. It is small in population terms, numbering about 750,000; it is small in geographical size, comprising approximately 38,000 km^2, i.e. between the sizes of Switzerland

and Belgium; and it is small in economic terms, its annual Gross Domestic Product (GDP) amounting to approximately $US 2.5 billion, or about 0.003 percent of global GDP (United Nations, 2019). For our purposes, we have used the most common criterion – population size – to select those states present in Lijphart's work for which we will provide comparable data. These include: Trinidad and Tobago, and Mauritius, both with populations greater than Bhutan, but under 1.5 million; and the Bahamas, Barbados, Iceland, Luxembourg, and Malta, all with populations smaller than that of Bhutan.

Corresponding to its population size, Bhutan's parliament – currently comprising 47 and 25 seats for the first- and second-chambers, respectively – is relatively small. Its total membership of 72 places it as the ninth smallest of the 79 bicameral legislatures in the Inter-Parliamentary Union (IPU) database; most of the eight smaller bicameral legislatures belong to very small Caribbean island states (Inter-Parliamentary Union, 2019b).

This fact is relevant because comparative research has repeatedly shown that the size of a legislature has pervasive effects on its legislative capacity, operation, and performance (See for example: Chen & Malhotra, 2007; Rush, 2013; Stone, 1998; Thomas & White, 2016; White, 1990). While a myriad of other factors will ultimately affect a legislature's performance, the size of the membership may be considered a key factor affecting the ability of a legislature to act independently of the executive. As this is intrinsic to what we have defined as 'legislative capacity', it is an appropriate factor around which to organize our comparisons.

To summarise, then, we will be attempting to characterise the legislative capacity of the Bhutanese parliament, and place it in a comparative context. To do so, we are using aspects of Lijphart's work as an organizational framework. We will be focussing on a range of standard measures, taking particular note of comparable data on small, democratic states.

Party system

The first of Lijphart's variables to be considered is the party system, the two poles of the variable being a two-party system and a multi-party system (Lijphart, 2012, pp. 60-78). We shall discuss below the detail of the electoral system used for the NA, but at this point it can be summarised as a two-round system, in which the 'Primary' round serves as the elimination round, with only the two highest polling parties in that round permitted to compete in the 'General' round. Thus, the electoral system enforces a two-party system in the NA. That said, however, it is worth considering the party outcomes in more detail, using the measure set out by Lijphart, i.e. the Laakso-Taagepera index (Laakso & Taagepera, 1979), as this will highlight the changes in the outcomes of the first three general elections.

The Laakso-Taagepera index of the effective number of parties is calculated as:

$$N = 1/\Sigma s_i^2$$

in which s_i is the proportion of seats of the *i*-th party. Using this index, a chamber that had an equal number of members from each of two, and only two, parties, would score exactly 2.0.

In 2008, the Druk Phuensum Tshogpa (DPT) won 45 of the 47 NA seats, while the People's Democratic Party (PDP) won the remaining two seats (Election Commission of Bhutan, 2015, p. 20). This lopsided result produces an index of 1.09, indicating the degree to which the chamber approached a one-party system. In the subsequent general elections, however, the results have become progressively more balanced. In 2013, the DPT won only 15 seats, and the PDP 32, producing an index of 1.77; in 2018, the DPT won 17 seats, while the Druk Nyamrup Tshogpa (DNT) won 30, for an index of 1.86 (Election Commission of Bhutan, 2015, p. 73; 2018a, p. 3; author's index calculations).

To compare the Bhutanese figures with those of the countries studied by Lijphart, we compute the mean of our figures for the

three elections, i.e. 1.57. Unsurprisingly, this places Bhutan among the democracies with the fewest effective political parties: the mean for all countries in Lijphart's study was 3.19, and only five countries had mean indices lower than 2.0 (Lijphart, 2012, pp. 73, 75). As Table 1 indicates, four of those five are members of the small state group we have identified above. Table 1 also indicates the degree to which the effective number of parties is associated with majoritarian (MAJ) versus proportional (PR) electoral systems.

Table 1. *Effective number of parties in selected small states*

Country (Elec. Sys.)	Effective parties	Country (Elec. Sys.)	Effective parties
Bahamas (MAJ)	1.69	Iceland (PR)	3.72
Barbados (MAJ)	1.68	Luxembourg (PR)	3.48
Mauritius (MAJ)	2.85	Malta (PR)	1.99
Trinidad (MAJ)	1.87		
Mean	2.02		3.06

Source: Inter-Parliamentary Union, 2019b; Lijphart, 2012, pp. 74-75.

If the 2008 election was an outlier, whose extreme result will not be repeated, one would anticipate that the Bhutanese mean would move closer to that of the other countries using majoritarian electoral systems. However, given that the electoral system used for the NA will always produce two parliamentary parties, the Laakso-Taagepera index will always fall between 1.0 and 2.0.

What implications does this have for the legislative capacity of the parliament? It is an initial indicator that Bhutan's new political system has been designed to lean toward the majoritarian, as opposed to consensus, model of democracy. By extension, as the former model is typified by executive dominance of the legislature, it is an indicator that the legislative capacity of the parliament may be impaired.

Concentration of executive power

Regarding support base, coalition theory sets out a three-fold classification: minimal winning cabinets, oversized cabinets, and minority cabinets (Lijphart, 2012, pp. 79-80). Of the 'minimal winning' type, the single-party majority cabinet is the most majoritarian of the possibilities. Looking across the 36 democracies in his analysis, over the period 1945-2010, Lijphart found only five countries that always had minimal-winning cabinets of the single-party type: Bahamas, Barbados, Botswana, Jamaica, and Malta (Lijphart, 2012, pp. 98-100).

As Table 2 demonstrates, minimal-winning cabinets are more prevalent in the small states included in Lijphart's study than in the overall group; this is true, as the figures for Iceland and Luxembourg indicate, even where a 'Westminster' heritage is absent.

Table 2. *Proportions of time during which minimal winning and one-party cabinets were in power, 1945– 2010*

Country	Minimal winning (%)	One-party (%)	Mean (%)
Bahamas	100.0	100.0	100.0
Barbados	100.0	100.0	100.0
Iceland	90.3	2.3	46.3
Luxembourg	90.8	0.0	40.4
Malta	100.0	100.0	100.0
Mauritius	30.6	0.0	15.3
Trinidad	99.2	89.5	94.3
Mean	*87.3*	*56.0*	*70.9*
36 Country Mean	64.2	56.4	60.3

Source: Lijphart, 2012, pp. 99-100.

The institutional design of the Bhutanese system means that it will join the select group of countries that always have

single-party majority governments. Even under extraordinary circumstances of 'national crises', the constitution prescribes only that the 'Opposition Party shall aid and support the government', rather than entertaining the possibility of a formal coalition government (Bhutan, 2008a, Article 18, s.6).

As to legislative capacity, this concentration of executive power provides a further indication that the NA is likely to be executive-dominated.

Executive-legislative relations

Lijphart identifies three characteristics of parliamentary government that distinguish it from other types (Lijphart, 2012, pp. 106-107). The first of these is that the head of government and cabinet are responsible to the legislature, and can be dismissed at any time via the equivalent of a vote of no-confidence. This is indeed the case for the NA, as set out in various articles of the constitution ((Bhutan, 2008a, Article 10, s.24, Article 17, ss.6-7). While the details do not affect the classification, it is worth noting that the bar is set quite high for a successful no-confidence vote. Although it only requires a vote of one-third of the total members of the NA to trigger a no-confidence vote, success in the vote itself requires support of two-thirds of the membership (Bhutan, 2008a, Article 17, ss.6-7).

The second characteristic noted by Lijphart is that the head of government is selected by the legislature, rather than via popular vote (Lijphart, 2012, p. 107). The investiture of the government may be accomplished in a number of ways, including, for instance, a formal investiture vote in the lower chamber. Bhutan follows instead the general practice in the 'Westminster' tradition, in that it is the King who appoints as Prime Minister the leader, or nominee, of the party that has won the majority of seats in the NA (Bhutan, 2008a, Article 17, s.1). For greater certainty, the constitution also notes that a 'candidate for the post of Prime Minister… shall be an elected member of the National Assembly' (Bhutan, 2008a, Article 17, s.4).

Lijphart's third characteristic is that 'parliamentary systems have collective or collegial executives' (Lijphart, 2012, p. 107). The Bhutanese constitution sets out that this shall be the case; Article 20 notes both that 'The Executive Power shall be vested in the Lhengye Zhungtshog [Cabinet] which shall consist of the Ministers headed by the Prime Minister', and that the 'Lhengye Zhungtshog shall be collectively responsible to the Druk Gyalpo [King] and to Parliament' (Bhutan, 2008a, Article 20, ss. 2, 7).

Lijphart goes on to use cabinet durability as a measure of executive dominance of the legislature in parliamentary systems (Lijphart, 2012, p. 117*ff*.). Two Bhutanese cabinets have completed their terms in office to date: that of Prime Minister Yigme Thinley (9 April 2008 - 29 April 2013) that had a duration of 5.06 years; that of Prime Minister Tshering Tobgay (27 July 2013 - 9 August 2018), that had a duration of 5.04 years (Bhutan. Office of the Prime Minister and Cabinet, 2019). As indicated in Table 3, the mean of these two figures, 5.05, is below both Lijphart's overall mean and the mean for our selected group of small states. However, as only two data points offer limited guidance on this critical point, we shall consider another indicator.

Table 3. *Mean cabinet duration in selected small states, 1945–2010*

Country	Mean cabinet duration (years)
Bahamas	9.44
Barbados	8.87
Iceland	3.20
Luxembourg	5.87
Malta	8.85
Mauritius	2.39
Trinidad	6.95
Mean	6.51
36 Country Mean	5.35

Source: Lijphart, 2012, pp. 120-122.

An alternative way of thinking about the potential for executive dominance, not surveyed by Lijphart, is particularly relevant to smaller legislatures (Rush, 2013, pp. 183-185). This is the ratio of members of parliament who are also members of the executive, to those members who are not. In smaller legislatures, having a relatively high proportion of the membership in the executive leaves a smaller proportion available for executive scrutiny.

Bhutan currently has 10 departmental ministries, in addition to the Prime Minister (Bhutan. Cabinet Secretariat, 2019). The constitution prescribes that any change to the number of ministries must be approved by parliament, and that 'Ministries shall not be created for the purpose only of appointing Ministers' (Bhutan, 2008a, Article 20, s. 2). The latter provision appears to have been designed specifically to prevent the use of increases in the size of the ministry as a strategy to undermine scrutiny (Sonam Tobgye, 2015, p. 229).

Rush suggests that, in larger parliaments, the executive normally constitutes less than 20 per cent of the total membership (Rush, 2013, p. 184). However, of the 36 small legislatures that he surveys, in more than 85 per cent of the cases the executive constitutes more than 20 per cent, and ranging up to 69 per cent, of the membership. In Bhutan, the executive currently constitutes 23.4 per cent of the Assembly, but constitutes only 15.3 per cent of parliament overall. In comparative terms, it is in a relatively good position in this regard.

The picture painted by this section is of an unequivocally parliamentary system in which the Assembly, due to the constitutionally entrenched high bar for no-confidence votes, will find it very difficult to dislodge the executive. It will thus be left to a force external to the parliament – the voters of Bhutan – to prevent long-lasting cabinets; voters have embraced this responsibility in 2013 and 2018, by dismissing the first two elected cabinets after only one term each. The constitution does, however, provide parliament with the internal ability to prevent erosion of its current position regarding the proportion

of ministers in the NA. Thus, to the degree that defending the current balance in the NA *vis-à-vis* the executive is linked to the maintenance of parliament's current legislative capacity, the latter is in the hands of parliament itself.

Electoral system

As the method for choosing the members of a legislature is consequential for that body's legislative capacity, we need to consider this subject here. We will begin with a brief sketch of the system used for NA elections; we discuss the system used for NC elections in a subsequent section.

General elections for the NA use the single-member plurality or 'first past the post' method (The fundamental framework for National Assembly elections is set by the constitution: Bhutan, 2008a, Article 12, s. 1, & Article 15, ss. 5-8). However, prior to the General election, if there exist more than two registered political parties, a Primary round of elections is held. In the Primary round, voters select only political parties, rather than individual candidates. Subsequently, only the two political parties receiving the greatest number of votes in the Primary round are permitted to field candidates for the General election. While the constitution provides for a maximum of 55 NA constituencies, only 47 have been used for the first three General elections.

Lijphart suggests that electoral systems may be described in terms of seven characteristics; as some of these apply only to proportional electoral systems, or to presidential systems, we consider here the four applicable to the Bhutanese system: the electoral formula, the district magnitude, the total membership of the chamber to be elected, and the degree of malapportionment of the chamber (Lijphart, 2012, pp. 131-132).

As noted above, the electoral formula used for NA elections is best described as plurality: whichever candidate wins the most votes in a constituency during the General election is declared the winner. While this system is not uncommon - 11 of Lijphart's

36 democracies used it - neither is it the most prevalent: taken together, the various sub-types of proportional representation are more common (Lijphart, 2012, pp. 132-136).

It is worth noting that the effect of the Primary round of elections is that, while the General election is conducted on a plurality basis, the system as a whole mimics a majority formula. Majority formulas are designed such that the winner must secure an absolute majority; this is sometimes, as in the presidential elections in France, accomplished via a two-round election in which, should no candidate win an absolute majority in the first round, a second round run-off is conducted in which only the two top vote-winners from the first round compete.

This is clearly the intention of the Bhutanese system: political parties must field a candidate in each constituency, and are barred from fielding more candidates than there are constituencies (Bhutan, 2008b, s. 207; Election Commission of Bhutan, 2013). Thus, there can be only two candidates for each constituency in the General election; as there are rules in place to break ties, one candidate must receive a majority.

District magnitude refers to the number of members to be elected from each district. In a plurality electoral system, use of a district magnitude greater than one tends to result in greater disproportionality in the results (Lijphart, 2012, pp. 137-138). As Bhutan uses single-member districts, the disproportionality inherent in plurality systems is not exacerbated.

The next factor with which we need to be concerned is the size of the legislature: i.e., the number of members to be elected. Plurality electoral systems tend to produce disproportional results, but this disproportionality is aggravated if the membership of the legislature is below the cube root of the population (Lijphart, 2012, pp. 141-142). Given that the estimated population at the time of the design of the parliament was approximately 650,000, the cube root law would have prescribed an Assembly of 87 members; with the population now in excess of 750,000, the

corresponding figure would be at least 91 members (United Nations. Department of Economic and Social Affairs. Population Division, 2019). Given that the constitutional limit for the size of the NA is 55 members, and that its current size is 47, one would expect that significant disproportionality would result.

Lijphart next considers the contribution of malapportionment to electoral disproportionality (Lijphart, 2012, p. 143). In single-member constituencies, such as those used for NA elections, malapportionment means that the constituencies have substantially unequal voting populations. It is particularly difficult to avoid malapportionment where single-member constituencies are used, because equal apportionment would require that a relatively high number of small districts be drawn, each having exactly equal electorates.

Regarding malapportionment, the generally accepted measure is that advanced by Samuels and Snyder (Samuels & Snyder, 2001). Their formula is calculated as:

$$MAL = (1/2)\ \Sigma|s_i - v_i|$$

where Σ signifies the summation over all districts i, s_i is the percentage of all seats allocated to district i, and v_i is the percentage of the overall population (or registered voters) residing in district i (Samuels & Snyder, 2001, p. 655). In the case of Bhutan, it is the number of registered voters, rather than overall population, that is relevant, as it is on this basis that seats are apportioned (Bhutan, 2008b, s.5). In this section, we shall focus on the Assembly; we consider malapportionment as it affects the NC below.

The application of the Samuels-Snyder formula to the NA, on a constituency basis, yields a score of 0.1402. This means that 14.02 percent of seats are allocated to districts beyond what an equitable share, based on their numbers of eligible voters, would give them. Table 4 puts Bhutan's score into context by comparing it with malapportionment in the first chambers of

selected other countries.

Table 4. *Malapportionment in selected first chambers*

Country	Samuels & Snyder Index score
Barbados	0.0364
Belize	0.0753
Estonia	0.0140
Iceland	0.1684
Malta	0.0088
Overall Mean (78 countries)	0.07

Source: Samuels & Snyder, 2001, pp. 660-661; figures for Bahamas, Luxembourg, Mauritius, and Trinidad not included in Samuels & Snyder.

It is notable that the malapportionment of Bhutan's NA is relatively high; while the most malapportioned first chamber in Samuels and Snyder's study was almost twice as malapportioned as the NA, Bhutan's figure would have placed it as the 13th most malapportioned out of the 78 lower chambers included in their analysis. What is typical about Bhutan in this regard, however, is that Samuels and Snyder found that malapportionment did correlate with being a poorer, recently-established democracy (Samuels & Snyder, 2001, pp. 659, 662). As well, chambers selected via a single-member district electoral system, such as that used for NA elections, also tended to have higher levels of malapportionment (Samuels & Snyder, 2001, pp. 663, 665).

Having considered the various relevant attributes of the electoral system used for the NA, we may now consider the degree of disproportionality it produces both in individual elections, and overall. Disproportionality for parties in an individual election is easily determined as the difference between their vote share and seat share. The data for the 2008, 2013 and 2018 elections are provided in Table 5. The potential for this electoral system to produce a highly disproportional result was amply demonstrated

in 2008, in which a roughly two-thirds to one-third split in vote share translated into a roughly 96 per cent to 4 percent split in seat share.

Table 5. *Vote and seat shares: National Assembly general elections*

	DPT	PDP	DNT
Year	Vote share/ Seat share (%)	Vote share/Seat share (%)	Vote share/ Seat share (%)
2008	66.99/95.75	33.01/4.25	-
2013	45.12/31.92	54.87/68.09	-
2018	45.04/36.17		54.96/63.83

Source: Election Commission of Bhutan, 2015, pp. 71, 73; 2018a; International Foundation for Electoral Systems, 2008.

A more sophisticated measure of overall disproportionality, used by Lijphart, is that suggested by Gallagher (Gallagher, 1991). Gallagher's index of disproportionality is calculated as:

$$G = \sqrt{\frac{1}{2}\Sigma(v_1 - s_1)^2}$$

where v_1 and s_1 are the vote and seat percentages, respectively. The results of the calculation for the first three general elections, respectively, are 28.76 per cent, 13.21 per cent, and 8.87 per cent, for a mean of 16.95 percent. Had Bhutan been included in Lijphart's study, this result would have placed it as the country with the fifth highest disproportionality of the 36 countries studied. As Lijphart noted, of the parliamentary systems in his study, the five with the highest disproportionalities were - like Bhutan - 'all small countries with plurality systems and unusually small legislatures' (Lijphart, 2012, pp. 150-151). The figures for our selected small states, disaggregated by electoral system, are provided in Table 6.

Lijphart next discusses the link between electoral systems and party systems (Lijphart, 2012, pp. 153-157). This discussion focusses on the fact that, while all electoral systems are to some degree disproportional, and plurality and majority electoral systems are systematically more disproportional than are proportional representation systems, this disproportionality works to the advantage of the larger parties. The effect of this fact is that all electoral systems tend to reduce the effective number of parliamentary parties as compared to the effective number of electoral parties (Lijphart, 2012, p. 154).

Table 6. *Mean electoral disproportionality in selected small states, 1945– 2010*

Country (Elec. Sys.)	Mean electoral disproportionality (%)	Country (Elec. Sys.)	Mean electoral disproportionality (%)
Bahamas (MAJ)	16.48	Iceland (PR)	3.85
Barbados (MAJ)	17.27	Luxembourg (PR)	3.43
Mauritius (MAJ)	15.61	Malta (PR)	2.07
Trinidad (MAJ)	11.33		
Mean	15.17		3.12

Source: Lijphart, 2012, pp. 150-151

We can demonstrate this effect using the Laakso-Taagepera index, utilised earlier, which we can apply to vote shares in the Primary round of elections. As only the DPT and PDP competed in 2008, the Primary round was skipped, but we can consider the 2013 and 2018 Primary rounds; Table 7 provides the results for these elections.

Table 7. *Summary of party vote in 2013 and 2018 primary round National Assembly elections*

Party	Share of vote (%)	
	2013	2018
Druk Phuensum Tshogpa (DPT)	44.52	30.92
People's Democratic Party (PDP)	32.53	27.44
Druk Nyamrup Tshogpa (DNT)	17.04	31.85
Druk Chirwang Tshogpa (DCT)	5.90	-
Bhutan Kuen-Nyam Party (DKP)	-	9.78

Source: Election Commission of Bhutan, 2015, p. 59; 2018b; figures may not total 100 due to rounding.

The Laakso-Taagepera indices, based on these vote shares, are 3.0 and 3.6, respectively. Thus, the overall effect of the electoral system has been to reduce the effective number of parties from 3.0 and 3.6, based on Primary round vote share, to the figures we determined above, 1.77 and 1.86, based on final seat shares in the Assembly.

Lijphart's discussion of Rae's work also touches on the question of 'earned' versus 'manufactured' majorities (Rae, 1967; 1971, pp. 74-75). The degree to which this applies in the Bhutanese case depends upon one's interpretation of the two-round electoral system. It is certainly the case that majorities are 'earned' in the General election, inasmuch as one of the two contending parties will have a majority of the seats. However, if one considers the electoral system as a whole, and one takes the position that voters' true preferences for parties are as they are expressed in the Primary round, then it is the case that, since it is the system that forcibly eliminates all but the top two Primary-round parties from the General round, the parliamentary majority is, indeed, 'manufactured'.

To summarise, the electoral system used for the NA includes a series of features that, in combination, will tend to produce results characterised by rather high disproportionality. It is

nominally a plurality system, but additional features mean that it mimics a majority system. As the membership of the chamber is small relative to the population, disproportionality is aggravated. In addition, malapportionment of Assembly seats is unusually high. Together, these features have, to date, indeed produced levels of disproportionality comparable to those of other small parliaments using similar electoral systems. Given this fact, there is no reason to expect that this will change markedly unless the system itself is modified. Finally, we have noted that the overall effect of the electoral system is to reduce what might otherwise be a three-party system to a two-party system in the Assembly.

The combined effects of the features we have discussed so far produce a less than promising picture of the legislative capacity of the NA. It is selected via an electoral system designed to allow only two parties in the Assembly, one of which will always form a single-party majority government. Further, these majorities may well be disproportional, given that the Assembly is small, both in absolute terms and in relation to the size of the population, and highly malapportioned. The high threshold set for a successful no-confidence vote means that the executive will face little threat from this mechanism. The ratio of the executive members to backbenchers is, typically for a small legislature, higher than for larger legislatures, a fact that fosters executive domination and generally impairs a legislature's ability to produce independent policy input. Fortunately for the Bhutan parliament, the Assembly is not alone.

Division of legislative power

It is worth noting the decision to have a bicameral parliament in Bhutan, as this was not an obvious choice. As of 2019, of the 192 countries listed by the Inter-Parliamentary Union as having a legislature, approximately 60 per cent were unicameral and 40 per cent bicameral (Inter-Parliamentary Union, 2019a). On considering the correlations of unicameralism with relevant features of countries, Massicotte found that it correlated

with: unitary, rather than federal, form of government; small population - of 77 countries with populations under five million, 55 were unicameral; and small geographical size (Massicotte, 2001, p. 152). All three of these features apply to Bhutan, although, regarding the latter, relative geographical isolation is an issue given the difficulty of traversing the country's mountainous terrain. Despite this fact, as we shall see, Bhutan has been provided with a potentially influential second chamber.

Within the group of countries having bicameral legislatures, Lijphart notes six differences between first- and second-chambers that 'determine whether bicameralism is a significant institution' (Lijphart, 2012, p. 190). He considers the first three - relative cameral size, relative length of members' terms, and whether the second chamber has staggered terms – as affecting how the institutions operate, but not affecting whether 'bicameralism is a truly strong and meaningful institution' (Lijphart, 2012, p. 192). Despite Lijphart's opinion, it is worth considering these in the Bhutanese case.

As noted, the NA currently has a membership of 47, as opposed to the NC's 25. There is nothing unusual about the second chamber having fewer members: save for a few notable exceptions, such as the United Kingdom, this is almost universally the case. As Stone concluded from his study of the Australian state second chambers, however, while there 'is no ideal size for an upper house', lack of members tends to impair a chamber's ability to operate as a house of scrutiny or review (Stone, 2008, p. 178). Modern second chambers do much of their detailed work in committees, and lack of members has the tendency to impair the development of effective committee systems (Stone, 2005, p. 48). Considering the variety of sizes of second chambers in the Australian states – from 15 to 42 members - Stone concluded that 'a minimum of around forty would seem to be desirable' (Stone, 2008, p. 178).

Beyond absolute size, relative size of the second chamber to the first has obvious ramifications if, as in Bhutan's case,

intercameral conflicts are resolved via joint sittings. Again, Stone notes that there is 'no ideal ratio' for relative size: for the Australian states, the ratio varies from .45 to .60 (Stone, 2008, p. 179). More specifically, for the state of Victoria and the federal parliaments, the only two Australian parliaments that use legislative joint sittings, the current ratios are .46 and .50, respectively. At present, Bhutan's ratio is .53; if the NA were to be enlarged to its constitutional maximum of 55 members, the ratio would fall to .46. In comparative terms, however, it is notable that, while in both the federal and Victoria parliaments the passage of a bill in joint sitting requires only an absolute majority of members, in Bhutan such passage requires a two-thirds majority of those voting (Australia, 2010, s. 57; Bhutan, 2008a, Article 13, s. 4; Victoria, 2017, s. 65G(4)).

It is clear that the larger the ratio, *ceteris paribus*, the greater is the threat of defeat of government proposals, passed by the first chamber, in joint sittings. Equally clear, however, is that the partisan composition of the first chamber is crucial. For example, during Bhutan's first parliament, the government's overwhelming majority - 45 of 47 seats - meant that a cohesive governing party vote in a joint sitting needed to attract only a handful of the 25 Councillors in order to pass contested bills. By contrast, in the third parliament, a cohesive governing party vote could be blocked by a cohesive opposition party vote combined with less than one-third of the Council vote.

Second chambers tend to have legislative terms that are the equal of, or longer than, first chambers (Lijphart, 2012, p. 191). Bhutan conforms to this pattern, inasmuch as the nominal term for both houses is five years (Bhutan, 2008a, Article 10, s. 24). To date, these terms have essentially coincided, as the elections for the two houses have occurred within months of one another. Should the NA be dissolved early at some point, the length of terms would remain the same, but the coincidence of terms would end.

Second chambers often have staggered terms, with only part

of the membership being replaced at each election (Lijphart, 2012, pp. 191-192). This is not a feature of the NC, the total membership being renewed simultaneously at the end of its five-year term.

The three features of bicameral parliaments that Lijphart considers determine the strength of bicameralism are: the formal constitutional powers of the chambers; the method of selection of the chambers; and whether the chambers are designed to have differing compositions (Lijphart, 2012, pp. 192-194). We shall consider each of these in turn.

Legislatures may have a range of formal powers, including, but not limited to: creating, amending, or nullifying legislation; confirming, maintaining, or dismissing the political executive; confirming or rejecting candidates for public appointments; and ratifying or repudiating tentative international agreements (Russell, 2014, p. 52). First- and second- chambers' powers may differ both across and within these categories.

The powers of the two chambers of the Bhutanese parliament regarding the passing of legislation are set out in Article 13 of the constitution. For what we may refer to as 'ordinary' legislation, the two houses are treated equally in Article 13: such legislation may originate in either house, the voting rules are the same for each house, and the intercameral processes are identical no matter in which house the legislation originates. To the degree that equality for ordinary legislation must be qualified, it is due to the issues we discuss below.

There are, however, categories of legislation for which equality between the houses is not the rule. The first of these is 'Money and financial bills', which, according to the constitution, must originate in the Assembly (Bhutan, 2008a, Article 13, s. 2). Such a stipulation regarding 'money bills' is not uncommon in congressional or parliamentary systems, and is indeed virtually universal in Westminster-style parliaments (Russell, 2000, pp. 34-38; 2014, p. 56). Thus, in comparative terms, this stipulation

alone would not be considered an unusual diminution of the Council's power. However, the Council's power regarding 'money bills' has been severely undermined due to the interpretation of a subsequent section of Article 13, i.e., section 5:

> Where a Bill has been introduced and passed by one House, it shall present the Bill to the other House within thirty days from the date of passing and that Bill may be passed during the next session of Parliament. In the case of Budget and Urgent Bills, they shall be passed in the same session of Parliament. (Bhutan, 2008a, Article 13, s. 5)

The interpretation of this section formed part of the first constitutional case to go before Bhutan's Supreme Court (*The Government of Bhutan v. Opposition party*, 2011). While the Justices concluded that money bills required passage through both houses of the parliament, just as any other bill, they interpreted section 5 as meaning:

> the budget bill must follow the normal bill passing process but comments and proposals made by the National Council is (*sic*) not binding on the National Assembly… It is the prerogative of the National Assembly to submit the budget bill for Royal Assent without incorporating changes suggested by the National Council if deemed irrelevant. (*The Government of Bhutan v. Opposition party*, 2011, Finding 5.13).

The decision of the Supreme Court following from this Finding extended this logic from budget bills to all money bills: it ruled that 'the National Assembly has the sole authority in money and financial bills', and has thus removed from the Council not only a role in the initiation of any such bills, but also any effective legislative role in their passage (*The Government of Bhutan v. Opposition party*, 2011, Decision 6.8).

Given this interpretation of section 5, the question arises

as to whether the government could abuse section 5, and circumvent normal procedures for what we have above referred to as 'ordinary' bills simply by having them declared 'Urgent'. In fact, there is no constitutional nor statutory definition of what constitutes an 'Urgent' bill; consequently, this matter became a matter of some debate during the first parliament, including during an Extraordinary Sitting in 2009 (Bhutan, 2009a, pp. 128-134; 2009b, p. 59). The issue was finally settled in a joint sitting in May, 2011: at that time, rules of procedure were agreed, which provide guidance as to the circumstances that might prompt such a bill, and the process for declaring a bill as 'Urgent' (Bhutan, 2011, Chapter 3). While the description of the possible circumstances are necessarily rather vague – threats to national political, economic, or social security, for instance – the safeguarding provision is that the ultimate decision on the declaration of a bill as 'Urgent', no matter from where the request for such a declaration originates, shall be made by the Speaker of the NA rather than the government itself.

A further consideration when evaluating the relative powers of the two chambers regarding ordinary legislation is an issue we referred to above, i.e. that of joint sittings. Clearly, if this mechanism did not exist, and the second chamber could simply defeat ordinary legislation emanating from the first chamber, the power of the second chamber would be greater. As Russell found in her 2014 study, however, most second chambers do not hold an absolute veto, but rather 'can be overruled in some way' (Russell, 2014, p. 55). Of the 74 countries she considered, exactly half allowed the second chamber to be over-ridden via a vote – simple majority, absolute majority, or super-majority – in the first chamber alone, while in only 25 countries, only eight of which were parliamentary systems, did the second chamber have an absolute veto (Russell, 2014, pp. 51, 54). Intermediate between these two categories were 11 countries that used joint sittings as a method for resolving intercameral disputes, five of which, including Bhutan, were parliamentary systems. Of these, only three others – Australia, India, and Pakistan – used joint sittings of the entire chambers. As indicated in Table 8, Bhutan

has the most stringent requirement of this group – a two-thirds majority – to override a second chamber objection.

Table 8. *Comparative parliamentary chamber memberships and joint sitting voting rules*

Country	Membership: 2nd Chamber/1st Chamber	Ratio	Voting rule
Australia	76/151	.50	Absolute Majority
Bhutan (current)	25/47	.53	Two-thirds Majority
India	250/552	.45	Simple Majority
Pakistan	104/342	.30	Simple Majority

Sources: Inter-Parliamentary Union, 2019b; individual country constitutions.

This level of stringency is raised still higher for particularly sensitive situations. For the impeachment of holders of 'constitutional offices' – members of the Supreme Court, the Auditor General, etc. – the requirement is 'two-thirds of the total number of members of Parliament'; the same hurdle is set for extending states of emergency (Bhutan, 2008a, Article 32, s. 2, Article 33, ss. 3, 8).

A final point regarding joint sittings is to note that, for one particular category of legislation, i.e. constitutional amendments, the bar for passage is set even higher:

> A motion to amend the Constitution under section 1 of this Article shall be initiated by a simple majority of the total number of members of Parliament at a joint sitting and, on being passed by not less than three-fourths of the total number of members in the next session at a joint sitting of Parliament, the Constitution shall stand amended on Assent being granted by the Druk Gyalpo. (Bhutan, 2008a, Article 35, s. 2)

Note that this section requires, for both initiation and passing, absolute majorities, and then compounds this with the need for an affirmative vote of three-quarters of this total membership for final passage. The latter hurdle is also set for establishing a Council of Regency should the King be 'unable to exercise the Royal Prerogatives by reason of temporary physical or mental infirmity', for the forced abdication of the King, or for the alteration of Bhutan's international boundaries (Bhutan, 2008a, Article 2, ss. 7(c), 24, Article 1, s. 3).

Moving on from legislation, the second chamber has no role in confirming, maintaining, or dismissing the political executive: this is left entirely to the Assembly. Neither chamber has a role in confirming or rejecting candidates for public appointments, although both the Speaker of the Assembly and the Chairperson of the Council have a role in recommending candidates for several public positions (See, for example, Bhutan, 2008a, Articles 24, 25, 26, & 27, s.2).

The NC does have one unique role assigned to it. The constitution provides that:

> Besides its legislative functions, the National Council shall act as the House of review on matters affecting the security and sovereignty of the country and the interests of the nation and the people that need to be brought to the notice of the Druk Gyalpo, the Prime Minister and the National Assembly.(Bhutan, 2008a, Article 11, s. 2).

While the section provides no specific power for the second chamber, it does perhaps imply an overview role on matters of international relations that is not uncommon for second chambers. There is no additional role for the chamber in ratifying international treaties, however: this role is simply assigned to 'Parliament' (Bhutan, 2008a, Article 10, s. 25).

The second area that Lijphart suggested was determinative of a second chamber's strength was its method of selection. For

Lijphart, the most crucial difference here was whether the second chamber was elected, as election, and direct election in particular, conferred a degree of democratic legitimacy on the second chamber that allowed it to compete in political terms with the first chamber (Lijphart, 2012, pp. 192-193). However, Lijphart was willing to allow that democratic legitimacy could be gained in ways other than direct election: the indirectly elected German second chamber, for instance, he conceded, is a very strong second chamber. Lijphart combined his evaluation of a second chamber's formal powers with his evaluation of its democratic legitimacy into a single measure of its 'symmetry' in terms of its relationship with the first chamber: symmetry signified greater strength, asymmetry signified likely weakness.

Twenty of the 25 seats in the NC are directly elected, using the single-member plurality system (Bhutan, 2008a, Article 11, ss. 1, 3). Each of the 20 dzongkhags (districts) serves as a single constituency. No candidate for the NC may belong to any political party: the NC is conceived of as a non-partisan chamber. The remaining five seats are filled via appointment by the King.

How, then, should the NC be evaluated in Lijphart's terms? Lijphart included in his 'symmetrical' category a total of nine countries; five of these were included because their chambers had formally equal powers – Argentina, Italy, Switzerland, the United States and Uruguay – and four others – Australia, Germany, Japan, and the Netherlands - because, although their chambers' powers were 'moderately unequal', their method of selection made up for this deficit (Lijphart, 2012, p. 193). This presents us with a bit of a conundrum. Given what we have seen of the Council's formal powers, it can easily fit into the 'moderately unequal' category. Additionally, the fact is that the Uruguayan second chamber can be overridden by a two-thirds majority in a joint sitting, just as in Bhutan; the Australian Commonwealth second chamber can be overridden with the lesser hurdle of an absolute majority in a joint sitting; and the Japanese second chamber may be overridden by a two-thirds majority vote in the first chamber alone. On this basis, it would seem that the

Bhutanese parliament should be regarded as symmetrical. However, five of the 25 Bhutanese Councillors are appointed, not elected: does this fact so impair the democratic legitimacy of the Council such that it must be regarded as asymmetrical?

Russell has offered a trenchant critique of Lijphart's use of direct election as a proxy for democratic legitimacy (Russell, 2013). She argues that 'a conception of legitimacy based purely on direct election, whereby directly elected second chambers are assumed to be legitimate and strong, and unelected chambers illegitimate and weak, is far too crude' (Russell, 2013, p. 385). Russell surveys the political science literature on legitimacy, and notes that what she terms 'perceived legitimacy' is thought to depend on three components: 'input' or 'source' legitimacy; 'procedural' or 'throughput' legitimacy; and 'output' or 'substantive' legitimacy (Russell, 2013, pp. 375-376). Regarding second chambers, input legitimacy might be enhanced, rather than diminished, by their non-majoritarian character, given that they are often designed to counter-balance a first chamber based on the majoritarian principle: a second chamber composed of experts in their various fields is one example. Similarly, such bodies may gain procedural legitimacy by having a less overtly political role, for 'their relatively less party-political ethos, and for their careful deliberation and policy scrutiny, contrasted with first chambers' (Russell, 2013, p. 376). Finally, a second chamber may develop output legitimacy via its policy intercessions, particularly when this challenge hasty or unpopular policy decisions emanating from the first chamber.

Considering the NC in light of Russell's work, it would seem that any dismissal of that body on the basis that one-fifth of its membership is unelected would be unwarranted. First, the five 'eminent persons' appointed to the Council are clearly meant to fit the 'experts in their fields' criterion, and thus might enhance the perceived legitimacy of the institution. The fact that it is the King, whose prestige is unmatched in Bhutan, who selects these appointees, would only seem to further heighten their perceived legitimacy. Second, the non-partisan nature of the Council

fits the procedural legitimacy criterion. Third, as to output legitimacy, while it may be unclear whether the Council's policy interventions have been popular, it is clear that it has caused the Assembly to re-think on a number of occasions (Gyambo Sithey, 2013, pp. 62-73).

Overall, then, it seems that Bhutan's NC fits the criteria for Lijphart's 'symmetrical' category: 'those with equal or only moderately unequal constitutional powers and democratic legitimacy' (Lijphart, 2012, p. 193).

The third feature Lijphart highlighted as determining the strength of bicameralism was whether the chambers are designed to have differing compositions, or, in Lijphart's terms, whether they are 'incongruent' (Lijphart, 2012, p.194). As Lijphart indicated, the outstanding examples of incongruence occur where territorial units of a country - often a federation – are represented equally in the second chamber, notwithstanding widely differing populations. This is, of course, the case for 20 of the 25 seats in the Council, in that each of the 20 dzongkhags has one representative.

One of the metrics Lijphart uses to gauge the degree of overrepresentation of the less populous units is the Samuels-Snyder index, to which we have referred above regarding the NA. Based on the 20 elected NC seats, the Samuels-Snyder method for measuring malapportionment produces a score of 0.1999 for the NC; this indicates that 19.99 percent of seats are allocated to districts beyond what an equitable share, based on their numbers of eligible voters, would give them. Table 9 puts Bhutan's score into context by comparing it with malapportionment in the second chambers of selected other countries.

Table 9. *Malapportionment in selected second chambers*

Country	Samuels & Snyder Index score
Argentina	0.4852
USA	0.3642
Australia	0.2962
Japan	0.1224
India	0.0747
Overall Mean (25 countries)	0.21

Source: Samuels & Snyder, 2001, p. 662; none of the small states we have previously used for comparison has a second chamber selected on a regional basis.

This comparison indicates that the degree of malapportionment in the NC is not extreme in comparative terms: if Bhutan had been included in the Samuels-Snyder study, it would have ranked as only the 16th most malapportioned of the 25 upper chambers studied, and, as Table 9 indicates, would have been below the mean for the group.

Nevertheless, although malapportionment in the NC is not extreme, it is clear that it is designed to have a different composition from the NA, and must be considered an incongruent chamber. In Lijphart's terms, we therefore have a chamber that is both symmetrical and incongruent: an example of 'strong bicameralism' (Lijphart, 2012, p. 199). This places the NC in a rather exclusive group: of Lijphart's 36 democracies only five – Argentina, Australia, Germany, Switzerland, and the United States – had second chambers that fell into this category.

To summarise, then, the sole characteristic of the NC that would tend to significantly undermine its legislative capacity is its small absolute size. The fact that it is small relative to the NA is rendered much less consequential due to the high bar - two-thirds majority - required to override the NC in joint sittings. Even allowing for the Supreme Court's interpretation regarding

money bills, the NC may be judged, in Lijphart's terms, as both symmetrical and incongruent, in short an example of strong bicameralism.

Therefore, we may conclude that, as designed, the NC makes a substantial positive contribution to the legislative capacity of Bhutan's parliament.

Conclusion

The purposes of this paper have been to investigate the legislative capacity of the new Bhutanese parliament and to place this institution in a comparative context. We have discovered a small parliament, the first chamber of which is designed along two-party, government *versus* opposition, adversarial lines. Its electoral system features significant malapportionment, and has, in 2008, demonstrated its ability to produce highly disproportional electoral outcomes. Due to its small membership and other design features, it is likely to suffer significant executive domination. In comparative terms, the chamber's characteristics mean that it would fit comfortably within the family of similar chambers in small, Westminster-style parliaments.

The saving grace for the legislative capacity of Bhutan's parliament, however, may lie with its second chamber. In legislative terms, it is nearly the equal of the first chamber. Not only is it not executive dominated, as ministers must be drawn from the Assembly, as an apolitical body neither is it subject to partisan pressures. In comparative terms, although small, it is a strong chamber.

Overall, then, when assessing the legislative capacity of Bhutan's new parliament, one must be careful to consider it in context. That is, due to its small size, it cannot be expected to have great legislative capacity, and this factor is aggravated by the fact that the Assembly is designed to be executive-dominated. However, while small size will also inhibit the second chamber, its design features mean that it greatly enhances the legislative capacity of

the parliament as a whole, and boosts its overall position among the world's small parliaments.

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Population and Migration in Thimphu Thromde

*Sangay Chophel**

Abstract

As a developing country, Bhutan is on the upward trajectory of urbanization. While it has benefits it also exerts pressures. Within Bhutan, Thimphu thromde has the largest urban population, which exhibit many forms of urbanization. Using the data from 2017 Population and Housing Census of Bhutan, the paper projects the population of Thimphu city till 2027 due to lack of its population projection. The cohort-component method is used for projection. The net-migration from 2005 to 2017 is calculated using residual method. Further, employing probit regression, the determinants of migration to Thimphu thromde is examined. Age, marriage, unemployment, land, household composition, household income and education are significant determinants of migration.

Introduction

Urbanization in Bhutan has continued apace. The urban population has increased from 30.9% in 2005 to 37.8% in 2017, and largest share of the overall population reside in Thimphu *thromde* (city) at 15.8%[1] where most of the government offices are based. The other three cities are Phuntsholing, Samdrup Jongkhar and Gelephu thromdes. There are relatively smaller urban areas in each of the 20 districts.

The annual growth rate of Thimphu thromde (3.72%) has

* Senior Research Officer, Centre for Bhutan & GNH Studies. Email: schophel@gmail.com, schophel@bhutanstudies.org.bt

[1] See the report of the first census conducted in 2005, *Population and Housing Census of Bhutan 2005*, and the second census conducted in 2017, *2017 Population and Housing Census of Bhutan*.

outpaced the national population growth rate (1.3%) as it is evident from the last two censuses. The population increase in Thimphu city is largely contributed by migration. Notwithstanding the economic opportunities brought about by urbanization, the growth in population has exerted pressures on infrastructure, environment and social fabric. Soaring house rent, pollution, gridlocks, accelerating waste generation, water shortage, substance abuse by youth are some of the issues Thimphu city face. On the other hand, there are empty households, fallow lands and uncared elderly in rural areas.

Despite having planning documents, strategies and rules, such as Thimphu Structure Plan 2002, Bhutan National Urbanization Strategy (2008), Bhutan Building Rules 2002, Land Pooling Rules 2009, Land Pooling and Readjustments Regulations 2018, the Rural Construction Rules 2013, and the Thromde Act of Bhutan 2007, the aforementioned challenges could not be addressed. To compound the issues there were cases of non-compliance and deviations from planning rules in Thimphu city planning process (Bajaj, 2014). National Human Settlements Policy 2019 has been approved and Spatial Planning Act is being drafted by the Ministry of Works and Human Settlement with the hope of addressing these challenges.

This paper is motivated by 1) the absence of the population projection of Thimphu thromde and 2) to identify and analyze the determinants of migration to Thimphu thromde. National Statistics Bureau (2019) has projected the population of 20 districts of Bhutan up to 2047 but left out population projection for Thimphu thromde and the other three thromdes. Thromde is a city within a district. The population of Thimphu district is 138,736 as of 2017. Out of this total Thimphu population, Thimphu thromde comprises of 114,551, which is a very large share of 82.5%. Therefore, it merits an understanding of population growth and projection of Thimphu thromde. In studying urbanization, priority has been given to urban concentrations, which refers to the degree of concentration of a country's urban population in one or two major cities (Hofmann

and Wan, 2013; Henderson, 2003).

Literature review on migration

Migration is simply the change of residence away from the usual place of residence. According to United Nations, long-term migrants are individuals who changes his or her place of usual residence for at least one year. This paper will define migrant as a person who has moved away from his/her previous residence for at least one year. The geographical unit in this paper refers to *gewog* (county)/town. This definition will exclude short-term and seasonal migrants, visitors and students but could include return migrants. As the focus of this paper is on internal migration, foreign (non-Bhutanese) migrants are excluded from the analysis.

Perhaps the first formal theory of migration was proposed by Todaro (1969) in his model of labour migration in developing countries. In this model, the decision to migrate from rural to urban areas are influenced by two factors: the urban-rural real income differential and the probability of finding an urban job. Todaro's model was further expanded by Harris and Todaro (1970) in the context of aggregate and inter-sectoral welfare implications. Both Todaro (1969) and Harris and Todaro (1970) highlight higher productivity urban job (which results in higher wage) as the factor inducing migration to urban areas. Recent extension of rural-urban migration has been developed by Kanbur, Christiaensen and Weerdt (2019) to the case of migration from rural areas to secondary towns and big city, and conclude that investing in secondary towns is more poverty reducing than investing in big cities by showing various mechanisms at play.

There are other theories of migration that considers political factors and mainly concerns with international migration which is of little relevance to Bhutan. International (non-Bhutanese) population constitutes of only 6.25% as of 2017 in Bhutan. Stark (1991, cited in Arango, 2000) consider migration to be more of household decision than individual decision, Piore (1979)

places attention mainly on the receiving end of migration in the context of international migration, and others have approached international migration using world system theory.

There are extensive studies on the determinants of migration in literature. Migration push factors include lack of employment opportunities, poverty, hunger, land scarcity, unsustainable livelihood, lack of market access for agricultural products, limited services and infrastructure, discrimination, climate change, disasters and insecure environment. On the other hand, pull factors include higher income and employment opportunities, better educational, health, and other facilities, technological advancement in urban areas and family reunification.

The Ministry of Agriculture of Bhutan has conducted research on internal rural-urban migration first in 2005 and then a larger one in 2013 but have used inconsistent definition of migration. In the former, migrants were defined as those who have lived away from their gewog of birth for five years or more and in the latter, it is defined as those who are resident of a current dzongkhag (place of enumeration) other than the dzongkhag where they have census (civil registration). Definition of migration having civil registration as a criterion is at odds with many other international studies. Chand (2017) conducted a study on migration in Thimphu in 2010 albeit at a small sample size of 251, without performing any multivariate analysis. The Ministry of Agriculture also did not conduct any multivariate analysis on its study conducted in 2005 and 2013.

Thimphu thromde population projection

The purpose of this section is to project the population of Thimphu thromde using cohort-component method. Using 2005 and 2017 census data, the population of Thimphu thromde will be projected 10 years forward using constant fertility and death rates. It can be projected to any number of years but the deviation of the parameters from it true value will be higher when the projection is done over longer horizons. For instance,

the fertility rate of Thimphu city is 1.7 which is unlikely to vary much in the next five years or 10 years but will do so in the next 15 years and above.

For population projection, it is useful to refer to population balancing equation, which states that the population at current period is given by the sum of population at previous period, number of intervening births and net migrants, minus number of intervening deaths.

Information on current population, birth and death is readily available from census data but it is not straight forward to find information on net migration between intercensal periods. The calculation of net migration involves a number of steps using residual method, which is generally used for extrapolation. Another factor to consider is sex ratio at birth. Sex ratio at birth was 1.05 or 105 male births for every 100 female births in 2005.

To find the net migration between 2005 and 2017, first the population of Thimphu thromde should be projected from 2005 to 2017 using 2005 census data to estimate its population in 2017. The estimated population in 2017 should then be subtracted from the actual 2017 population which is available from 2017 census. The difference is the net migration between the two-census periods. The net migration rate per year can then be calculated for male and female by age groups. The net migration rate per year for age group 75 and above can be split into three equal parts for age groups 75-79, 80-84 and 85 and above. This net migration rate per year will be used to project population from 2017 to 2027. The essential elements of net migration rate are given below in Table 1. The detailed calculation of estimated 2017 Thimphu thromde population is given in Appendix Table A1.

Table 1. *Migration in Thimphu thromde between 2005 and 2017*

Age	Actual 2005 population		Estimated 2017 population		Actual 2017 population		Migration residual 2005-2017		Male net migration rate per year	Female net migration rate per year
	Male	Female	Male	Female	Male	Female	Male	Female		
0-4	3971	3808	4525	4304	4758	4477	233	173	0.0043	0.0033
5-9	3723	3692	3931	3723	4699	4554	768	831	0.0163	0.0186
10-14	4115	4489	3618	3447	4400	4349	782	902	0.0180	0.0218
15-19	4452	5033	3635	3586	4615	5161	980	1575	0.0225	0.0366
20-24	7554	5425	3897	4131	7868	7458	3971	3327	0.0849	0.0671
25-29	5249	3957	4259	4773	8635	7983	4376	3210	0.0856	0.0560
30-34	3539	2760	6194	5216	6750	5988	556	772	0.0075	0.0123
35-39	3208	2211	6004	4477	5168	4578	-836	101	-0.0116	0.0019
40-44	2014	1465	4060	3147	3465	2757	-595	-390	-0.0122	-0.0103
45-49	1570	1126	3164	2295	2792	2221	-372	-74	-0.0098	-0.0027
50-54	1116	713	2310	1600	1922	1620	-388	20	-0.0140	0.0011
55-59	599	503	1548	1069	1176	1182	-372	113	-0.0200	0.0088
60-64	461	477	1083	687	909	976	-174	289	-0.0134	0.0351
65-69	354	363	623	421	629	660	6	239	0.0008	0.0472
70-74	265	304	349	337	438	610	89	273	0.0213	0.0676
75+	275	394	322	629	772	981	450	352	0.1162	0.0466
Total	42465	36720	49521	43842	58996	55555	9475	11713		

As shown in Table 1, 21188 people have migrated to Thimphu thromde between 2005 and 2017 with higher proportion of women than men. The largest chunk of the migrants are between 15-29 age bracket for both men and women. The estimated population of Thimphu city in 2017 is 93363 without migrants. Using the estimated 2017 population and 2005 population, the natural growth rate of Thimphu thromde comes to 1.49%. Subtracting 1.49% (the natural growth rate) from 3.72% (the annual growth rate of Thimphu thromde) yields the growth rate of migration at 2.23%. Therefore, the growth of Thimphu thromde population is driven more by migration than its rate of natural increase.

Since the number of migrants between 2005 and 2017 has been estimated, the population projection of Thimphu thromde till 2027 will now be proceeded. The mortality by age and gender is given in Table 2. The live birth rate by sex of child and age of mother for Thimphu thromde is available in 2017 PHCB, Table A4.8, p. 158.

Table 2. *Mortality in Thimphu thromde, 2017*

Gender	Age	No. of death	Popul-ation	Gender	Age	No. of death	Popul-ation
Female	<1	5	1008	Male	<1	7	1079
Female	1-4	5	3469	Male	1-4	7	3679
Female	5-9	4	4554	Male	5-9	4	4699
Female	10-14	3	4349	Male	10-14	1	4400
Female	15-19	3	5161	Male	15-19	6	4615
Female	20-24	4	7458	Male	20-24	8	7868
Female	25-29	6	7983	Male	25-29	11	8635
Female	30-34	10	5988	Male	30-34	23	6750
Female	35-39	10	4578	Male	35-39	22	5168
Female	40-44	11	2757	Male	40-44	23	3465
Female	45-49	11	2221	Male	45-49	18	2792
Female	50-54	16	1620	Male	50-54	24	1922
Female	55-59	21	1182	Male	55-59	19	1176

Gender	Age	No. of death	Popul-ation	Gender	Age	No. of death	Popul-ation
Female	60-64	18	976	Male	60-64	25	909
Female	65-69	17	660	Male	65-69	20	629
Female	70-74	24	610	Male	70-74	32	438
Female	75-79	27	439	Male	75-79	26	350
Female	80-84	29	300	Male	80-84	30	236
Female	85+	36	242	Male	85+	33	186

Projecting the Thimphu thromde population from 2017 to 2022 involves a number of calculations. First, using mortality data from Table 2, survival rates are calculated as shown in Table A2. And similarly, number of births for the next five years, from 2017-2022, is calculated using fertility rates of child bearing women. Adding surviving population and number of births gives the natural population in 2022. The total number of migrants from 2017 to 2022 is calculated using migration rate. Therefore, adding the migrants to the natural population gives the total population in Thimphu thromde in 2022. Repeating the steps for the next five years from 2022 gives the projected population of Thimphu thromde in 2027. Table A2 shows the details of population projection.

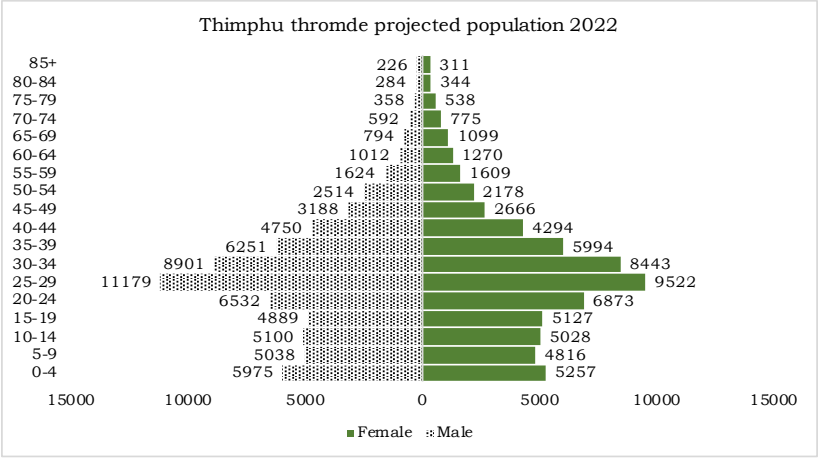

Figure 1. Thimphu thromde projected population pyramid in 2022

The population of Thimphu thromde is projected to increase to 135354 in 2022, with 66146 females and 69208 males. The number of migrants is projected to increase by 12572 in 2022 from 2017.

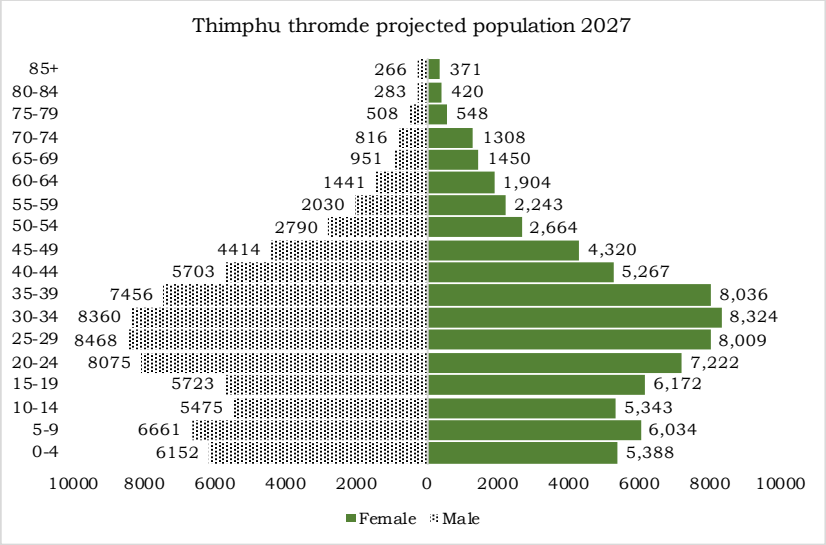

Figure 2. Thimphu thromde projected population pyramid in 2027

In 2027, the population of Thimphu thromde is projected to increase to 150595 (which is 31.5% percentage increase from 2017), with 75021 females and 75574 males. The number of migrants is projected to increase by 19998 in 2027 from 2017. The share of the young population, below 15 years, will slightly fall from 23.8% in 2017 to 23.3% in 2027 during to declining fertility, whereas elderly population, 65 and above, will increase by 1% to 4.6% in 2027 from 2017. The share of youth, 15-24, will fall by 3.8% to 18.1% during this decade.

Migration

Net-migrants in Thimphu thromde

For determining the net-migrants in Thimphu thromde, missing values of previous residence, non-Bhutanese and misreporting of duration of stay in the current gewog/town greater than age are excluded from analysis. The source of data is 2017 PHCB. As mentioned before, migration in this paper refers to change of residence away from his/her previous residence for at least one year. By this definition, there were 59,040 in-migrants (constituting 64.53% of the Thimphu thromde population) while there were 29,158 out-migrants resulting in 29,882 net-migrants in Thimphu thromde. Of those who migrated to Thimphu thromde, 69.5% were from rural areas whereas 30.5% were from urban areas, as shown in Table 3; by sex, 52.06% were females against 47.94% males.

Table 3. *Previous residence of migrants to Thimphu thromde, 2017*

Area of previous residence	Frequency	Percent
Urban	18007	30.5
Rural	41033	69.5
Total	59040	100

The migrants mostly comprise of younger age groups among those who migrated to Thimphu thromde. The maximum is found at age group 25-29 at 16.66%. 62.5% of the migrants are between 15-39 years (see Figure 3).

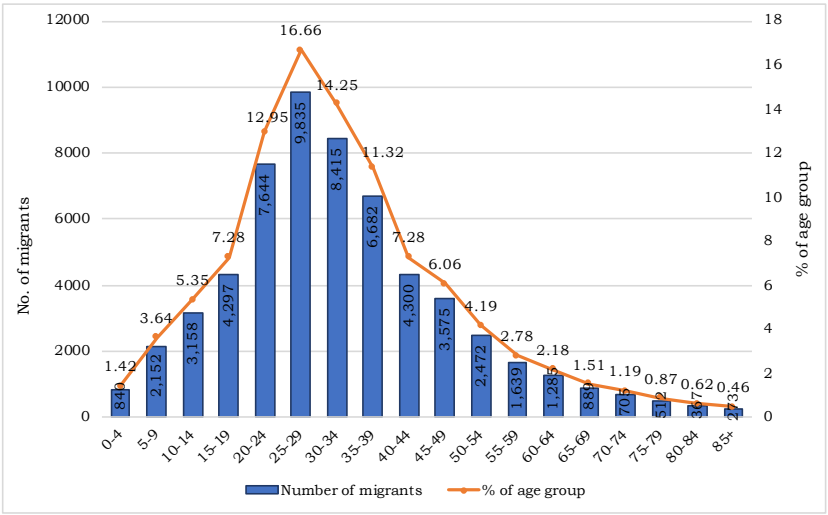

Figure 3. Migrants to Thimphu thromde by age group, 2017

Determinants of migration to Thimphu thromde

For regression analysis, those below 15 years and foreign (non-Bhutanese) migrants in Thimphu thromde are excluded. The foreign migrants constitute a negligible proportion (879 migrants or 1.47% of the total migrants). Missing values of the variables used in the regression are also dropped. This reduces the observation to 50,491. Probit model is used since the dependent variable is a binary variable, taking the value of one for those who are migrants and zero otherwise.

Summary statistics

Table 4 shows the summary statistics of the variables, separating out the migrants and non-migrants characteristics. 73.77% were migrants out of 50,491 people.

Table 4. *Comparison of migrants and non-migrants, 2017 (age 15 years and above)*

Variable	All (N= 50491)	Migrants (N= 37248)	Non-migrants (N=13243)
Male (%)	50.48	51.23	48.37
Age	30.64	31.81	27.37
Married (%)	55.10	61.61	36.80
Household head (%)	31.46	36.76	16.56
Non-formal education (%)	1.59	1.99	0.48
Primary education (%)	13.72	15.93	7.49
Lower secondary education (%)	8.25	8.39	7.87
Middle secondary education (%)	19.35	19.57	18.75
Higher secondary education (%)	26.1	24.85	29.62
Bachelor's degree (%)	20.64	18.43	26.86
Masters and above (%)	5.3	5.1	5.85
Diploma/Certificate (%)	4.59	5.24	2.77
Others (%)	0.46	0.51	0.31
Age 20-34 with higher education (%)	36.60	34.55	42.36
Log of total household income	12.83	12.76	13.02
Land (%)	47.87	43.49	60.21
Unemployed (%)	4.50	4.18	5.41
No. of kids below 7 years	0.57	0.60	0.46
No. of kids between 7 to 15 years	0.68	0.67	0.72
No. of elders 65 years and above	0.19	0.17	0.26

Note: Age 20-34 with higher education means those aged 20 to 34 having completed higher secondary education, bachelor's degree, masters and diploma/certificate.

Compared with non-migrants, migrants are slightly more male (51.23% vs. 48.37%), mostly married (61.61% vs. 36.8%) and household heads (36.76% vs. 16.56%). Although young the average age of migrants is slightly higher than non-migrants. As for education, migrants are mostly from middle secondary education, higher secondary education and bachelor's degree groups. However, when compared with non-migrants, there are comparatively more migrants from primary education (15.93% vs. 7.49%) and less migrants from bachelor's degree educational group (18.43% vs. 26.86%). In general, migrants tend to have higher education than non-migrants. To capture the tendency that migrants are mostly young with higher education, a variable was generated for those aged 20 to 34 years having higher education (i.e. those with higher secondary education/12th grade, bachelor's degree, masters and diploma/certificate). And yet the proportion of migrants aged 20 to 34 years with higher education is lower than its non-migrant counterparts (34.55% vs. 42.36%). Migrants are less likely to have land; the difference is quite large (43.49% vs. 60.21%). There is not much difference between migrants and non-migrants in terms of unemployment, household income, number of children below 7 years, number of children between 7 to 15 years and number of elders 65 years and above.

Regression analysis

The dependent variable being binary probit model is used. It takes the value of one for those who are migrants to Thimphu thromde and zero otherwise. The result of the regression is shown in Table 5. Both the coefficients and marginal effects are reported. The regression has been checked for multicollinearity; VIF are all below 1.85.

Table 5. *Probit model of migration decision*

	Coefficient	Marginal effect
Male	-0.0240	-0.0071
	(0.0132)	
Age	0.0451***	0.0132
	(0.00304)	
Age squared	-0.000401***	-0.0001
	(0.0000382)	
Married	0.259***	0.0781
	(0.0171)	
Non-formal education	0.377***	0.0837
	(0.0686)	
Lower secondary education	-0.187***	-0.0518
	(0.0296)	
Middle secondary education	-0.124***	-0.0336
	(0.0248)	
Higher secondary education	-0.187***	-0.0519
	(0.0259)	
Bachelor's degree	-0.430***	-0.1285
	(0.0276)	
Masters and above	-0.415***	-0.1234
	(0.0341)	
Diploma/Certificate	-0.00865	-0.0023
	(0.0389)	
Others	0.0371	0.0095
	(0.102)	
Age 20-34 with higher education	0.0453**	0.0133
	(0.0189)	
Log of total household income	-0.0783***	-0.0229

	(0.00607)	
Household head	0.279***	0.0802
	(0.0174)	
Land	-0.297***	-0.0886
	(0.0136)	
Unemployed	0.145***	0.0408
	(0.0297)	
No. of kids below 7 years	0.0912***	0.0268
	(0.00915)	
No. of kids between 7 to 15 years	-0.0234***	-0.0069
	(0.00724)	
No. of elders 65 years and above	-0.147***	-0.0431
	(0.0131)	
Intercept	0.840***	
	(0.0907)	
N	50491	
Pseudo R-sq	0.097	

Note: Standard errors in parentheses
** p<0.05, *** p<0.01
The reference group for educational level is primary education.

As shown in Table 5, gender is not a significant factor of migration when all factors are considered together (i.e. holding all other factors fixed). Age is a significant factor: as age increase the probability of migration increases but at a declining rate, consistent with the earlier finding (see Figure 3) that most migrants are between the ages 20-34. Marriage significantly increases the probability of migration by 7.8%. Marriages are mostly held when people are young. Household heads are more likely to migrate; the probability of migration increases by 8% when the migrant is a household head. It is highly likely that when the household head migrates other members follow.

The effect of education on migration is quite unexpected. With reference group as primary education, those with non-formal education are more likely to migrate. However, those with lower secondary, middle secondary and higher secondary education and bachelor's degree and masters are less likely to migrate to Thimphu thromde compared with those with primary education. This implies that migration to Thimphu thromde is driven largely by low level jobs, which does not require high qualifications. Thimphu thromde do face severe shortage of construction labourers, and hence some are employed as daily wage construction workers. Those with low qualifications works as parking fee collectors, security guards, tailors, and *drayang* (entertainment centres) performers, among others, in towns and cities. Moreover, there are some cases of educated lot (grade 12 and bachelor's degree) who have taken up commercial farming in rural areas. As mentioned before, a variable was generated to examine the effect of those who are young (aged 20-34) with higher education (i.e. those with higher secondary education, bachelor's degree, masters and diploma/certificate). The effect of this variable on the probability of migration is positive and significant although the magnitude of the effect is small at 1.33%. Therefore, it supports the general observation that those who are young and educated tend to migrate to cities. It thus suggest that those who are not young, that is 35 years and above, even if they have higher education, are less likely to migrate to Thimphu thromde. This could be because the returns on human capital declines with the increase in age after crossing a certain point.

An increase in household income by 1% reduces the probability of migration by 2.3%. In other words, those from poor households are more likely to migrate. Those who are unemployed are more likely to migrate than those who are employed. Unemployment increase the probability of migration by 4.1%. Unemployed people migrate to Thimphu city with the expectation of finding jobs, especially high paying productive jobs. Those who do not own any land are more likely to migrate; the probability of migration increases by 8.9%. Land is the main source of rural livelihood and income without which people could be forced to

migrate to urban areas. Household income, unemployment and land variables are all significant at 1% level.

With regard to household composition, while all the variables are significant, having more children under 7 years does not deter migration. On the contrary it increases the migration probability by 2.7%. However, an increase in school going children between 7 to 15 years does deter migration albeit by a very small proportion. One more kid in this age range decreases the probability of migration by 0.7%. The presence of elderly in the household deters migration by a relatively higher magnitude (one more elderly in the household decreases the migration probability by 4.3%), indicating that family members feels obliged to take care of their older parents and relatives.

Conclusion

Given the significance of Thimphu thromde as the major city in Bhutan and lack of its projection, its population was projected till 2027 using constant fertility and death rates for planning and other uses. The rural areas of Thimphu district do not feature in this study. In the process of projection, the paper showed that the net-migration of Thimphu thromde between 2005 and 2017 stood at 21188, with higher proportion of women than men and young ones dominating the population. It also showed that population growth of Thimphu thromde was driven more by migration than its natural increase. The population of Thimphu thromde is projected to increase to 135,354 in 2022 and 150,595 in 2027, and the number of migrants is projected to increase by 1998 in 2027. The proportion of population below 15 years will slightly decrease to 23.3% while those above 65 years will increase to 4.6% by 2027.

As expected a majority has migrated from rural areas to Thimphu thromde. Migrants to Thimphu thromde are more likely to be young, married, household head, unemployed, landless and from low income background. Among these factors, being landless has the largest effect followed by being head of household, marriage

and unemployment. An increase in school going children between 7 to 15 years and elderly in the household deters migration; however, an increase in children under 7 years does not deter migration. At higher levels of education, probability of migration decreases compared with primary education whereas those with non-formal education are comparatively more likely to migrate. When an interaction term of age 20-34 and higher education (higher secondary education, bachelor's degree, masters and diploma/certificate) was included in the regression, the effect was positive and small but significant, indicating that young and educated are somewhat more likely to migrate to Thimphu thromde. It has to be noted that there could be policy variables, such as access to credit, that could influence migration but the census data do not allow to test this in the model. The determinants of migration to Thimphu thromde give an idea about controlling the flows of migration.

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Appendix

Table A1. *Estimated 2017 population of Thimphu thromde*

Age	2005 population		Survival rates		2005 fertility rate	Births 2005-2010	2010 population		Births 2010-2015	2015 population		Survival rates		Births 2015-2017	Estimated 2017 population	
	Male	Female	Male	Female			Male	Female		Male	Female	Male	Female		Male	Female
0-4	3971	3808	0.934	0.920			3875	3700		4565	4359	0.973	0.966		4525	4304
5-9	3723	3692	0.981	0.996			3709	3502		3619	3402	0.992	0.998		3931	3723
10-14	4115	4489	0.998	0.996			3654	3677		3639	3487	0.999	0.998		3618	3447
15-19	4452	5033	0.993	0.997	0.0217	545	4105	4469	484	3645	3661	0.997	0.999	159	3635	3586
20-24	7554	5425	0.996	0.995	0.0986	2675	4422	5018	2474	4077	4456	0.998	0.998	879	3897	4131
25-29	5249	3957	0.989	0.997	0.1395	2760	7524	5400	3767	4405	4995	0.995	0.999	1394	4259	4773
30-34	3539	2760	0.987	0.991	0.0717	990	5189	3947	1416	7438	5386	0.995	0.996	773	6194	5216
35-39	3208	2211	0.975	0.982	0.0384	425	3494	2735	526	5124	3911	0.990	0.993	301	6004	4477
40-44	2014	1465	0.983	0.973	0.0191	140	3129	2171	207	3408	2686	0.993	0.989	103	4060	3147
45-49	1570	1126	0.953	0.931	0.0071	40	1979	1425	51	3075	2113	0.981	0.972	30	3164	2295
50-54	1116	713	0.939	0.945			1496	1048		1886	1327	0.975	0.978		2310	1600
55-59	599	503	0.911	0.825			1048	674		1405	991	0.964	0.926		1548	1069
60-64	461	477	0.867	0.899			546	415		955	556	0.944	0.959		1083	687
65-69	354	363	0.817	0.833			400	429		473	373	0.922	0.930		623	421
70-74	265	304	0.747	0.818			289	302		327	358	0.890	0.923		349	337
75+	275	394	0.343	0.664			292	510		316	586	0.652	0.849		322	629
Total	42465	36720				7575			8924	48357	42647			3637	49521	43842

Source: Author's calculation using data from 2017 PHCB

Table A2. *Population projection of Thimphu thromde*

Age	2017 population		Survival rates		2017 fertility rate	Births 2017-2022	2022 population		Migration 2022		2022 pop. with migration		Births 2022-2027	2027 population		Migration 2027		2027 pop. with migration	
	Male	Female	Male	Female			Male	Female	Male	Female	Male	Female		Male	Female	Male	Female	Male	Female
0-4	4758	4477	0.979	0.984			5850	5170	125	87	5975	5257		5899	5213	253	175	6152	5388
5-9	4699	4554	0.996	0.996			4659	4406	379	410	5038	4816		5729	5088	932	946	6661	6034
10-14	4400	4349	0.999	0.997			4679	4534	421	494	5100	5028		4639	4387	835	956	5475	5343
15-19	4615	5161	0.994	0.997	0.0081	210	4395	4334	494	793	4889	5127	176	4674	4518	1050	1653	5723	6172
20-24	7868	7458	0.995	0.997	0.0653	2435	4585	5146	1947	1727	6532	6873	1680	4367	4321	3709	2900	8075	7222
25-29	8635	7983	0.994	0.996	0.1193	4760	7828	7438	3351	2084	11179	9522	4435	4562	5132	3906	2876	8468	8009
30-34	6750	5988	0.983	0.992	0.0850	2545	8580	7953	321	490	8901	8443	3380	7778	7410	582	914	8360	8324
35-39	5168	4578	0.979	0.989	0.0374	855	6636	5938	-385	56	6251	5994	1109	8435	7887	-979	149	7456	8036
40-44	3465	2757	0.967	0.980	0.0120	165	5059	4528	-309	-234	4750	4294	271	6496	5874	-793	-607	5703	5267
45-49	2792	2221	0.968	0.975	0.0045	50	3352	2702	-164	-36	3188	2666	61	4893	4439	-479	-118	4414	4320
50-54	1922	1620	0.939	0.952			2703	2167	-189	11	2514	2178		3245	2636	-454	28	2790	2664
55-59	1176	1182	0.922	0.914			1805	1542	-181	68	1624	1609		2539	2062	-508	181	2030	2243
60-64	909	976	0.870	0.911			1084	1081	-72	190	1012	1270		1664	1409	-222	495	1441	1904
65-69	629	660	0.851	0.878			791	889	3	210	794	1099		943	985	8	465	951	1450
70-74	438	610	0.684	0.818			535	579	57	196	592	775		673	780	143	528	816	1308
75-79	350	439	0.680	0.728			300	499	58	39	358	538		366	474	142	74	508	548
80-84	236	300	0.507	0.602			238	320	46	25	284	344		204	363	79	56	283	420
85+	186	242	0.377	0.447			190	289	37	22	226	311		192	321	74	50	266	371
Total	58996	55555				11020			5940	6632	69208	66146	11113	67296	63300	8277	11721	75574	75021

Source: Author's calculation using data from 2017 PHCB