



▶ GENDER RESPONSIVE LABOUR MARKET ANALYSIS

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Gender Responsive Labour Market Analysis

Bhutan Education & Skills Training

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List of Acronyms

ADB	Asian Development Bank
BEST	Bhutan Education & Skills Training
FYP	Five Year Plan
GBA+	Gender Based Analysis Plus
GDP	Gross Domestic Product
GESI	Gender Equality & Social Inclusion
GNH	Gross National Happiness
GPI	Gender Parity Index
IZC	Institute of Zorig Chusum
LDC	Least Developed Country
LMA	Labour Market Analysis
MoESD	Ministry of Education & Skills Development
MoLHR	Ministry of Labour & Human Resources
NKRA	National Key Result Area
NSB	National Statistics Bureau
Nu	Ngultrum
PIP	Project Implementation Plan
PWD	People with disabilities
RCSC	Royal Civil Service Commission
RGoB	Royal Government of Bhutan
RIM	Royal Institute of Management
RUB	Royal University of Bhutan
TTI	Technical Training Institute
TVET	Technical and Vocational Education and Training

Executive Summary

Introduction

Bhutan has embarked on a process of reforming its system of Technical and Vocational Education and Training (TVET). The TVET system is currently characterized by a mismatch between the type of training provided by TVET institutions and the type of knowledge and skills needed in an innovative and competitive 21st century economy. Bhutan's process of TVET reform will address this by focusing on four key components of the system - product, place, people and process – that will enable future TVET graduates to be work ready, find dignified work and ultimately contribute to Bhutan's economic growth. The International Development Institute (IDI) at Humber College is supporting Bhutan's TVET reform through the Bhutan Education and Skills Training (BEST) project. Funded by Global Affairs Canada, the five-year project (2022-2027) will deliver interventions at the institutional, industry and national levels to improve economic participation for TVET graduates through a reformed, inclusive, and environmentally responsive TVET system. In order to support the design and implementation of BEST's interventions, a labour market analysis (LMA) was undertaken to identify economic subsectors with high opportunities for employment.

Methodology

The LMA made use of a Gender Equality & Social Inclusion (GESI) analytical lens that directs focus to analyzing high employment sub-sectors for both women and men but with a particular emphasis on identifying employment opportunities that improve the assets, agency and opportunities for leadership of women. An intersectional approach further characterizes the analytical lens to explore differences across intersectional identities like age, ability and geography. Based on the GESI lens, a simple index was created to measure high opportunity sectors for employment. The index is constructed of three variables made up of seven indicators, each connected to a component of BEST's definition of 'high opportunity for employment' and a component of the GESI lens. The index was then applied to subsectors of the Bhutanese economy drawing on secondary data from government sources.

Context

Economic development in Bhutan is shaped by the country's home-grown development model known as Gross National Happiness (GNH). GNH is an integrated and holistic approach to development that recognizes the interdependence of economic, social, cultural, ecological and governance concerns. Within this development context, Bhutan experienced significant economic growth over the past several decades prior to the COVID-19 pandemic. It has done so while pursuing an exceptional environmental record and achieving a significant reduction in poverty. Yet real challenges characterize the Bhutanese labour force. The agriculture sector employs almost half of the working population but contributes less than 20% of GDP. A large proportion of the labour force has no education while, at the same time, the economy struggles to incorporate those with tertiary education. Workers across the economy report having poor digital competencies. Youth unemployment skyrocketed in 2021 from 11.9% to 22.6% compared to a 2.7% to 5% change in the overall unemployment rate.

Women are disproportionately affected by these challenges in the labour force. While traditional norms and practices provide women with some notable assets, competing norms and beliefs marginalize women's agency and leadership in the labour force and impose a double or triple burden on them. Rural

women, young women, and women with disabilities are particularly affected. Overall, when compared to men, women are more likely to be unemployed or have less stable jobs, have lower wages, work in clerical, agricultural or retail jobs, and contribute to unpaid care work.

Reforming Bhutan's current TVET system holds the potential to address the challenges in the labour force by developing or updating courses, pedagogies, policies, trainee supports and linkages with industry. Pursuing such interventions through a gender lens will further address the low participation of women in TVET. Currently, only 28% of trainees are women and the TVET system scores only 0.41 on the Gender Parity Index, where 1.0 represents gender equality.

Identifying subsectors in the Bhutanese economy that hold high opportunities for employment, and women's employment in particular, is key to ensuring the TVET reform process responds appropriately to the needs of the labour force and a competitive economy in Bhutan.

High opportunity subsectors for employment

The *High Opportunity Subsectors Index* was constructed to measure three employment-related variables in each subsector of the Bhutanese economy: i) dignified work, ii) economic security, and iii) women's empowerment. Application of the index demonstrates that the subsectors of *Electricity, gas, steam & air conditioning; Information & communication; Health & social work activities; Administrative & support services; and Manufacturing* offer high opportunities for employment. Moreover, *Electricity, gas, steam & air conditioning; Health & social work activities; and Administrative & support services* are currently characterized by elements that are, to some extent, already fostering women's assets, agency and abilities to contribute to change. The BEST project should focus efforts on consolidating and building on these existing elements to further strengthen them, particularly through the design of courses in these areas. On the other hand, the high opportunity subsectors of *Information & communication* and *Manufacturing* are characterized by some challenges to effective women's labour force participation. The BEST project will need to take a different approach to these subsectors, focusing on improving the situation for women through the design of appropriate gender sensitive courses, pedagogies, policies and industry relations.

Several other subsectors that did not score high enough on the index to be designated as high opportunity subsectors should nonetheless also be considered by BEST as areas of focus in the design of courses and other interventions. This is due to larger contextual factors. Designing or revising courses in *Hospitality* is recommended given the importance of international tourism to the economy and the significant policy change that has recently occurred. *Agriculture, forestry & fishing* employs almost half of the labour force and is in significant need of mechanization and greater productivity. The subsector of *Art and entertainment* should also be considered for course design or revision given the centrality of Bhutan's traditional culture, including arts and crafts, to its identity and claims to sovereignty in a region where sovereignty has been extinguished in the past.

Lastly, two areas that do not appear in government documents as subsectors in the economy should be considered. *Renewable energy* jobs are a critical priority for Bhutan given the need to diversify beyond its hydropower sector, especially as hydro's long-term viability is threatened by climate change. Finally, while not a subsector, *Entrepreneurship* is a critical cross-cutting theme that should be the focus of course development to ensure TVET graduates not only have technical skills needed for employment, but business skills to start their own technical businesses.

1. Introduction

The Royal Government of Bhutan (RGoB) is initiating a process to reform the Technical and Vocational Education and Training (TVET) system in the country. As Bhutan continues to integrate with the global economy, its current TVET system is inadequate in addressing the evolving needs of an innovative and competitive 21st-century economy. Moreover, TVET is generally viewed as a less desirable education and career pathway for young Bhutanese. This is all exacerbated by a growing problem of youth unemployment with young women disproportionately affected. TVET reform is intended to address these issues. By focusing on reforming four key components of TVET in Bhutan – product, place, people and process – the intention is to mold TVET graduates who are not only job-ready but also able to find dignified employment, ultimately contributing to Bhutan's economic progress. Ensuring women, people with disabilities (PWD) and other vulnerable groups have better access to TVET training and subsequent employment is a key feature of the reform process.

The International Development Institute (IDI) at Humber College is supporting Bhutan's TVET reform process. With funding from Global Affairs Canada (GAC), the Bhutan Education and Skills Training (BEST) project will enhance the effectiveness of the TVET system in Bhutan to ensure that graduates are equipped with the knowledge and skills required to meet labour market needs and eventually contribute to the socio-economic development of the country. The five-year project (2022-2027) will contribute to comprehensive reform of the TVET sector by aligning with Bhutan's 2021 National TVET Reform Plan 2.0. The project will deliver interventions at the *national level* to create policies and sustainable management processes for systemic reform, *institutional level* to implement gender and environmentally sensitive pedagogical practices, courses and capacity development, *industry level* to create strong TVET-industry linkages, and *community level* to influence public mindsets about TVET. Ultimately, BEST seeks to improve economic participation for TVET graduates through a reformed, inclusive, and environmentally responsive TVET system. This will contribute to poverty reduction by decreasing unemployment, particularly among women, youth and people with disabilities, and increasing equitable access to sustainable economic opportunities and growth.

To support the BEST project, a labour market analysis (LMA) was conducted. The LMA used a gender equality and social inclusion (GESI) analytical lens to identify high opportunity economic subsectors for employment of TVET graduates with a particular focus on opportunities for women. A “high opportunity” economic subsector is defined by the BEST project as having three dimensions: 1) dignified employment, meaning it is valued by society and government priorities, 2) economic security, and 3) women's empowerment leading to the increased agency.¹ The objective of the LMA is to identify and analyze subsectors with high opportunities for employment to inform the design and implementation of BEST's project activities.

This report presents the results of the LMA. It should be noted that the LMA used data solely from secondary sources. This created some data limitations that were addressed in the design of the methods used to operationalize the analytical framework. BEST is committed to undertaking a follow-up LMA in the future that uses both primary and secondary sources. This will provide a more complete picture that complements this report and further builds on it.

¹ Bhutan Education and Skills Training (BEST) Project Implementation Plan (PIP) 2022-2027 & First Annual Workplan.

The report is structured in the following manner: The next section outlines the methodology used, covering the GESI analytical framework and a description of the methods employed to collect and analyze data. The subsequent three sections provide overall context and identify key issues for the identification of high opportunity sectors for employment. First is an overview of Bhutan’s national economic context followed by a section that analyzes the gender equality and social inclusion context shaping Bhutan’s economy and labour force. This is followed by an overview of the TVET context and TVET reform. With the larger contextual picture developed, the final section identifies and analyzes the high opportunity sectors for employment that emerged from the LMA. Specific attention is given to high opportunities for women and, where data are available, opportunities for young women and women with disabilities. The section also provides recommendations for TVET reform interventions for each of the subsectors identified as high opportunity.

2. Methodology

2.1 Analytical framework

The focus of this labour market analysis is to identify high opportunity sectors for employment and particularly for women’s employment. The identification of these sectors can then inform TVET reform interventions undertaken by the BEST project. While this includes an exploration of employment opportunities for both women and men, an analytical lens that is explicitly focused on women’s empowerment is used to ensure the design of BEST activities is informed by gender equality considerations. This is essential given the complexity of gender equality in Bhutan, discussed further below, that requires placing inclusion considerations at the forefront. The gender sensitive analytical framework is further contextualized by locating it within Bhutan’s national economic context and the nature of Bhutan’s current TVET system, including its plans for TVET reform.

The analytical framework used for the LMA is a slightly revised version of a GESI framework developed by MEDA² and applied in past Colleges and Institutes Canada (CICan) projects involving IDI as an implementation partner. This choice was made for three reasons. First, it ensures the LMA draws upon a GESI framework with demonstrated utility that is similar to commonly used frameworks such as Women’s Empowerment and Market Systems (WEAMs). Second, given its previous use in projects involving IDI, it will provide comparative gender information across multiple IDI projects that will support future analysis of IDI’s broader contributions to gender equality. Third, it provides a framework to operationalize the Government of Canada’s Gender Based Analysis Plus (GBA+) analytical process in a way that is specific to the employment of women and other vulnerable groups.

GBA+ is a process that directs analytical attention to assessing how intersectional identity factors such as sex, gender, age, ability, religion, and income, among others, affect how people experience programs or policies. It is a process that involves identify an issue, challenging assumptions around how intersectional identity factors may experience the issue, collecting the facts in a way that incorporates data on intersectional identities or identifies areas where there are gaps in the data, and developing options or recommendations based on this data.

² Mennonite Economic Development Associates. (2022) Tanzania Rapid Labour Market Assessment: An initiative of the Empowerment through Skills Program (ESP) of Colleges and Institutes Canada (CICan).

Figure 1: Gender Based Analysis Plus



The GESI analytical framework used in this LMA report integrates four interrelated domains: i) the *enabling environment* for strengthening women’s abilities to pursue desired outcomes, ii) *assets*, or resources and skills women have to potentially pursue desired outcomes, iii) *agency*, or the perceived or actual ability for women to deploy their assets to achieve desired outcomes, and iv) *contribution/ leadership*, or the engagement of women as a source of change for themselves, their workplaces and their communities. By incorporating a GBA+ focus, the GESI analytical framework also directs attention to other intersectional identity factors that may affect how different women may experience these domains differently. Specifically, the LMA focuses on the factors of sex, age, ability, and geography (rural/urban) given the focus of the BEST project. Note, however, that existing data in secondary sources are quite limited for some of these identity factors. Moreover, it is even more limited for other identity factors that may intersect with these factors or face additional issues. As such, it will be important for BEST’s expanded follow-up LMA to explore these further and, as part of this exploration, address assumptions that may be incorporated in official data and societal mindsets.

The four GESI framework domains are integrated, working together to promote positive outcomes for women. A positive *enabling environment* creates the conditions for women to secure *assets* necessary for pursuing change. These assets are only valuable, however, if matched by women’s ability to engage their own *agency* to put them to use in the pursuit of change. Increased agency, in turn, increases women’s roles as a source of *leadership* and *contributors* to change.

This report analyzes the labour market in Bhutan and the opportunities it has for women’s employment through this lens of the integration of enabling environment, assets, agency and change contributions/leadership. More details on the application of the GESI framework are found in section 4.

2.2 Methods

In order to analyze the labour force to identify high opportunity sectors for employment, a simple index was created using three equally weighted variables made up of seven indicators. The three variables are directly tied to the three components of the definition of “high opportunity sectors” used by the BEST project (i.e. dignified work, economic security and women’s empowerment). The three variables are further defined in terms of their contributions to the enabling environment, assets, agency and

contribution/leadership domains of the GESI analytical framework. Details on the construction of the index can be found in section 6 of this report.

The index was applied to subsectors of the Bhutanese economy to identify high opportunity sectors, including for women. The subsectors used in the analysis are those that are standardized in most RGoB documents to ensure comparative data were available across the index's variables. Application of the index relied on data found in RGoB documents, primarily from the Ministry of Education and Skills Development (MoESD), the Department of Skills Development in the former Ministry of Labour and Human Resources (MoLHR) and now a part of MoESD, and the National Statistics Bureau (NSB).

Relying on secondary sources created some limitations as the variables and indicators created for the index needed to be designed based on available secondary data. In addition, available secondary data were not always consistent across different RGoB documents and occasionally within individual documents. Where this was the case and a determination of the accuracy of data could not be made, these data were excluded from use and therefore not incorporated into designing the variables for the index. The result is that the index is course-grained in order to compensate for the data limitations (see more details in section 6). In order to offset this limitation, a number of qualitative considerations beyond the index were incorporated into the discussion to provide a more nuanced analysis. These considerations drew on a range of secondary sources including relevant scholarly research and grey literature (policy documents, multilateral organization reports, media reports). Scholarly research and grey literature were also used for the contextual sections of the report that frame the use of the index. It is recommended that the follow-up labour market analysis to be done by the BEST project incorporate both primary and secondary sources to supplement and expand this report to address its limitations.

The result of the methods used in this report is the identification and analysis of high opportunity subsectors for employment of TVET graduates with a particular focus on women's employment. Identification of the subsectors can inform the design and implementation of the BEST project's interventions. The next section turns to outlining the broader context to better understand the nature of these high opportunity subsectors.

3. National Economic Context

3.1 Bhutan's development model: Gross National Happiness

Bhutan is perhaps best known for its indigenous development model known as Gross National Happiness, or GNH. The fourth King of Bhutan, Jigme Singye Wangchuck, who reigned from 1972-2006, coined the phrase Gross National Happiness and famously declared in 1986 that "Gross National Happiness is more important than Gross National Product." Gross National Happiness is rooted in the simple notion that happiness is a universal aspiration and should be the core of development. Accordingly, GNH conceptualizes development as a process that moves beyond a sole focus on economic growth and incorporates interrelated economic, social, governance, cultural and environmental dimensions. These dimensions create the enabling conditions for people's happiness as the end goal of development. Happiness in GNH is not understood in the western sense of immediate pleasure, but as a harmonious balance between material wellbeing and the spiritual, ecological and cultural aspects of an individual and society. GNH therefore constructs development as a means to foster the multiple dimensions of human happiness rather than just wealth.

GNH has been Bhutan’s guiding development model for several decades. It has also gained international traction as an alternative development model. In 2011, the UN General Assembly adopted a Bhutanese sponsored resolution that defined the pursuit of happiness as a fundamental human goal that, at the time, was the embodiment of the Millennium Development Goals. Indeed, by conceptualizing GNH as a strategy that creates enabling conditions for happiness, GNH has a clear connection to UNDP’s human development paradigm and its focus on creating enabling conditions for people’s agency.³ Yet GNH largely pre-dates the human development paradigm. Moreover, GNH does not draw on any western or liberal influences as its foundation rests in a long Buddhist philosophical tradition that recognizes the integrated nature of happiness and wellbeing.⁴ Nonetheless, the Bhutanese government has argued that the happiness focus of GNH represents the larger development end to which the human development paradigm contributes.⁵

As a development philosophy, GNH was originally constructed as four interrelated pillars: equitable socio-economic development, cultural protection and promotion, environmental sustainability and good governance. Promoting these pillars is the pathway to creating the enabling conditions for happiness. The four pillars were later expanded into nine domains that maintain an interrelated relationship.

Figure 2: The nine domains of Gross National Happiness (GNH)



³ Schroeder, K. (2018). *Politics of Gross National Happiness: Governance and Development in Bhutan*. New York: Palgrave Macmillan.

⁴ Priesner, S. (2004). Gross National Happiness: Bhutan’s vision of its development and its challenges. In K. Ura (Ed.), *Gross National Happiness: A set of discussion papers* (pp. 12–23). Thimphu: Centre for Bhutan Studies.

⁵ Royal Government of Bhutan. (2005). *Bhutan National Human Development Report 2005*. Thimphu: Royal Government of Bhutan.

These nine domains were further operationalized beginning in 2008 to make GNH a more applied model that moved beyond its philosophical origins. Several GNH policy tools were developed, including a GNH Index to measure Gross National Happiness nationwide and a GNH policy screening tool that requires all policy design to be assessed for its potential impacts on the GNH domains. Bhutan's Five-Year Plans (FYPs) are now also explicitly rooted in the GNH domains.

As a holistic and integrated development model, GNH has implications for Bhutan's economy and labour force. The pursuit of economic growth is not a goal of development; rather, it is a means to happiness as the end goal of development. Moreover, as a means to happiness it needs to be balanced with the other domains of GNH. As a result, there have historically been times where Bhutan has purposefully not promoted economic growth if it threatened other domains of GNH. This strategy is clear in Bhutan's last long term development vision, *Bhutan 2020*, which stated:

Our approach to development has sought to both draw upon and conserve this rich fund of social and cultural philosophy and to achieve a balance between the spiritual and material aspects of life, between *peljor gongphel* (economic development) and *gakid* (happiness and peace). When tensions were observed between them, we have deliberately chosen to give preference to our understanding of happiness and peace, even at the expense of economic growth, which we have regarded not as an end in itself but as a means to achieve improvements in the wellbeing and welfare of the people.⁶

Analyzing Bhutan's economy and labour market therefore needs to take this GNH perspective into account, as does the design of TVET courses that respond to the 21st century economic needs in the country. Reforming the Bhutanese TVET sector needs to incorporate a multidimensional understanding of the kind of development Bhutan is pursuing overall.

3.2 Economic context

3.2.1 Economic growth

Bhutan has experienced notable economic growth even within the parameters of its balanced GNH approach to development. Real GDP growth has averaged 7.5% since the 1980s. This is primarily driven by the country's hydropower sector given Bhutan's location in the Himalayas with its abundant glaciers and many rivers. Most hydropower output is exported to neighbouring India, making up 34.15% of Bhutan's exports, 19.45% of domestic revenue and 8% of GDP.⁷ While the COVID-19 pandemic drove a decline in GDP by -8.3% in 2020 compared to 2019, a modest period of growth has returned and is forecast to continue. According to figures from the Asian Development Bank (ADB), real GDP growth was 4.1% in 2021, 4.7% in 2022 and is forecast to be 4.6% in 2023 and 4.2% in 2024. GDP per capita is growing at a slightly slower rate, with ADB figures showing 3.1% in 2021, 3.7% in 2022 and forecasts of 3.8% in 2023 and 3% in 2024.⁸

⁶ Planning Commission. (1999). *Bhutan 2020: A vision for peace, prosperity and happiness. Part I*. Thimphu: Planning Commission, Royal Government of Bhutan.

⁷ IRENA. (2019). *Renewables Readiness Assessment: Kingdom of Bhutan*. Abu Dhabi: International Renewable Energy Agency.

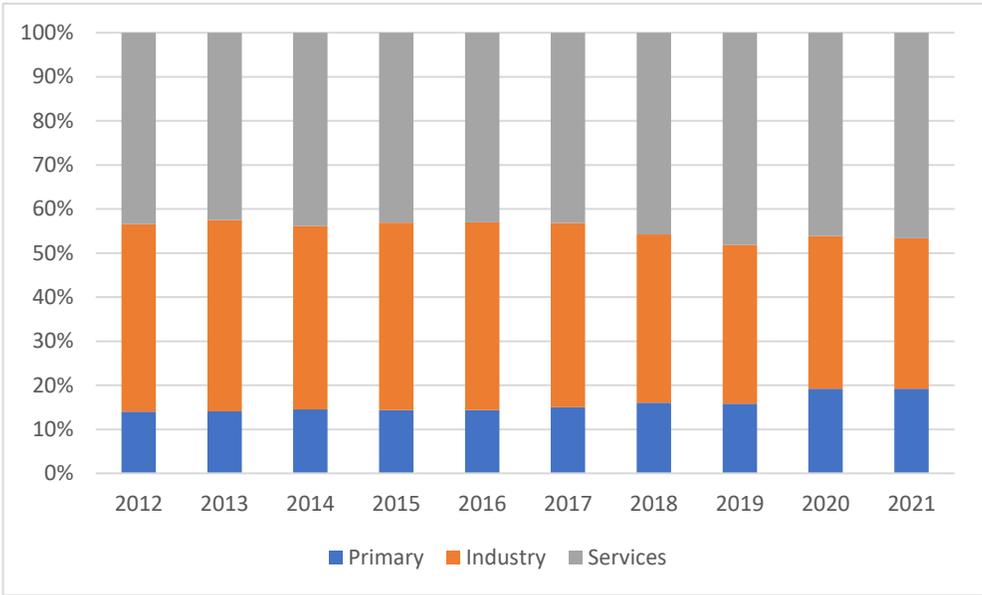
⁸ <https://www.adb.org/countries/bhutan/economy>

Based on its economic performance historically, Bhutan is set to graduate from Least Developed Country (LDC) status in 2023. This growth is accompanied by relative equality in Bhutan with a Gini index of 0.285. Nonetheless, addressing inequality is an increasing concern in the country. A Bhutanese person in the top 20% of the population now consumes four times more than someone in the bottom 20%.⁹

3.2.2 Structure of the economy

In 2021, Bhutan’s service sector made up the largest share of the economy at 46.6%. Industry represented 34.3% and the primary sector (agriculture, livestock and forestry) made up 19.2%.¹⁰ This represents a fairly consistent economic structure over the previous ten years with the primary sector’s share of the economy growing by 5.2% over that period and services growing by 3.2%. Industry decreased its share of the economy by -8.4%.

Figure 3: Structure of the economy, 2012-2021



As Bhutan emerges from the COVID-19 pandemic, industry and to a lesser extent services, drove growth in the economy. In 2021 the subsectors of mining & quarrying, transport & communication, construction, and retail trade were central to this growth.¹¹ At the same time, Bhutan’s economy is characterized by a trade deficit that has significantly increased recently. The trade deficit increased by 21.66% from 2020 to 2021, rising from 6.28% to 27.94%, and now accounts for 20.9% of GDP.¹² The country’s international

⁹ National Statistics Bureau. (2022). *Poverty Analysis Report 2022*. Thimphu: National Statistics Bureau.
¹⁰ National Statistics Bureau. (2022). *National Accounts Statistics 2022*. Thimphu: National Statistics Bureau.
¹¹ *Ibid.*
¹² *Ibid.*

trade is dominated by India with exports to India from Bhutan representing 78.7% of total exports. Canada is a small trading partner, ranking 42nd in terms of exports to Bhutan.¹³

3.2.3 Poverty reduction

Bhutan's overall GNH approach to development has resulted in a notable reduction in poverty that has accompanied the country's historical economic growth. Comparing poverty levels in Bhutan over time is challenging given changes in methodology used in the country, but the most recent *Poverty Analysis Report* of 2022 shows an overall rate of consumption-based poverty of 12.4%. Poverty is primarily a rural phenomenon with a poverty rate of 17.5% in rural areas compared to an urban rate of 4.2%. Subsistence poor make up only 0.4% of the population.¹⁴ These figures show a significant change in poverty since 2007. The *Poverty Analysis Report* of 2007 reported a poverty rate of 23.2% (30.9 rural and 5.9 urban),¹⁵ indicating a notable decline although, again, comparing these figures needs to be done with caution given the different methodologies used in the two studies. Over the long term, Bhutan's reduction of poverty was the steepest among all countries with a poverty rate of 50-60% as of 1990.¹⁶

It is worth noting that this reduction in poverty that accompanied notable long-term economic growth occurred alongside an internationally recognized record on environmental conservation. Over 70% of Bhutan is forested and national parks, wildlife sanctuaries, and biological corridors make up approximately 51% of the country's total area. Bhutan is also carbon negative and is committed to remaining carbon neutral in perpetuity. Bhutan's conservation record has been recognized globally. Both UNEP's inaugural "Champions of the Earth" award and WWF's J. Paul Getty Award for Conservation Leadership were awarded to the fourth King of Bhutan. This economic and environmental record has further occurred in the context of a successful transition to democracy beginning in 2008 that, as of early 2023, witnessed three national elections involving three peaceful transitions of power.

3.2.4 Employment and the labour force

While Bhutan's GNH-driven development record, including its economic growth, is generally quite impressive for a small landlocked country, there are significant challenges related to the labour force. The Bhutanese economy has a mismatch between sectors of growth and employment. Despite making up less than 20% of the economy, the primary sector employed 49% of the workforce as of 2021 and had the lowest labour productivity.¹⁷ The service industry, the largest driver of economic growth, employs 35% of the workforce with this figure largely remaining the same over the last 10 years. The industrial sector, while the smallest sector of employment, has more than doubled its employment since 2010, growing from employing 7% of the workforce in 2010 to 15% in 2020. It also has the highest labour productivity when compared to the primary and service sectors.¹⁸

¹³ [National Statistics Bureau. \(2022\). *Statistical Yearbook of Bhutan 2022*. Thimphu: National Statistics Bureau.](#), pp. 238-239.

¹⁴ [National Statistics Bureau. \(2022\). *Poverty Analysis Report 2022*. Thimphu: National Statistics Bureau.](#)

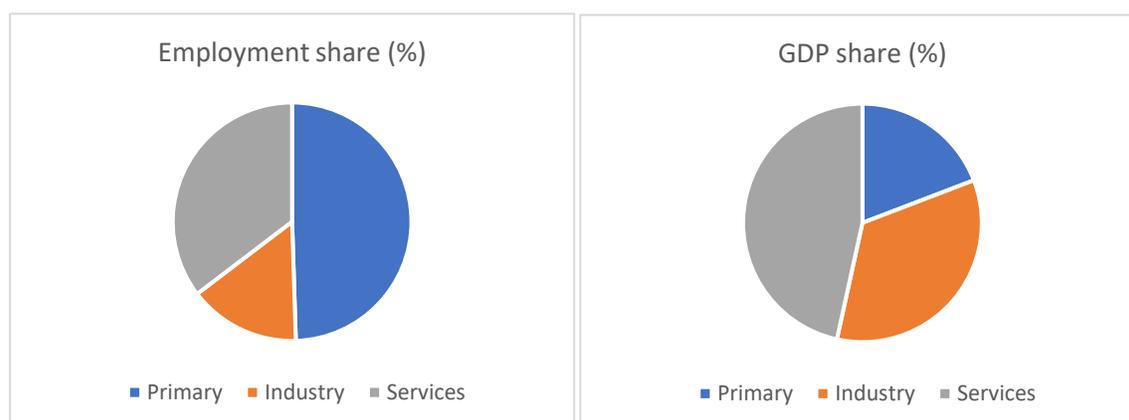
¹⁵ [National Statistics Bureau. \(2007\). *Poverty Analysis Report 2007*. Thimphu: National Statistics Bureau.](#)

¹⁶ [National Statistics Bureau and the World Bank. \(2014\). *Bhutan Poverty Assessment 2014*. National Statistics Bureau and the World Bank, Royal Government of Bhutan.](#)

¹⁷ MoESD. (2023). *Labour Market Report*. Thimphu: MoESD, p.3.

¹⁸ *Ibid.*

Figure 4: Employment share versus GDP share of economic sectors, 2021



Labour productivity overall, understood as the output produced by a worker per a unit of time, is quite high in Bhutan as it surpasses most of its South Asian neighbours.¹⁹ Nonetheless, a plurality of Bhutan’s workforce, 41.5% in 2021, has no education. The majority of these workers are employed in the primary sector. The industrial sector tends to employ workers with mid-level education while workers with a higher secondary or university qualification are overwhelmingly employed in the service sector.²⁰ Across the labour force, workers lack IT skills and digital competencies needed for the 21st century economy. Just over 47% of employees report having either poor or average basic computer skills such as typing, sending emails and using the internet. Almost 63% of workers have poor or average skills using office software like Word and Powerpoint.²¹

The labour force participation rate, defined as the proportion of labour force in relation to the working age population, was 69.1% in 2021, slightly up from 65.3% in 2013.²² Among adults who are employed the median monthly income is Nu 16,400 (approximately CAD 275) with a significant gap between rural and urban workers (Nu 10,000 rural versus Nu 19,000 urban).²³

The unemployment rate over the last decade has hovered between a low of 2.1% in 2012 and 2016 and, unsurprisingly, a high of 5% during the pandemic in 2020. In 2021 the unemployment rate decreased slightly to 4.8%.²⁴ Somewhat surprisingly, those who have a higher secondary or university credential make up the greatest number of unemployed and this phenomenon has increased significantly since 2010.

¹⁹ *Ibid.* p. 4

²⁰ *Ibid.*, p. 11

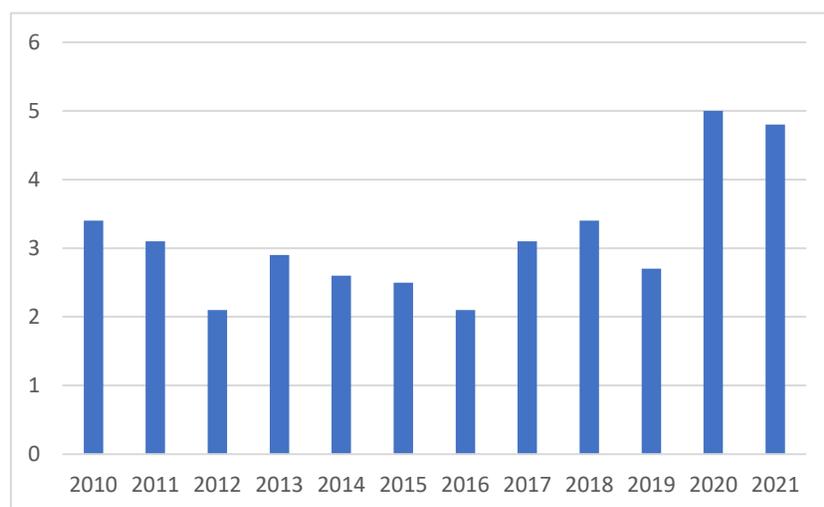
²¹ *Ibid.*, p. 41

²² *Ibid.* p. 5

²³ National Statistics Bureau (2021). *2021 Labour Force Survey Report Bhutan*. Thimphu: NSB.

²⁴ MoESD. (2023). *Labour Market Report*. Thimphu: MoESD, p. 13.

Figure 5: Unemployment rate (%), 2010-2021



3.2.5 Economic challenges and the impact of COVID-19

The mismatch between Bhutan’s labour force and the sectors of economic growth is characterized by further obstacles. The economy continues to be over-reliant on hydropower, an industry with limited domestic workforce needs. The construction sector relies heavily on foreign workers²⁵ and the vast majority of unemployed Bhutanese, 77.5%, aspire to work in the public sector.²⁶ The private sector continues to remain relatively small with limited supports to entrepreneurs. Fostering entrepreneurship, while a priority, remains in its infancy. In addition to the overall nature of the economy, economic challenges emerge from growing rural-urban migration, particularly among youth seeking employment, which threatens to continue to erode rural economies.²⁷ Other vulnerable groups also experience economic challenges. Women face inequality in the workforce and PWD encounter significant challenges in employment and education (see section 3.4 for a detailed discussion of women, youth and PWD).

These challenges were exacerbated by the COVID-19 pandemic. Bhutan’s GNH-based response to the pandemic demonstrated significant resilience in the face of the health emergency.²⁸ The economic impacts, however, have been significant. Annual government expenditures more than doubled during the pandemic.²⁹ The result is a notable increase in public debt³⁰ as well as an issue with dwindling foreign currency reserves.³¹ In addition, while the decline in growth that occurred in 2020 has reversed,

²⁵ MoESD. (2023). *Labour Market Report*. Thimphu: MoESD, p. 36.

²⁶ National Statistics Bureau. (2022). *2022 Labour Force Survey Report Bhutan*. Thimphu: National Statistics Bureau.

²⁷ National Statistics Bureau. (2018). *Rural-Urban Migration and Urbanization in Bhutan*. Thimphu: NSB.

²⁸ [Verma, R. and Wangmo, K. \(2020\). Bhutan’s foresighted resilience in the initial period of the COVID-19 Pandemic: Through the Lens of Gross National Happiness. *Journal of Bhutan Studies* 42 \(Summer\).](#)

²⁹ [National Statistics Bureau. \(2007\). *Poverty Analysis Report 2007*. Thimphu: National Statistics Bureau, p. 296.](#)

³⁰ *Ibid*, p. 304.

³¹ [Royal Monetary Authority. \(2022\). *Annual Report 2022*. Thimphu: RMA, p.41.](#)

Bhutan is struggling with inflation as it emerges from the pandemic. In 2021, inflation reached 7.3% with a decline to 5.6% in 2022. The rate is forecast to remain above 5% through 2024.³²

The economic challenges that have emerged as Bhutan recovers from the COVID-19 pandemic have further impacted the movement of Bhutanese. In addition to the ongoing issue of rural/urban migration, there has recently been an apparent surge in emigration of Bhutanese to Australia for employment or education. While clear figures are hard to come by, since 2022 “Australian fever” appears to be a threat to Bhutan’s domestic capacity, particularly in the fields of education, medicine and the civil service.³³ Indeed, 70.3% of young jobseekers believe there are better work opportunities abroad and 68.9% are actively seeking work or training abroad.³⁴ While increased emigration will provide individual Bhutanese with good employment opportunities elsewhere, it represents an emerging threat for the human capital needs of Bhutan’s economy.

Overall, Bhutan’s national economic context illustrates a complex set of factors with implications for TVET education. A history of long-term economic growth experienced within a larger holistic GNH development strategy has occurred in parallel to a labour force that is overrepresented in the least productive sector of the economy, widespread lack of digital competencies, growing unemployment, particularly among those with tertiary education, and increased perceptions of better employment and training opportunities abroad. This is all occurring within an economy struggling to emerge from the COVID-19 pandemic.

4. Gender Equality & Social Inclusion (GESI) Context and Analysis

The overall portrait of Bhutan’s economy and labour force, including the challenges brought on by the pandemic, masks significant economic and employment inequalities experienced by women, youth and people with disabilities, especially young women and women with disabilities. The GESI analytical framework outlined in the *Methodology* section of this study was used to explore these gender differences when reviewing the secondary literature. The framework directs analytical attention to four interrelated domains:

Enabling environment: The policies, laws, norms and beliefs that create a space for supporting and strengthening women’s and girls’ abilities to pursue desired outcomes.

Assets: the resources and skills women and girls have to potentially pursue their desired outcomes.

Agency: the perceived and actual ability of women and girls to employ their assets to make or influence decisions and to act on these decisions to achieve desired outcomes.

Contribution/Leadership: the engagement of women and girls as a source of change for the achievement of desired outcomes for themselves, their workplace and their communities.

Applying this analytical framework to more deeply explore Bhutan’s economy and labour force illustrates a situation of both positive and negative gender themes, yet one that clearly needs to address gender

³² <https://www.adb.org/countries/bhutan/economy>

³³ <https://thedi diplomat.com/2022/10/the-paradox-of-bhutans-australian-dream/>

³⁴ MoESD. (2023). *Labour Market Report*. Thimphu: MoESD, p. 39.

inequality in the labour force. The following analyzes the overall situation of women in Bhutan through the lens of the above four domains.

4.1 The enabling legal and policy environment

Bhutan's 2008 constitution provides an overall foundation for the promotion of women's rights. In addition to all fundamentals right being gender neutral (Article 7), ensuring women enjoy the same fundamental rights as men, Article 9 (17) explicitly requires the state to take action to eliminate all forms of discrimination and exploitation of women in both the public and private spheres. Article 8 (5) further requires Bhutanese citizens themselves to not tolerate or participate in the abuse of women and to take necessary steps to prevent it. To promote women's and children's rights, the RGoB created the National Commission for Women and Children (NCWC) in 2004 as the lead agency on gender issues and it became an autonomous agency in 2008.

Multiple pieces of legislation have been passed in Bhutan that address various aspects of gender equality including the Childcare and Protection Act (2011), the Domestic Violence Prevention Act (2013), and the Labour and Employment Act (2007), which provides women with paid maternity leave. The Domestic Violence Prevention Act is supplemented by Women and Children Welfare Committees at the national, *dzongkag* (district) and *thromde* (urban centre) levels to ensure its effective implementation. In addition, the Royal Bhutan Police (RBP) maintain a Women and Child Protection Division and all police recruits receive training on gender sensitive procedures for dealing with women and children.³⁵ Bhutan is also a signatory of the Convention on the Elimination of all Forms of Discrimination Against Women (CEDAW).

While this legal framework provides a formal vehicle to promote and protect the rights of women, the RGoB viewed existing Acts as too *ad hoc* with insufficient integration and accountability. Accordingly, the *National Gender Equality Policy 2020* was created to provide a more coherent approach.³⁶ The policy focuses on addressing gender issues in the political, social and economic domains. Specifically, it seeks to increase women's decision-making ability in the public sphere, address gender-based violence and women's health issues, and promote girls' participation in education and women's access to finances and markets.

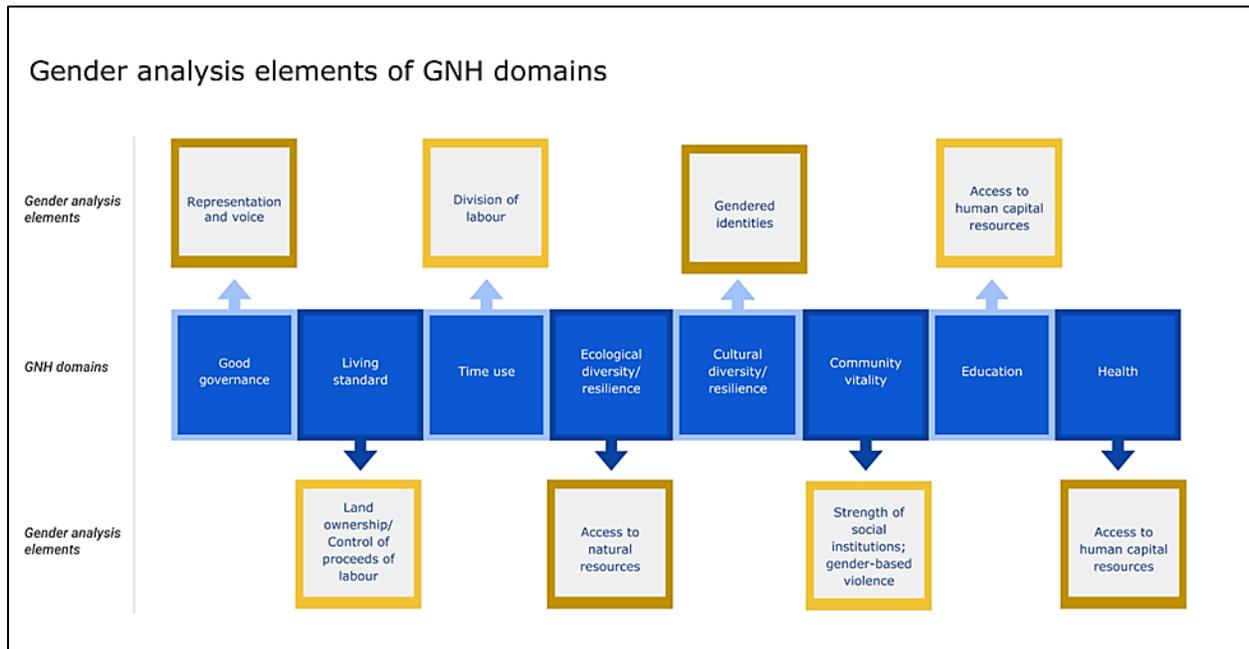
These Acts and policies rest within Bhutan's larger Gross National Happiness framework. Gender is not explicit within GNH's 9 domains (although GNH Index data can be disaggregated by gender), but recent research argues that key elements of gender analysis can be, at least in theory, infused within the domains of GNH (see figure 6). As such, when a gender lens is incorporated into using the GNH domains, the GNH framework itself provides an implicit means to measure and guide policy action on gender equality issues.³⁷

³⁵ CEDAW. (2019). *Concluding observations on the combined eighth and ninth reports of Bhutan*. CEDAW/C/BTN/CO/8-9/Add.1. New York: United Nations.

³⁶ [National Commission for Women and Children, Royal Government of Bhutan. \(2020\). *National Gender Equality Policy 2020*. Thimphu: NCWC.](#)

³⁷ Verma, R. & Ura, K. (2022). Gender differences in gross national happiness: Analysis of the first nationwide wellbeing survey in Bhutan. *World Development*, vol. 150(C).

Figure 6: Gender analysis and GNH domains



Adapted from Verma & Ura 2017; 2022

It should be noted that while elements of gender analysis can be used to apply a gender lens to the GNH domains, it does not provide a complete gender framework as GNH does not address gender elements such as decision-making and power dynamics within households and communities.

A practical application of the integration of gender analysis elements into GNH is evident in Bhutan’s 12th Five Year Plan (2018-2023). The FYP mainstreams gender into all policies, programs and plans in all government agencies and incorporates gender equality as a National Key Result Area (NKRA) across all GNH domains. As a result, the 12th FYP directs the implementation of development plans from the national to local levels towards achieving the 9 GNH domains through a gender lens. Overall, the existence of a gender lens in the FYPs and a set of gender-focused policies and legislation have contributed to creating a positive enabling environment for gender equality.

4.2 Assets and competing norms

The existence of a positive enabling environment is useful only if women can take advantage of such an environment through the use of their own assets. In Bhutan, the favourable policy environment is paralleled by some significant assets that women hold. Inheritance has traditionally been matrilineal in rural areas. This enables daughters to inherit land and property, a significant financial and livelihood asset. From the 1950s onwards, new reforms commoditized land, further strengthening land ownership as a key asset for women. Women in some rural areas are the heads of households giving them significant decision-making power in the family and the right to initiative divorce. Polyandry is also historically practiced in some parts of Bhutan. Overall, these characteristics suggest women have some potentially significant assets to draw upon, particularly within the domestic sphere.

Bhutan's legal enabling environment combined with norms and assets around inheritance and rural household leadership represent a potentially significant means for the promotion of gender equality. Yet other traditional beliefs and norms muddy the enabling environment and constrain women's broader leadership and their agency to deploy the property assets they may have. Indeed, existing research suggests that patriarchy remains evident throughout multiple contexts within Bhutan.³⁸ Women are generally believed to be weaker and viewed as economic dependents of men. They are expected to be homemakers, raise children and take care of parents, creating a double or even triple burden for those women who engage in formal or informal employment. With less time than men, women face barriers to accessing further education, work promotions, or engaging in labour mobility.

Other traditional practices further disempower young women, particular in rural areas. *Bomena*, or night-hunting, is a practice for young males to find a potential marriage partner where the male secretly enters a girl's home at night to engage in sex without prior consent. This practice results in sexual exploitation of girls by government officials or urban visitors who deceive rural girls with false promises of marriage. This is a reflection of a larger issue of gender-based violence in Bhutan. Approximately 45% of women have experienced some form of partner violence.³⁹

The impact of such beliefs and norms, despite the existence of a positive legal environment and a number of assets that woman maintain, cannot be overstated for their impact on women's economic, social and political lives. This is evident in Bhutan's ranking in the *Global Gender Gap Report*. The Report measures the gap between females and males in four domains: economic participation, educational attainment, political empowerment and health and survival. In the 2022 edition of the Report, Bhutan ranks only 126 out of 146 countries.⁴⁰ Bhutan's overall score in 2022 is slightly lower than 2021. This situation of gender inequality is further borne out in the results from Bhutan's own Gross National Happiness survey, a national survey measuring the 9 domains of GNH that is undertaken every 5 or so years. The most recent survey from 2015 shows that women do poorer than men across all nine GNH domains, including the living standards domain.⁴¹

4.3 Constrained leadership and agency

Women's and girls' ability to contribute to decision-making as a means to change their own circumstances is a key element of gender equality. Again, Bhutan has an enabling policy environment and women maintain some assets to pursue their needs based on some enabling norms, but competing norms and practices have limited women's leadership roles in public decision-making. Women are underrepresented in political positions and within the civil service. In the national parliament, women hold only about 15% of seats in both houses. Only 11% of female candidates were elected at the local level in 2016.⁴² Women are therefore largely missing in key positions for making policy decisions. Women are also underrepresented in the implementation of policy decisions and public services. According to

³⁸ See, for example, Chuki, S. and Turner, M. (2017). Women and politics in democratic transitions: the case of Bhutan. *Contemporary South Asia* 25(2).

³⁹ [NCWC. \(2019\). Gender Equality in Bhutan – A Situational Analysis. Thimphu: NCWC.](#)

⁴⁰ [World Economic Forum. \(2022\). Global Gender Gap Report 2022. Geneva: WEC.](#)

⁴¹ Centre for Bhutan Studies & GNH Research. (2016). *A Compass Towards a Just and Harmonious Society: 2015 GNH Survey Report*. Thimphu: Centre for Bhutan Studies & GNH Research.

⁴² [National Commission for Women and Children, Royal Government of Bhutan. \(2020\). National Gender Equality Policy 2020. Thimphu: NCWC.](#)

Royal Civil Service Commission (RCSC) statistics, Bhutan's civil service is made up of 37% women.⁴³ Significantly, women hold lower-level positions in the civil service and tend to be employed in areas associated with traditional gender roles such as health and education. Only 9.7% of executive positions are held by women and 17.5% of operational positions.

Women are therefore underrepresented as contributors to change and in leadership positions in both policymaking and policy implementation. Traditional gender norms, values and practices are again at the centre of this situation as women's political participation is constrained by low self-esteem and self-image, decision-making ability and the double and triple burden.⁴⁴ Policymaking and implementation are therefore at risk of maintaining an inherently masculine bias. Indeed, the latest GNH survey found that one of the two greatest gaps between men and women is in the good governance domain of GNH, with women significantly less satisfied than men in their political participation and with the responsiveness of government services and performance to their needs.⁴⁵

Overall, the situation of traditional beliefs, norms and practices that constrain women's roles in leadership and in contributing to decision-making, despite having a number of meaningful assets, has also constrained women's agency, or their ability to employ their assets to make decisions. This is particularly the case with women's economic agency. Indeed, among the four domains measured in the *Global Gender Gap Report*, Bhutanese women's lowest ranking when compared to the rest of the world is in economic participation and opportunity. The domain measures labour force participation, wage equality, earned income and professional/technical workers, illustrating the breadth of economic inequality women face.

Specific labour force indicators demonstrate this breath of gender differences in the labour force, constraining women's economic agency when compared to men. While the employment rate in 2021 was similar, with 93.9% of women and 96.4% of men employed, a higher proportion of women work in clerical support, agriculture and retail sales/markets. Men are more likely to work in professional and technical positions.⁴⁶ Moreover, higher proportions of women work in less stable jobs as own-account workers or family workers.⁴⁷ The discrepancy in the type of jobs held by men and women is further reflected in earnings. In 2021, women earned only 77.7% of what men earned. The overall trend is fairly stable with the average female to male wage gap from 2013-2021 being 78.7%.⁴⁸ The wage gap between young men and young women ages 15-24 is somewhat better at 87.7% in 2021. Overall, the gap in wages is greatest between rural women and urban men where employed rural women's median monthly income is Nu 8,000 compared to Nu 20,000 for urban men.⁴⁹

⁴³ Royal Civil Service Commission. (2018). *Civil Service Statistics December 2018*. Thimphu: RCSC.

⁴⁴ CEDAW. (2013). *Concluding observations on the seventh periodic report of Bhutan, adopted by the Committee at its forty-fourth session (20 July-7 August 2009)*. CEDAW/C/BTN/CO/7/Add.1. New York: United Nations.

⁴⁵ Centre for Bhutan Studies & GNH Research. (2016). *A Compass Towards a Just and Harmonious Society: 2015 GNH Survey Report*. Thimphu: Centre for Bhutan Studies & GNH Research.

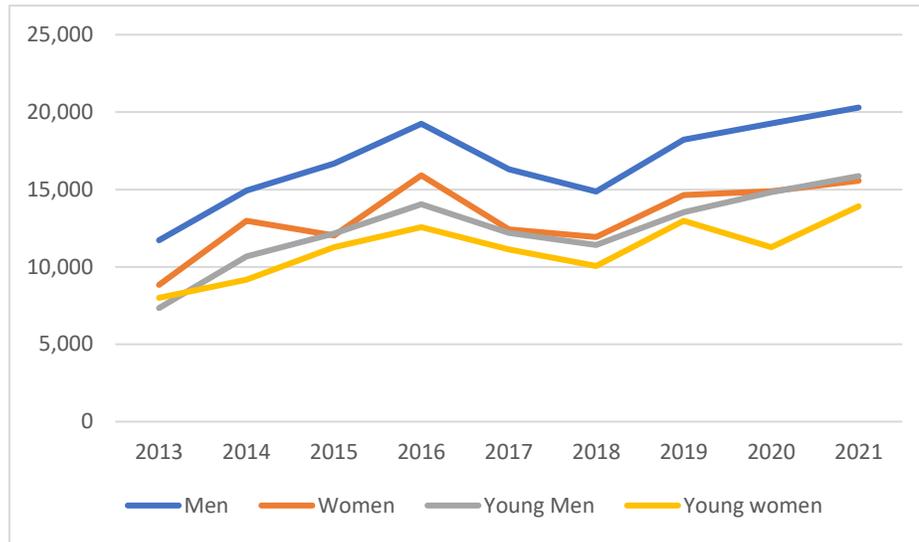
⁴⁶ MoESD. (2023). *Labour Market Report*. Thimphu: MoESD, p.7.

⁴⁷ *Ibid.*, p. 21.

⁴⁸ *Ibid.*, p. 19.

⁴⁹ National Statistics Bureau (2021). *2021 Labour Force Survey Report Bhutan*. Thimphu: NSB, p. 30.

Figure 7: Gender differences in median monthly earnings (in Ngultrum)



When analyzed from the perspective of unemployment, women’s greater likelihood of being unemployed has been consistent over the last decade. In 2021, 6.1% of women were unemployed compared to 3.6% of men. While the rate for both women and men reflects the impact of the pandemic, 2013 shows a similar disparity with 4% of women and 2.8% of men unemployed. Focusing on unemployment figures alone, however, does not fully address women’s labour situation. Females undertake 2.5 times more unpaid care work than males, representing an 11% share of GDP.⁵⁰ Of those women not in the labour force, 25% identify unpaid care and other family responsibilities as the reason for not participating in formal employment.⁵¹ A critical part of maintaining Bhutanese society’s wellbeing therefore rests on the unpaid labour of women and girls.

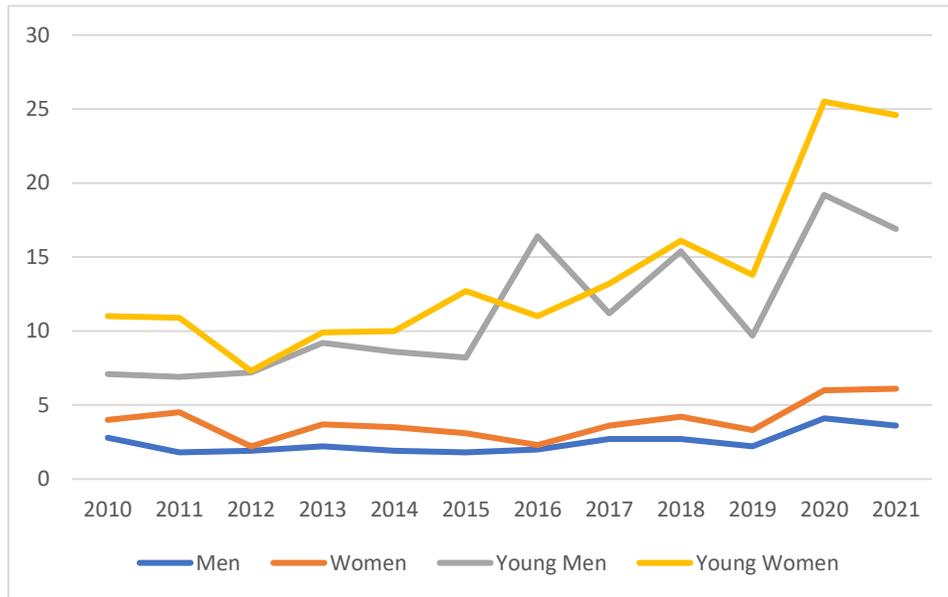
While the labour market experience of women demonstrates inequality with men, the experience of all women is not the same. Urban women experience greater unemployment rates than rural women although rural women are more likely to have low wage, informal agricultural work. Young women also face different circumstances than older women. Bhutanese youth overall experience far greater employment challenges than older Bhutanese. While overall unemployment during the pandemic increased from 2.7% to 5%, youth unemployment surged from 11.9% to 22.6%. Young women were disproportionately affected as they make up 61.3% of unemployed youth. The youth unemployment rate began to trend downward in 2021 as Bhutan emerged from the pandemic, but the reduction in unemployment among young men was greater than young women, with young men’s unemployment dropping by 2.3% versus only 0.08% for young women.⁵²

⁵⁰ NCWC. (2019). *Accounting for Unpaid Care Work in Bhutan in 2019*. Thimphu: NCWC.

⁵¹ *Ibid.*

⁵² MoESD. (2023). *Labour Market Report*. Thimphu: MoESD, p. 14.

Figure 8: Gender differences in unemployment rate, 2010-2021



Young women also face gendered stereotypes in the workplace that limit their ability to engage their agency effectively. Even after completing education that provides them with technical skills, young women who are hired by technical companies are often assigned administrative or front-of-the store jobs despite their skills. Business owners claim this is necessary as customers will not accept a female employee working on technical issues.⁵³ Improved educational access for young women therefore does not necessarily provide them with an asset that they can effectively deploy to gain meaningful, well-paid work.

Societal and workplace stereotypes are also experienced by people with disabilities and females with disabilities in particular. The prevalence of disability in Bhutan is 2.1%. The vast majority of people with disabilities – 80% - live in rural areas and females make up 52% of all PWD.⁵⁴ There is no available data on employment rates of PWD in Bhutan. Disability was traditionally conceptualized in the country within notions of *karma*, resulting in a complex mix of societal attitudes of compassion and blame.⁵⁵ More recently, traditional views have mixed with modern notions of medical pathology. Modern access to healthcare, however, appears to have led to a more negative perception of disability given accompanying notions of social stratification.⁵⁶ Further, societal views often see meaningful work, and particularly work that requires technical skills, as being inappropriate, too difficult, or too dangerous for PWD. This confirms earlier research that found PWD are generally considered a burden and unable to engage in

⁵³ Bhutan Canada Foundation. (2022). Baseline Study Report. Bhutan Education and Skills Training (BEST). September 20, 2022.

⁵⁴ National Statistics Bureau. (2018). *Population and Housing Census 2017*. Thimphu: NSB.

⁵⁵ Bhutan Canada Foundation. (2022). Baseline Study Report. Bhutan Education and Skills Training (BEST). September 20, 2022.

⁵⁶ Schuelka, M. (2018). The cultural production of the ‘disabled’ person: Constructing student difference in Bhutanese schools. *Anthropology and Education Quarterly*, 49(2), 183–200.

income generating employment.⁵⁷ Moreover, PWD lack accessible information sources on labour force opportunities. Even providing appropriate technical education to enable PWD to enter the labour force is perceived as a problem as TVET instructors themselves believe they do not have the skills to teach PWD.⁵⁸

The lack of employment data for PWD means little is known about any differences in employment between males with disabilities and females with disabilities. However, for women with disabilities the situation outlined above is further layered by the general gendered beliefs about women as being weaker and whose place is in the household domain. Women with disabilities often remain housebound, particularly in rural areas, and are susceptible to domestic violence.⁵⁹ They lack not only agency but assets as well. The situation is not limited to women with disabilities themselves. Those who provide unpaid care to family or friends with disabilities are most likely to be women whose own employment aspirations are limited as a result.

5. National TVET Context

5.1 The current TVET system

Technical and vocational education and training represents a potential vehicle to address some of the key challenges facing the Bhutanese economy and labour force. Reforming the TVET system through a GESI lens is a further opportunity to provide improved access to technical education and employment for populations currently marginalized in Bhutan's economy such as women, PWD and youth.

The development of the TVET system in Bhutan dates back to 1961 when Kharbandi Technical School, later renamed Royal Technical Institute, was established. The creation of Royal Bhutan Polytechnic followed in 1974. In 1999, the National Technical Training Authority was established to regulate TVET education. Governance of TVET was moved to the Ministry of Labour & Human Resources (MoLHR) in 2003. Two new departments were created under MoLHR, the Department of Human Resources and Department of Occupational Standards, to oversee the delivery and regulation of TVET. Six new public Technical Training Institutes (TTIs) were also established. In 2017, the Department of Technical Education (DTE) was created within MoLHR to take over the administration of the public TVET system, including the six new Technical Training Institutes (TTIs) and two Institutes of Zorig Chusum (IZC). A reorganization of Bhutan's central government ministries occurred in 2022/2023 resulting in the responsibility for TVET education being moved to the Ministry of Education and Skills Development (MoESD).

The six Technical Training Institutes currently offer technical training in areas such as automotive repair, masonry, plumbing and welding. The two institutes of Zorig Chusum, including the National Institution of Zorig Chusum in Thimphu, the capital, and the College of Zorig Chusum in eastern Bhutan, offer education in the 13 traditional arts and crafts of Bhutan. Together, the eight TTIs and IZC make up the

⁵⁷ Schuelka, M. (2015). The evolving construction and conceptualization of disability in Bhutan. *Disability & Society*, 30(6), 820–833.

⁵⁸ Bhutan Canada Foundation. (2022). Baseline Study Report. Bhutan Education and Skills Training (BEST). September 20, 2022.

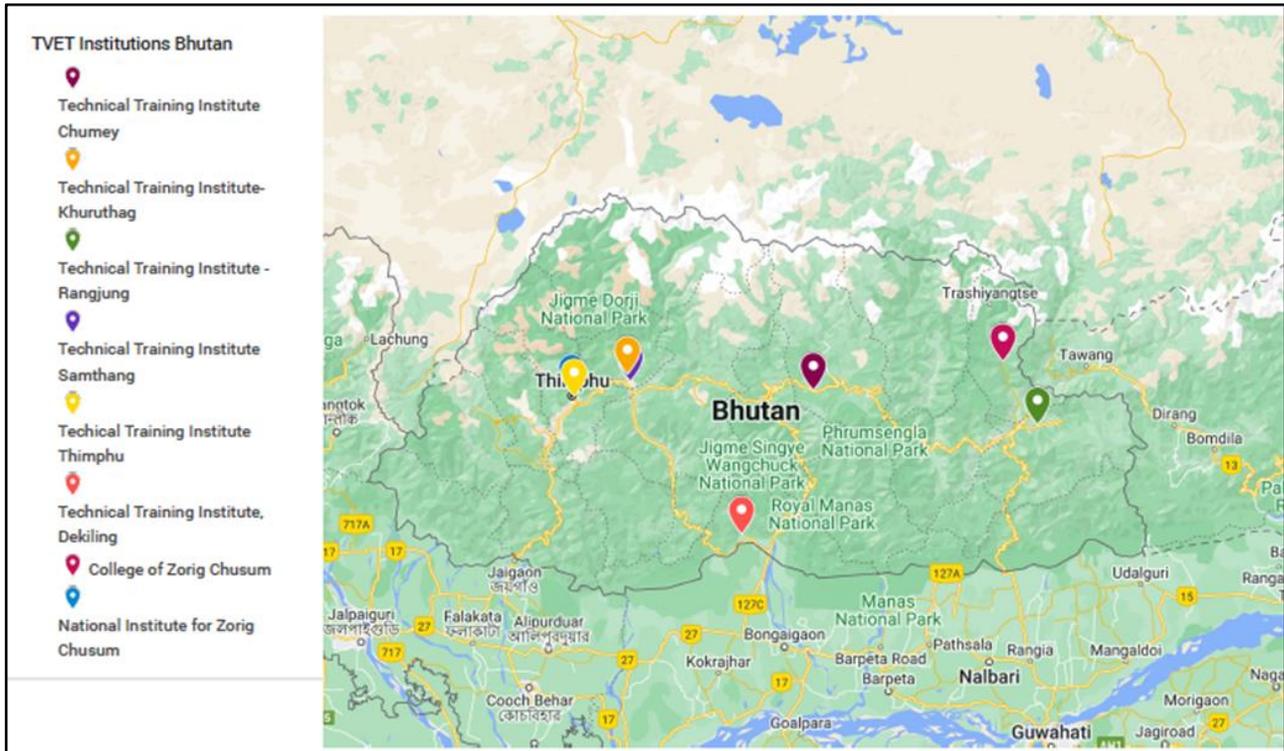
⁵⁹ [Lhaden, Y. \(14 November, 2020\). Reaching out to women with disabilities. *Kuensel*. Accessed 19 May, 2023.](#)

formal tertiary public TVET system. There are also 120 private TVET training providers and public sector providers outside of the formal public system.

Table 1: Public TVET institutions by type, courses & intake capacity

TVET Institution	Sector of courses offered	# of courses offered (2019-2021)	Intake capacity
Technical Training Institutes (TTIs)			
Technical Training Institute Chumey	Construction	12	288
Technical Training Institute Khuruthang	Mechanical & electrical	6	212
Technical Training Institute Rangjung	Electrical, furniture & automobile	7	240
Technical Training Institute Samthang	Automobile	7	161
Technical Training Institute Thimphu	Automobile	5	144
Jigme Wangchuk Power Training Institute Dekiling	Construction & hydropower	23	270
Institutes of Zorig Chusum (IZC)			
National Institute of Zorig Chusum	Traditional arts & crafts	13	239
College of Zorig Chusum	Traditional arts & crafts	14	186
		Total:	1740

Figure 9: Location of TTIs and IZC



5.2 TVET reform

Bhutan places high priority on TVET. The constitution entrenches vocational training as a principle of state policy. According to Article 9 (12): “The State shall endeavour to ensure the right to work, vocational guidance and training and just and favourable conditions of work.” Despite this importance, the current state of TVET is characterized by a disconnection between the skills learned by TVET trainees and the demands of the current Bhutanese economy. The result is a poor capacity of the TVET system to address youth unemployment. The issue is particularly pressing with the recent surge of youth unemployment to 22.6% in 2021, of which young women make up 61.3%. Reforming the TVET system so it provides Bhutanese youth, especially young women, with an education pathway to relevant skills for the 21st century economy is therefore a critical need. The Royal Government of Bhutan has accordingly embarked on a reform process to transform the TVET system. A plan to reform the “Four Ps” – Place, Product, People and Process – encompasses a comprehensive approach to reform across the system to better connect TVET training to the skills and knowledge needed in the Bhutanese economy.⁶⁰

The BEST project will contribute to the overall TVET reform strategy. BEST uses an end-to-end strategy that addresses reforming the recruitment of trainees through to the delivery of training to the support of graduates in finding meaningful economic opportunities. This holistic strategy is particularly critical for providing opportunities to young women. As of 2021, females made up only 28% of TVET trainees. The Gender Parity Index (GPI) for TVET education, where a value of 1 represents gender equality, is 0.41 in Bhutan’s TVET system overall, with significant differences across institutions.⁶¹

Table 2: Gender Parity Index by TVET institution

TVET Institution	Sector of courses offered	GPI
Technical Training Institutes (TTIs)		
Technical Training Institute Chumey	Construction	0.86
Technical Training Institute Khuruthang	Mechanical & electrical	0.56
Technical Training Institute Rangjung	Electrical, furniture & automobile	0.40
Technical Training Institute Samthang	Automobile	0.10
Technical Training Institute Thimphu	Automobile	0.18
Jigme Wangchuk Power Training Institute Dekiling	Construction & hydropower	0.32
Institutes of Zorig Chusum (IZC)		
National Institute of Zorig Chusum	Traditional arts & crafts	0.37
College of Zorig Chusum	Traditional arts & crafts	0.43

⁶⁰ For a detailed description of the 4P strategy see [Wangchuk, N. \(2021\). Preparing the Technical and Vocational Workforce. Druk Journal 7\(2\), 118-123.](#)

⁶¹ Department of Technical Education. (2021). *TVET Statistics of Bhutan*. Thimphu: MoLHR, p. 78.

Developing and implementing gender-based strategies and policies for recruitment, admissions and advising women will target this gap. Developing gender sensitive curriculum and trainee support will further seek to provide young women the opportunity to develop new educational assets relevant to their needs. As the GESI analysis above shows, however, developing new assets is not enough. In the case of technical employment, qualified women are often unable to translate these assets into agency. Over a ten-year period from 2011 – 2021, female TVET graduates represented 32.9% of graduates.⁶² These female graduates often struggle to find meaningful work as employers place them in gendered work roles rather than the technical roles for which they are qualified. BEST's focus on addressing graduates' economic opportunities once training is complete will provide an avenue to change employers' attitudes and practices and promote non-discrimination policies that broaden the employment opportunities available to female graduates to deploy their agency and contribute as decision-makers in the workplace.

6. High Opportunity Economic Subsectors

As the previous sections illustrate, Bhutan's TVET reform process exists within a broader context of an economy emerging from the pandemic with significant labour force issues. Within this economy, women, young women and women with disabilities face additional challenges related to gendered norms, constrained agency, and limited leadership opportunities. The current TVET system itself is poorly equipped to address this context given the mismatch between needed skills in the economy and those that are currently taught in TVET institutions, as well as the low participation of women in the TVET system. Reforming TVET holds significant potential for addressing these challenges. Successful reform will improve meaningful education and employment opportunities for young Bhutanese. Generating graduates who are work ready for the 21st century economy will foster a more innovative and competitive economy. Pursuing reform through a gender and social inclusion lens will create the opportunity for incorporating vulnerable populations into this process, creating more equitable access to sustainable economic opportunities.

For TVET reform to be successful in responding to this broader context, identifying high opportunity subsectors within the Bhutanese economy is necessary. Framing the reform process around responding to the needs of high opportunity sectors will not only strengthen areas of the economy most likely to promote innovation and efficiency in the economy but promote meaningful and dignified work for Bhutanese youth within these subsectors.

This section identifies and analyses high opportunity subsectors. It begins by outlining the nature of the *High Opportunity Subsectors Index* that was developed for this LMA to identify subsectors with the greatest opportunities for employment. This includes an overview of the index and its variables and an explanation of the assumptions that underlie its construction. The section then analyzes the results of the application of the index to subsectors of Bhutan's economy. High opportunity subsectors for women are then examined and recommendations for BEST programming are made to tie reform initiatives to these high opportunity subsectors.

⁶² *Ibid.*, p. 92.

6.1 The High Opportunity Subsectors Index

High opportunity economic subsectors are defined by the BEST project as having three dimensions: 1) dignified employment, meaning it is valued by society and government priorities, 2) economic security and 3) women's empowerment leading to the increased agency.⁶³ In order to identify such high opportunity subsectors, a simple index was created that measures these three dimensions (variables) using a nine-point scale made up of seven indicators. Each variable of the index is also connected to a domain of the GESI framework. The three variables – dignified employment, economic security and women's empowerment – are weighted equally within the index's nine-point scale with each comprising a maximum of 3 points. The decision to weigh them equally was made to reflect the integrated nature of the domains of the GESI analytical framework. The index was applied to economic subsectors in Bhutan to measure those that represent high opportunity for employment. The totals from all three variables were added together for a single number between 0 and 9 for each economic subsector. A subsector that scores a total of 6 out of 9 or higher (66.6%+) is designated a high opportunity sector for employment.

Constructing an index to measure high opportunity sectors for employment, including for women's employment, is immediately confronted with two issues. First, as previously discussed, creating an index needs to account for the limits in the data found in existing secondary sources. There needs to be available data disaggregated by economic subsector and the categories of subsectors must be consistent across all indicators for consistent measurement within the index. In addition, there must be sex disaggregated data by subsector. This represented somewhat of a challenge. While there is a standardized categorization of subsectors in most RGoB documents (usually termed "major economic activities"), it is not always applied consistently across documents or even within the same document. The final selection of indicators for the variables in the index addressed this issue by only choosing indicators where data for consistent subsector categories were available.⁶⁴ There were enough available secondary data to fit these criteria for the design of meaningful indicators. Nonetheless, some interesting data that could expand the index in more nuanced ways, such as jobseekers' work preferences (for variable 1 of the index) and employers' preferences for gender of workers (variable 3 of the index) were considered but discarded given the lack of consistent subsector categories across these data. As a result, the overall index is course-grained to ensure there is meaningful and consistent secondary data available to measure 'high opportunity' across the three variables and their seven indicators. The course-grained nature of the index should therefore be kept in mind when reviewing the results of this LMA.

Second, when measuring variables such as societal/government priority areas for dignified employment as well as economic security (the first two variables), the index must deal with existing data that may be rooted in gendered perspectives on women's work. Indeed, BEST's baseline study found that there remain gendered attitudes towards the kinds of employment that is suitable for women and that qualified women are often shut out of technical, higher paying jobs. Using gendered data to identify high opportunity employment therefore risks reinforcing gender stereotypes on appropriate work for women. For example, women's wages in Bhutan are higher in areas like administration and support

⁶³ Bhutan Education and Skills Training (BEST) Project Implementation Plan (PIP) 2022-2027 & First Annual Workplan.

⁶⁴ Note that RGoB documents do not provide data for two of the index's variables as they relate to the public sector. This was the only subsector without data and, given its nature, is less relevant to TVET education. It is nonetheless still included for comparative purposes.

services that are traditionally viewed as women's work. At the same time, this kind of work remains important and offers better paying opportunities to women.

The index therefore needs to balance areas that currently provide high opportunities for women, which nonetheless may be gendered, with areas of high opportunity more generally where women may currently be less represented. Expanding women's existing opportunities while also creating new ones where women have historically been marginalized will be an important part of the BEST project's focus on gender equality. To address this need for balance, the index was created so the first two variables, dignified employment and economic security, are measured without sex disaggregation to identify overall opportunities in the economy. Doing so also enables more information to be accessible given the limited secondary data. The third variable, women's empowerment, balances this by specifically measuring women's economic empowerment within the economic subsectors used in the first two variables. The result is an index that measures both existing women's opportunities and potential areas of opportunity where women are currently less represented or marginalized. Moreover, this allows for disaggregation of the data across the three index variables, enabling an analysis of just those subsectors where women currently have opportunity as well as those subsectors where different kinds of interventions may be needed to boost women's currently low access and participation.

Overall, while the index's nine-point scale is course-grained, it provides a means to differentiate high opportunity sectors, including for women, based on available yet limited secondary data without conceptually stretching the variables to accommodate additional data. Such conceptual stretching would dilute the value of the variables as meaningful measures of high opportunity. The index can be adapted to be finer grained when BEST undertakes the follow-up labour market analysis that combines primary and secondary sources.

The three variables of the index are made up of the following seven indicators:

1. Dignified employment (3 points): Dignified employment is defined by the BEST project as work that is valued by society and government priorities. Accordingly, this variable is measured using two indicators. The first focuses on government priorities and the second on work that is valued and prioritized by the private sector. The first indicator is assigned a score of 0 or 2 while the second a score of 0 or 1 for a maximum total of 3 for the overall variable. Both of these indicators measure the *enabling environment* of the GESI framework used in this report.

Indicator 1.1 (2 points): Economic subsector is a government priority (no = 0; yes = 2). A 'government priority' is defined as a subsector identified as a priority in the National Key Result Areas (NKRAs) of Bhutan's 12th Five Year Plan (FYP). In order to determine whether a subsector is a priority, content analysis of the NKRAs was done and further supplemented by a review of the Flagship Programs that implement key NKRAs. Identified priority subsectors were each assigned a value of 2 for this indicator. Those that were not identified as a priority were assigned a value of 0. This variable is weighted heavier than the second one for this variable (maximum 2 points versus 1) as the Bhutanese government, as part of the enabling environment, has by far the greatest influence and resources for shaping the economy, including promoting gender equality in the labour force.

Note that the 12th FYP was chosen as it was developed through an extensive consultation process that involved all levels of government and input from civil society. It therefore reflects a broad consensus on government priorities rather than the priorities of the national government

of the day. However, the 12th FYP covers 2018-2023 so priorities may shift after its completion. The 13th FYP is not scheduled to be released until October 2023. Once it is released, it would be worthwhile to re-apply the measurement of this variable to the 13th FYP.

Indicator 1.2 (1 point): Percentage of business establishments in subsector with confirmed future new vacancies for hire in next 1-2 years (40% or below = 0; 41% and above = 1). This indicator provides an indication of future labour force priorities in the private sector. It measures the percentage of businesses in a subsector that have prioritized new hires in the future. Across the economy, 40% of licensed business establishments have confirmed new vacancies for hire in the next two years.⁶⁵ Subsectors identified as having a higher than average percentage of business establishments with confirmed new vacancies in the next 1-2 years (i.e. 41% of subsector establishments and above) were assigned a value of 1. Data were collected from the *Labour Market Report 2023* published by the Department of Workforce Planning and Development, Ministry of Education and Skills Development.

2. Economic security (3 points): This variable is measured using three indicators focused on median wage, the rate of regular employment versus contract employment, and employment areas of current growth. The assumption is that higher wages, regular employment, and employment in a growth sector all contribute to a worker's economic security. Each indicator is assigned a score of 0 or 1 for a maximum total of 3. The variable and its indicators measure the *assets* domain of the GESI framework as a decent wage, regular employment and a job in a secure growth sector are resources which can be used for achieving desired outcomes.

Indicator 2.1 (1 point): Median wage in subsector (Nu 16,400 or below = 0; Nu 16,401 and above = 1). The median wage in 2019 across the Bhutanese economy was Nu 16,400 for adults 25 years or older.⁶⁶ Subsectors with a median wage above this figure are assigned a value of 1. Those with a median wage at or below the national average are assigned a value of 0. The figure for adults 25 years or older was used as it provides a better indicator of long-term economic security than the median wage for youth. The year 2019 was used as wage data from the pandemic years may involve outliers given lockdowns and the reliance of many on the Monarch's *Relief Kidu* program. Data were collected from the *Labour Market Report 2023*.

Indicator 2.2 (1 point): Rate of regular and self-employment in subsector (63% or lower = 0; 64% and above = 1). A regular full-time job or self-employment provide greater economic security than casual, piece paid, or family work. In Bhutan, regular paid positions or self-employment made up 63% of all jobs across the economy in 2019. Again, the year 2019 was chosen given the potential for outlier data in the pandemic years of 2020-2022. Subsectors with a rate of regular or self-employment that is 64% or higher, indicating greater job security than the national average, were assigned a value of 1. Data were collected from the *Statistical Yearbook of Bhutan 2020* published by the National Statistics Bureau of Bhutan.

Indicator 2.3 (1 point): Percentage of business establishments in subsector with current human resource growth (11% or below = 0; 12% or above = 1). This indicator measures current human resources growth defined as new hires exceeding exits. The assumption is that subsectors currently experiencing human resource growth offer greater job security. Data from 2019 were

⁶⁵ MoESD. (2023). *Labour Market Report*. Thimphu: MoESD, p. 33.

⁶⁶ *Ibid*, p. 55.

again used to avoid outliers that may emerge from data during the pandemic years. Note, however, that the economic dislocation of the pandemic may change subsectors with human resource growth as a potentially altered economy emerges. To address this potential, the analysis of the index results below reviews data from 2020-2022 where appropriate.

Eleven percent of licensed business establishments across the entire economy experienced human resource growth in 2019.⁶⁷ Subsectors with 12% or more of their establishments experiencing human resource growth are assigned a value of 1. Those with growth at the national average or below are assigned a value of 0. Data were collected from the *Labour Market Report 2023*.

3. Women's empowerment (3 points): This variable measures economic empowerment of women as a means to increase their agency. It incorporates two indicators focused on the gender earnings gap and growth in female workers. The first indicator, the gender earnings gap, is connected to the both the *assets* and *agency* domains of the GESI framework. Earnings represent not only a resource, or asset, that women can have but, in the case of a gender earnings gap that is removed or even favours women, it increases women's agency, or perceived and actual ability to use this asset to make decisions in their lives when compared to men. The second indicator, growth in female workers, represents the *contribution* domain of the GESI framework as it is a proxy for women increasingly being able to better engage as an equal source of decision-making and change in their workplace community.

Indicator 3.1 (2 points): Gender earnings gap (0.79 and below = 0; 0.80-0.99 = 1; 1.0 and above = 2). Subsectors where there is not an earnings gap in favour of men provide women with the same degree of agency as men to engage an asset – their wage – to meet their economic needs. An earnings gap that favours men, in contrast, disempowers women by decreasing their economic agency when compared to men. The average wage gap across the Bhutanese economy from 2013-2021 was 0.79,⁶⁸ where a figure of 1.0 represents no earnings gap between women and men, under 1.0 represents an earnings gap in favour of men, and above 1.0 in favour of women. For this indicator, subsectors with an earnings gap figure of 0.79 or less, the national average that favours men, were assigned a value of 0. Those subsectors with an earnings gap between 0.80 and 0.99, representing a decrease in men's current wage advantage, were assigned a value of 1. A value of 2 was assigned to subsectors with a figure of 1.0 and above, indicating gender equality in wages or an earnings gap that favours women.

This indicator was given more weight than the other indicator in this variable (2 points versus 1) as it is connected to both the *assets* and *agency* domains of the GESI framework. This further enables a distinction to be made between subsectors that are simply reducing the current earnings gap that favours men (a score of 1) to those that have actually removed it (a score of 2), the latter of which more significantly increases women's agency. Data were collected from the *Labour Market Report 2023*.

Indicator 3.2 (1 point): Subsectors with growth in female workers (proportion of annual employment exits that are female is greater than the proportion of annual hires that are female = 0; proportion of annual hires that are female is greater than the proportion of annual

⁶⁷ *Ibid*, p. 30.

⁶⁸ *Ibid*, p. 56.

employment exits that are female = 1). This indicator measures increased female labour participation within subsectors by comparing the proportion of annual hires that are female versus the proportion of annual employment exits that are female. Those that have a greater proportion of hires are assigned a value of 1. This is a proxy indicator based on the assumption that subsectors where the proportion of females hired is larger than the proportion exiting better balance their labour force, enabling more women to potentially participate in decision-making and leadership within the subsector. It is further an indication of women choosing the stay in jobs in the subsector. Data were collected for this variable from the *Labour Market Report 2023*. Again, data from 2019 was used to avoid potential outliers from the pandemic period of 2020-2022.

Table 3: Summary of the High Opportunity Subsectors Index

Variable	Indicator	Data Source	GESI Domain
1. Dignified employment – valued by society and government priorities (3 points max.)	Indicator 1.1 (2 point max.): Economic subsector is a government priority. <i>no = 0</i> <i>yes = 2</i>	12 th Five Year Plan	Enabling environment
	Indicator 1.2 (1 point max.): % of business establishments in subsector with confirmed new future vacancies for hire in next 1-2 years. <i>40% of businesses or below = 0</i> <i>41% of businesses and above = 1</i>	Labour Market Report 2023	
2. Economic security (3 points max.)	Indicator 2.1 (1 point max.): Median wage in subsector. <i>Nu 16,400 or below = 0</i> <i>Nu 16,401 and above = 1</i>	Labour Market Report 2023	Assets
	Indicator 2.2 (1 point max.): Rate of regular or self-employment in subsector. <i>63% or lower = 0</i> <i>64% and above = 1</i>	Statistical Yearbook of Bhutan 2020	
	Indicator 2.3 (1 point max.): % of business establishments in subsector with current human resource growth. <i>11% of businesses or below = 0</i> <i>12% of businesses and above = 1</i>	Labour Market Report 2023	

3. Women's Empowerment (3 points max.)	Indicator 3.1 (2 points max.): Gender earnings gap in subsector. <i>0.79 and below = 0</i> <i>0.80-0.99 = 1</i> <i>1.0 and above = 2</i>	Labour Market Report 2023	Assets Agency
	Indicator 3.2 (1 point max.): Growth in female workers in subsector. <i>Proportion of annual employment exits that are female is greater than the proportion of annual hires that are female = 0</i> <i>Proportion of annual hires that are female is greater than the proportion of annual employment exits that are female = 1</i>	Labour Market Report 2023	Contribution

6.2 Index results

Applying the index to the RGoB's standardized categories of economic subsectors illustrates that high opportunity subsectors for employment (those that score 6+ out of 9) include Electricity, gas, steam & air conditioning (7/9); Information & communication (7/9); Health & social work activities (7/9); Administrative & support services (7/9); Manufacturing (6/9); Education (6/9); and Professional activities (6/9). Full results are shown in Table 4 with the scores of high opportunity subsectors highlighted in yellow.

Table 4: High Opportunity Subsectors Index: Results for all subsectors

Subsectors	Dignified Employment		Economic Security			Women's Empowerment		Total (out of 9)
	Government priority	Business priority: confirmed future vacancies for hire	Median wage above nat'l average	Regular or self-employment	Current human resource growth	Gender earnings gap	Growth in female HR	
Electricity, gas, steam & air conditioning	0	1	1	1	1	2	1	7
Information & communication	2	1	1	1	1	0	1	7
Health & social work activities	2	0	1	1	1	1	1	7
Administrative & support services	0	1	1	1	1	2	1	7
Manufacturing	2	1	0	1	1	0	1	6
Education	0	1	1	1	1	1	1	6

Professional activities	0	1	1	1	1	2	0	6
Arts & entertainment	2	0	0	1	0	2	0	5
Hospitality	2	0	0	1	0	1	1	5
Water supply, waste management	2	0	1	1	1	0	0	5
Financial & insurance activities	0	0	1	1	1	1	1	5
Construction	0	1	0	1	1	0	1	4
Transport & storage	0	0	1	1	1	0	1	4
Agriculture, forestry & fishing	2	0	0	0	0	1	0	3
Mining & quarrying	0	1	0	1	1	0	0	3
Other service activities	0	1	0	0	0	2	0	3
Wholesale & retail trade; motor vehicles	0	0	0	1	0	0	1	2
Real estate activities	0	1	0	1	0	0	0	2
Public administration	0	Data not available	1	1	1	1	Data not available	--

The subsectors to which the index was applied cover the entire Bhutanese economy. While this provides useful information to compare high opportunity employment in both the private and public sectors, and spanning professional, technical and support employment, a number of the subsectors have less relevance to TVET sector in particular. As such, they can be removed from this analysis for better comparative purposes specific to the TVET sector. First, the category of *public administration* will be removed. While a limited number of positions within the public sector will be TVET related, the overall category largely constitutes policy and professional positions. In addition, civil service education in Bhutan is provided by the Royal Institute of Management (RIM) rather than TVET institutions (although TVET graduates could potentially be educated at RIM as well). Second, the *education* category will also be removed as the majority of positions in this category are in the public sector and the Colleges of Education in Paro and Samtse are responsible for related education. Third, the categories of *financial and insurance activities* as well as *real estate* will be removed. These are areas not traditionally associated with TVET in Bhutan as finance and business education is primarily provided by Gedu College of Business Studies. Lastly, *professional activities* will be removed as these are also not traditionally associated with TVET. Education leading to professional employment is primarily provided by the various colleges of the Royal University of Bhutan and Jigme Singye Wangchuck School of Law. Table 5 shows the results of removing these categories to better reflect TVET-related employment opportunities.

Table 5: High Opportunity Subsectors Index: Results for TVET related subsectors

Subsectors	Dignified Employment		Economic Security			Women's Empowerment		Total (out of 9)
	Government priority	Business priority: confirmed future vacancies for hire	Median wage above nat'l average	Regular or self-employment	Current human resource growth	Gender earnings gap	Growth in female HR	
Electricity, gas, steam & air conditioning	0	1	1	1	1	2	1	7
Information & communication	2	1	1	1	1	0	1	7
Health & social work activities	2	0	1	1	1	1	1	7
Administrative & support services	0	1	1	1	1	2	1	7
Manufacturing	2	1	0	1	1	0	1	6
Arts & entertainment	2	0	0	1	0	2	0	5
Hospitality	2	0	0	1	0	1	1	5
Water supply, waste management	2	0	1	1	1	0	0	5
Construction	0	1	0	1	1	0	1	4
Transport & storage	0	0	1	1	1	0	1	4
Agriculture, forestry & fishing	2	0	0	0	0	1	0	3
Mining & quarrying	0	1	0	1	1	0	0	3
Other service activities	0	1	0	0	0	2	0	3
Wholesale & retail trade; motor vehicles	0	0	0	1	0	0	1	2

As indicated in Table 5, high employment opportunities in TVET related subsectors of the economy include the following: *Electricity, gas, steam & air conditioning; Information & communication; Health & social work activities; Administrative & support services; and Manufacturing*. The results are, as discussed above, based on the balance created within the index to measure subsectors where women have existing employment opportunities (the empowerment variable) as well as subsectors with opportunities more generally but where women *may* be less represented (the dignified employment and economic security variables). The intent of this balance is to identify subsectors with existing opportunities for women that can be further consolidated through TVET reform as well as those that TVET reform can focus on to better foster women's participation. Both will be important for BEST to effectively promote gender equality.

The results that emerge from the application of the index can be disaggregated to isolate those subsectors with existing high opportunity for women versus those with high opportunity more generally.

Table 6 shows the results when the overall results for all three of the index's variables are compared to the disaggregated result for just the women's empowerment variable, further compared to results for the combined dignified work and economic security variables.

Table 6: Overall Index results versus disaggregated variable results

Rank by overall index score (out of 9)	Rank by score on Women's Empowerment variable (out of 3)	Rank by score on Dignified Employment & Economic Security variables (out of 6)
1. Electricity, gas, steam & air conditioning (7/9)	1. Electricity, gas, steam & air conditioning (3/3)	1. Information & communication (6/6)
1. Information & communication (7/9)	1. Administrative & support services (3/3)	2. Manufacturing (5/6)
1. Health & social work activities (7/9)	2. Arts & entertainment (2/3)	2. Health & social work activities (5/6)
1. Administrative & support services (7/9)	2. Hospitality (2/3)	2. Water supply, waste management (5/6)
2. Manufacturing (6/9)	2. Health & social work activities (2/3)	3. Electricity, gas, steam & air conditioning (4/6)
3. Arts & entertainment (5/9)	2. Other service activities (2/3)	3. Administrative & support services (4/6)
3. Hospitality (5/9)	3. Information & communication (1/3)	4. Hospitality (3/6)
3. Water supply, waste management (5/9)	3. Agriculture, forestry & fishing (1/3)	4. Arts & entertainment (3/6)
4. Construction (4/9)	3. Manufacturing (1/3)	4. Construction (3/6)
4. Transport & storage (4/9)	3. Construction (1/3)	4. Transport & storage (3/6)
5. Agriculture, forestry & fishing (3/9)	3. Transport & storage (1/3)	4. Mining & quarrying (3/6)
5. Mining & quarrying (3/9)	3. Wholesale & retail trade; motor Vehicles (1/3)	5. Agriculture, forestry & fishing (2/6)
5. Other service activities (3/9)	4. Mining & quarrying (0/3)	6. Wholesale & retail trade; motor Vehicles (1/6)
6. Wholesale & retail trade; motor vehicles (2/9)	4. Water supply, waste management (0/3)	6. Other service activities (1/6)

Disaggregating the data illustrates that the two subsectors of *Electricity, gas, steam & air conditioning* and *Administrative & support services* not only tie for best overall score across the index, but also score highest when just the women's empowerment variable is isolated. The category of *Information & communication* also ties for best overall score and scores the highest for the combined dignified work and economic security variables, but does noticeably less well on the women's empowerment variable. It is important to again note that the index is course-grained given the available secondary data, but the results from individual indicators within the women's empowerment variable do show that *Electricity, gas, steam & air conditioning* and *Administrative & support services* hold particular promise now as

subsectors for women's employment. In contrast, *Information & communication* holds significant opportunity generally, but women are currently in a disadvantaged position in this subsector when compared to men, requiring a focus on addressing this inequality in the TVET reform process. Finally, it is also worth noting in the disaggregated data that the subsectors of *Hospitality* and *Arts and entertainment* score only moderately well in the overall index but improve their scores relative to other subsectors when the women's empowerment variable is isolated. This indicates that while they are not as high opportunity overall as some of the other subsectors, they hold promise for more immediately consolidating and broadening women's employment opportunities given that women currently do quite well in these two subsectors.

The next section turns to analyzing individual high opportunity subsectors for employment with a particular focus on opportunities for women. It focuses on those subsectors that scored 6 or more on the overall index. The subsequent section addresses additional considerations related to subsectors that did not score quite as highly as well as cross-cutting areas not covered in the index or in the RGoB's categorization of subsectors.

6.3 High opportunity subsectors for women

While each of the subsectors discussed below offer high opportunities for employment, they differ in how they offer opportunities for women in particular. The discussion below uses the GESI lens to explore the nature of the employment opportunities overall and how these differ for women in different high opportunity subsectors.

6.3.1 Electricity, gas, steam & air conditioning

This subsector tied for the highest overall score in the index with a score of 7/9. It scored the maximum for each indicator with the exception of being a government priority (indicator 1.1). The subsector is a priority for the private sector, however, with 48.8% of businesses in the subsector with confirmed future vacancies for hire in the next 1-2 years (indicator 1.2). This compares to 40% of businesses from across the entire economy. The subsector also offers economic security. The median wage of Nu 17,000 is slightly higher than the national average of Nu 16,400 (indicator 2.1). In addition, an overwhelming proportion of jobs in the subsector – 96.2% - are either regular positions or self-employed positions rather than casual, piece work or family work (indicator 2.2). This is significantly higher than the national average of 63% of jobs. Regular jobs dominate over self-employment in the subsector with 95.6% of jobs being regular positions compared to 4.4% being self-employed positions. The subsector offers further economic security given the human resource growth that currently exists. In 2019 prior to the pandemic, 35.3% of businesses in the subsector had hires that exceeded employment exits (indicator 2.3). This is again significantly higher than the national average of 11% of licensed businesses where hires surpassed exits.

The economic security offered by this subsector combined with it being a priority of the private sector is matched by its contributions to women's empowerment. The gender earnings gap is 1.02, representing an earnings situation that favours women over men (indicator 3.1). This far exceeds the national figure of 0.79 that significantly favours men. It is also a subsector where human resource growth is balancing the labour force as the proportion of annual hires that are female (23.2%) is slightly higher than the proportion of annual employment exits that are female (22.7%).

While not a current government priority, the combination of future and current demand for workers, slightly higher earnings potential than the national average, secure job positions, and good wage and human resource opportunities for women make this a subsector with significant opportunities for women's employment. Viewed through the GESI lens, a secure job with a decent wage in a subsector of growth provides women with significant assets. The fact that women's wages in the sector are already higher than men's increases women's agency to use these assets to make meaningful decisions in their lives when compared to men, better balancing gender equality. Further, the slight growth in female workers in the subsector creates a more gender balanced workforce that provides more women's voices to potentially contribute to decision-making within the subsector. The reform of TVET in Bhutan should therefore include this as a key subsector of focus to consolidate and further build on the benefits women currently have in the subsector. For example, BEST activities can include designing new or revising existing courses in areas such as HVAC and electrical engineering so they fit the skills needed in Bhutan's 21st century economy. Prioritizing TVET courses in these areas as part of revised female trainee recruitment strategies is another area that would be beneficial. Overall, focusing on this subsector as part of the broader TVET reform process will further strengthen the assets, agency and potential to contribute to change that women currently have in the subsector.

6.3.2 Information & communication

The information and communication subsector also tied for the highest overall score in the index with a score of 7/9. It scores higher than every other subsector in the two combined index variables of dignified employment and economic security. It provides dignified employment as defined by being a high priority of government (indicator 1.1), including as a Flagship Program in the 12th FYP focused on digitizing services and business in Bhutan. It is also a priority of the private sector (indicator 2.2). The subsector also provides economic security. The median wage is Nu 18,000, above the national average of Nu 16,400 (indicator 2.1). The vast majority of jobs, just over 90%, are also either regular paid employment or self-employed positions as opposed to casual, piece or family employment (indicator 2.2). This compares to 63% in the economy overall. Of these regular and self-employed positions, 83.6% are regular employment positions. There is also notable employment growth within the subsector. A total of 30% of licensed businesses in this subsector in 2019 had hires exceeding employment exits, beyond the 11% national average (indicator 2.3).

While the *Information and communication* subsector scores well in the dignified employment and economic security variables, it fares somewhat more poorly in the women's empowerment variable, especially compared to the *Electricity, gas, steam & air conditioning* subsector and the *Administrative & support services* subsector. While these two subsectors both have gender earnings gaps over 1.0 indicating a gap that favours women, the *Information and communication* subsector has a gender earnings gap of 0.65 (indicator 3.1). Males' wages are therefore significantly higher than female's in this subsector. Moreover, the wage gap in favour of men is significantly higher than the national average of 0.79. The situation in terms of growth in female workers in the subsector is better (indicator 3.2). In 2019, the proportion of annual hires that were female was 44.5%, almost 8 points higher than the 36.6% of annual employment exits that were female. So, overall, while this subsector provides assets in terms of general wages and job security in a growing subsector, its contribution to increasing women's agency compared to men's through equitable wages holds significant room for improvement.

Despite the issue of a notable gender wage gap that marginalizes women when compared to men, the *Information and communication* subsector's maximum score on the other six indicators in the index makes it a high opportunity subsector for potential employment of women. Unlike the *Electricity, gas, steam & air conditioning* subsector that would benefit from reform activities that consolidate and build on existing positive conditions for women, the *Information and communication* subsector will require interventions that remedy the challenge of the existing wage gap while building on the economic security and government priority that make the subsector an attractive one. Moreover, the nature of much ICT work represents a potentially important subsector for employing women with disabilities, a further reason to focus on the subsector in BEST's project activities.

The BEST project should therefore include information and communication as a focus for course design or revision. New or revised ICT courses would benefit by focusing on areas identified by employers as having a skills shortage. The highest shortages in ICT skills have been identified in graphics and multimedia as well as electronics and Internet of Things. Also important, but with lesser priority, are network security and 3D printing.⁶⁹ In addition to reform that addresses ICT courses, the BEST project should also address the current gender wage gap by providing interventions that work with relevant TVET industry partners to change potential stereotypes contributing to this gap. It should also consider developing career guidance and support for female trainees to promote ICT careers among women with an intentional focus on women with disabilities.

6.3.3 Health & social work activities

The *Health & social work* subsector also scored 7/9 on the index. It scored quite well across all three variables. It is a government priority with preventative health designated as a Flagship Program in the 12th FYP (indicator 1.1). The need for skilled healthcare professionals has more recently become an even greater priority given the large number of healthcare professional who have left the field, many of these apparently moving to Australia. The subsector is less clearly a priority of the private sector (indicator 1.2) as only 26.4% of TVET-related employers identify it as such compared to the 40% national average across all subsectors. This is likely a reflection of a significant proportion of the jobs in the health field being in the public sector.

In terms of economic security, the median monthly wage is quite good (indicator 2.1) at Nu 23,000/month compared to the national average of Nu 16,400. The rate of regular employment rather than casual, piece or family work (indicator 2.2) is exceptional with 100% of health and social work jobs being either full time positions or private enterprise owners. There is also above average human resource growth in this subsector (indicator 2.3). A total of 26.4% of licensed businesses in the health and social work subsector had hires exceeding employment exits in 2019. This compares to the 11% national average.

This subsector does reasonably well in the women's empowerment variable. The gender earnings gap (indicator 3.1) is closing in on equality at 0.94 compared to the national average of 0.79. In addition, the growth in female workers in the subsector is reasonably good (indicator 3.2) with the proportion of female hires outpacing the proportion of females exiting the subsector at 37.8% to 31.5%.

⁶⁹ DTE. (2022). *TVET Graduate Employer Survey 2022*. Thimphu: DTE, MoLHR, p.23.

While not a standout in any of the individual variables when compared to some of the other high opportunity subsectors, *Health and social work* is a subsector that is broadly effective across all the variables, thereby already contributing reasonably well to promoting women's assets, agency and contributions. It therefore offers a high opportunity for women's employment that requires consolidation and expansion but not necessarily individualized interventions for specific improvements (such as the ICT subsector does). As the Bhutanese population ages, this subsector will continue to have high demand. It will be important, however, for the BEST project to assess where, or if, it should engage in designing programming within this subsector. Khesar Gyalpo University of Medical Sciences of Bhutan (KGUMSB) provides health related education in Bhutan, including programming in nursing, public health, health technicians and traditional medicine. Identifying health and social work education that complements and does not duplicate existing courses at KGUMSB will be important.

6.3.4 *Administrative & support services*

The fourth subsector that scored 7/9 on the index is *Administrative & support services*. It scored the maximum for each indicator with the exception of it not being a government priority (indicator 1.1). It is a priority in the private sector with 43.1% of businesses in the subsector reporting confirmed future vacancies for hire in the next 1-2 years (indicator 1.2). There is notable economic security in the subsector as well. The median monthly wage is Nu 20,000 compared to the Nu 16,400 national average (indicator 2.1). Sixty-eight percent of jobs in the subsector are either regular paid jobs or self-employment rather than casual, piece or family work (indicator 2.2). This compares to 63% across the economy. There was also notable growth in human resources (indicator 2.3). Eleven percent of businesses across the economy experienced human resource growth in 2019. This subsector experienced more than double this rate at 26.4%.

The subsector also scores well on the Women's Empowerment variable. It is characterized by a gender earnings gap of 1.01 that favours women over men (indicator 3.1). The proportion of females hired in 2019 also surpassed that of the proportion of females who exited jobs in the field in 2019 at 37.8% versus 31.5% (indicator 3.2). This represents an interesting situation. Decent wages and a growing subsector for women's employment demonstrate that this is an area with existing opportunity to consolidate gender equality by further building on its ability to contribute to women's assets, agency and contributions. At the same time, despite the fact that a significant proportion of this workforce is male, it is an area that is still negatively gendered as "women's work". Further, courses in this area do not appear to have been a component of TVET education in Bhutan in the past nor are they viewed as a potential area in the future. Private trainers are more likely to deliver courses related to this subsector. As such, while this is an area to consolidate meaningful employment for women, with the corollary that there continues to be a negative gender stereotype, it likely does represent a priority for Bhutan's TVET system.

6.3.5 *Manufacturing*

This subsector ranked second with a score of 6/9 on the index. It scored the maximum for dignified work as it is both a priority of government (indicator 1.1) and business (indicator 1.2), with 51.7% of businesses reporting confirmed new future vacancies for hire in the next 1-2 years. This compares to the national average of 40% of businesses across the subsectors. The *Manufacturing* subsector does less well in the economic security domain. The median wage is only Nu 10,000 compared to the national average of Nu 16,400 (indicator 2.1). Seventy-nine percent of the jobs in this subsector are either regular

positions or self-employed rather than casual, piece or family work, which is considerably higher than the 63% national average (indicator 2.2). Nonetheless, 42% of these positions are self-employed own account workers. While some people may prefer the freedom provided by this kind of position, it has less security than regular paid positions, which account for 36% of manufacturing jobs. Human resource growth (indicator 2.3) in this subsector in 2019 was slightly less than most of the subsectors that scored higher overall, with 23.6% of licensed businesses reporting such growth. This is still significantly higher than the national average of 11%.

The *Manufacturing* subsector does less well on the Women's Empowerment variable. The gender earnings gap is only 0.49, illustrating a significant wage gap in favour of males (indicator 3.1). This is much lower than the national average of 0.79 with only *Mining & quarrying* lower among all subsectors. It is also significantly lower than the other high opportunity subsectors that, with the exception of the ICT sector that scored 0.65, scored between 0.94 and 1.02, indicating near gender equality or a wage gap in favour of women. *Manufacturing* does better on growth in female workers (indicator 3.2). The proportion of female hires in 2019 was 37.8% versus 33.5% female employment exits.

Overall, the *Manufacturing* subsector provides a high opportunity for women's employment but its lower score on the index demonstrates it holds less potential than the previously discussed high opportunity subsectors. In particular, the significantly lower than average wage provides less economic security. With the current interest among young Bhutanese in finding employment abroad, the subsector likely holds limited attraction as an employment option. This is compounded by the large gender earnings gap, making the sector particularly poor as one that would provide women with an asset – decent wages – that can be employed to improve their agency. Should the BEST project choose to address this subsector, it will be critical to pair developing or revising courses with interventions for the private sector that address the wage gap issue. Interventions that increase the attractiveness of a relatively low paying field for all genders will also be needed.

6.4 Additional considerations

The previous discussion outlined the nature of high opportunity economic subsectors that can be targeted by TVET reform interventions to create increased employment, including for women. Some of the high opportunity subsectors are characterized by conditions where existing benefits for women can be consolidated and strengthened (i.e. *Electricity, gas, steam & air conditioning; Health & social work activities; and, to a lesser extent, Administrative & support services*). Others are characterized by favourable employment conditions overall but would require interventions that improve the capacity for women to benefit from these favourable conditions (i.e. *Information & communication and Manufacturing*). The BEST project would benefit from focusing on these high opportunity subsectors to promote women's employment. At the same time, it is worth exploring other issues that could impact the choice of subsectors for interventions given the course-grained nature of the index. Again, the course-grained nature is a reflection of the available comparative data in secondary sources. Using the index provides a general picture of high opportunity subsectors. Incorporating a number of qualitative assessments can help provide a more nuanced exploration to fill in greater detail than the index can provide when using existing secondary sources.

The following discusses a number of subsectors that scored below the 'high opportunity' threshold of 6/9 as well two cross-cutting areas that are not explicitly reflected in the RGoB's economic subsector categories.

6.4.1 Hospitality

The *Hospitality* subsector scored 5/9 on the index, just below the threshold for designating it a high opportunity subsector. While it is a government priority with a current Flagship Program (indicator 1.1) and does quite well on the Women's Empowerment variable (variables 3.1 and 3.2). It is a subsector with less economic security. The Nu 15,000/month median wage is below the national average of Nu 16,400 (indicator 2.1). Human resource growth among businesses in 2019 was also below the 11% national average at 10.4% (indicator 2.3) and continued throughout the pandemic. This is not surprising given the importance of tourism to this subsector and the challenge it faced when international tourism was essentially shut down for two years.

Nonetheless, this is a subsector that would benefit as one of focus in the BEST project. International tourism is one of the largest components of Bhutan's small private sector and is critical in generating foreign currency. Moreover, it is currently undergoing fundamental change as Bhutan emerges from the pandemic. Bhutan is known for its GNH-driven *high value-low impact* tourism strategy that charges a high daily tariff to international tourists to drive economic growth yet limit tourist numbers to lessen adverse ecological and cultural impacts. A significant policy change occurred in 2022, however, just as Bhutan was re-opening to international tourists. The new policy addresses the nature of the previous daily tariff in a manner that now makes visiting Bhutan more expensive for international tourists. While it is too early to see the impacts of this policy shift, which has the potential to reduce tourist numbers and related economic growth, it will require efforts to diversify tourism products and reform hospitality services to effectively re-establish the tourism sector in an unclear post-pandemic period.

In order to support the current changes to the tourism sector to ensure its continued success, the current time period is critical for training Bhutanese for this subsector. Promoting employment opportunities for women in this process will require not only designing recruitment strategies, curriculum, pedagogical methods and support systems that are gender sensitive, but working with the private sector to improve opportunities for women. The gender earnings gap (indicator 3.1) is currently 0.83, illustrating a better situation than the national average of 0.79, but one that still favours men. At the same time, in 2019 the proportion of hires that were women slightly exceeded the proportion of employment exits that were women, 62.6% compared to 60.9 (indicator 3.2). And while actual numbers of tourism positions decreased during the pandemic, the trend of a greater proportion of female hires versus the proportion of female exits increased during the pandemic, reaching 75.6% compared to 62.9% in 2021. Building on this situation holds the potential to increase women's voices, contributions and leadership in the hospitality workplace.

Employers in the subsector have identified skills shortage in hospitality management and the food and beverage industry.⁷⁰ Focusing on these areas will allow the BEST project to contribute to re-shaping and diversifying a subsector that plays one of the largest and most important roles in Bhutan's economy.

6.4.2 Arts & entertainment

The *Arts & entertainment* subsector also scored 5/9 on the index, below the high opportunity threshold. Yet it requires further assessment. The RGoB's subsector category to which the index was applied includes not only arts but entertainment and recreation. The index therefore does not tell the whole

⁷⁰ DTE. (2022). *TVET Graduate Employer Survey 2022*. Thimphu: DTE, MoLHR, p.22.

story for traditional arts in particular as they are subsumed within a larger category. Focusing on traditional arts is important given that the 13 traditional arts and crafts in Bhutan, known as *zorig chusum*, are a defining part of Bhutanese culture. This, in turn, is a key domain in GNH. Most critically, Bhutan views the preservation of its traditional culture as a key strategy to demonstrate its uniqueness as a distinctly “Bhutanese” cultural, social and political entity in a region where sovereignty was extinguished in neighbouring Tibet and Sikkim. Preserving culture is therefore a part of preserving Bhutanese sovereignty from external claims in a region of geo-political giants; it is a contributor to political survival.⁷¹ As such, it is an ongoing priority of the government (indicator 1.1) and will likely continue to be so, particularly as globalization and outside cultural values continue to make inroads in Bhutan.

Addressing traditional arts and crafts as part of the TVET reform process will therefore play a role in contributing to this larger cultural and political issue. Moreover, Bhutan’s TVET system includes two institutions devoted to *zorig chusum* training and BEST’s baseline report illustrates that the kinds of interventions required for these institutions will need to be, in some cases, different than in the Technical Training Institutes (TTIs). So while the subsector did not reach the high opportunity threshold of the index, traditional arts and crafts will be a key part of TVET reform. Strategies to promote it as a subsector for women’s employment will need to accompany this.

The overall subsector of *Arts & entertainment* currently does well in terms of the gender earnings gap (indicator 3.1) with a value of 1.08. This is higher than all other TVET related subsectors and represents a key opportunity to build on an existing wage asset that contributes to women’s ability to engage their agency. Some caution is in order, however, given that the subsector category includes more than just traditional arts. Moreover, the subsector does not do well in terms of current growth in female workers (indicator 3.2). In 2019, the proportion of hires that were women was 50.5% while the proportion of employment exits that were women was 60%. This trend continued during the pandemic from 2020-2021. Overall human resource growth in the subsector is also below the 11% national average at only 10.1% (indicator 2.3). Median wages similarly are slightly below the national average at Nu 15,000/month compared to Nu 16,400 (indicator 2.1).

The subsector provides an opportunity to consolidate and build on women’s better wages when compared to men, but with overall wages that are less than the national average and within the context of the proportion of women leaving jobs in the subsector surpassing the proportion who are being hired. Strategies that focus on recruiting more female trainees to *zorig chusum* courses are therefore necessary. Potentially assisting in this process is Bhutanese society’s already very positive perception of work in Bhutan’s traditional arts and crafts. BEST’s baseline study found that while TVET is generally held in low esteem in Bhutanese society, including among TVET trainees themselves, education and work related to traditional arts and crafts is held in high esteem. Building on this good will to develop strategies to attract more female trainees would be useful. More broadly, developing reform interventions should also take into consideration how the teaching of traditional arts and crafts can incorporate modern technology and pedagogical methods, two things that current *zorig chusum* trainees, both female and male, outlined as a priority in BEST’s baseline report.

⁷¹ Schroeder, K. (2018). *Politics of Gross National Happiness: Governance and Development in Bhutan*. New York: Palgrave Macmillan, p. 28.

6.4.3 Agriculture, forestry & fishing

This subsector scored only 3/9 on the index indicating that it does not hold great promise for meaningful employment. While it is a government priority (indicator 1.1), the subsector is not a priority of the private sector (indicator 1.2); has a median monthly wage of only Nu 5,000, less than a third of the national average (indicator 2.1); is characterized by more insecure employment (indicator 2.2); and is not characterized by human resource growth (indicator 2.3). There is also negative growth in female workers in the subsector (indicator 3.2) and a gender earnings gap (indicator 3.1) that, while better than the national average, is 0.85 and therefore still favours men. Overall, the subsector as currently characterized lacks real potential for increasing women's assets and engaging their agency.

Nonetheless, the sheer size of this subsector in terms of employment and its importance to Bhutanese food security makes it a subsector that would benefit from incorporation into the TVET reform process. In addition, anecdotal evidence during the pandemic indicated that some Bhutanese, including young Bhutanese, were returning to rural areas to take up farming. Current government priorities include organic farming, which is one of the Flagship Programs, as well as commercialization and mechanization. Employers have indicated that skills in agro-based food processing and production as well as dairy product production are also needed.⁷² TVET reform that provides training that responds to the need for greater mechanization, processing and agro-business skills may contribute to better paying and secure agricultural jobs. This, in turn, would promote improvement in the historically low productivity in the agriculture sector.

While agriculture is currently not a sector with high opportunity for women, it is worth including it as a focus of TVET reform not only because it is the largest employer in the country, but because women outnumber men working in agriculture (57.8% women; 41.3% men).⁷³ Rural women therefore are more likely to fill these lower paying and less secure jobs. Moreover, the traditional gender segregation of agricultural roles has recently become blurred, leaving women with a greater role in agricultural duties alongside engaging in their household duties.⁷⁴ Addressing the agriculture sector as part of TVET reform therefore offers the potential not to promote a high opportunity for women's employment, but to improve an existing reality of inequitable work shouldered disproportionately by rural women.

6.4.4 Renewable energy and green jobs

The RGoB's standardized categories of economic subsectors, or areas of economic activity, were used in this LMA as this enabled consistent data to be accessed to compare subsectors for their ability to provide high opportunity employment. The RGoB's categorization does not, however, incorporate a specific 'green' category such as renewable energy. While green jobs cut across many of the subsectors, a category specific to employment in the field of renewable energy could not be assessed using the index for its ability to provide high opportunity employment. Nonetheless, green jobs and employment in the renewable energy sector are a clear priority for Bhutan. Most broadly, environmental sustainability is one of the original four pillars of Gross National Happiness and ecological resilience is one of the nine GNH domains. Driven by its GNH strategy, Bhutan sequesters more carbon than it

⁷² DTE. (2022). *TVET Graduate Employer Survey 2022*. Thimphu: DTE, MoLHR, p. 19.

⁷³ MoLHR and UNDP. (2022). *Bhutan Workforce Futures: Stepping Stones to Industrial Strategic Propositions for the Agriculture, Creative and Digital Sectors*. Thimphu: MoLHR, p. 37.

⁷⁴ *Ibid.*, p. 36.

produces making it, along with Panama and Suriname, one of only three carbon negative countries in the world. At the same time, domestic energy consumption is increasing. Demand for energy in the industrial and transport sectors doubled from 2005 – 2014 with much of this met through imported fossil fuels.⁷⁵ Moreover, Bhutan’s current heavy reliance on its hydropower sector, driven by the abundant water sources in the Himalayas, is vulnerable to the effects of climate change. In particular, glacial outburst floods (GLOF) have occurred in Bhutan and are likely to increase as the climate warms, putting the hydropower sector at increasing risk in the future.

The promotion of renewable energy is a priority for continuing to ensure a carbon negative development path and broadening energy production beyond hydropower. Two of the NKRA in the 12th FYP address renewable energy. NKRA 6 addresses ‘Carbon neutrality, climate and disaster resilience’ and includes the promotion of solar and wind through green technologies as one of its strategies. NKRA 15 focuses on ‘Sustainable human settlements’ and includes a strategy of promoting green and energy efficient buildings as well as green growth in the construction sector.

The BEST project incorporates environmental sustainability and the promotion of green jobs into its focus, including in multiple results statements in its logic model and accompanying indicators in the performance measurement framework. This will ensure that green principles and skills are infused into all TVET courses, regardless of focus. Yet the government’s clear prioritization of renewable energy and Bhutan’s long history of meaningfully pursuing environmental sustainability represents a specific opportunity for TVET reform. Revising existing courses or designing new ones specifically focused on renewable energy driven by current technology will provide TVET trainees with in-demand skills for the Bhutanese economy as well as globally. It is recommended that the follow-up labour market analysis undertaken by BEST further explore the implications of this sector for women’s employment as this data is not available in the secondary sources consulted for this report.

Employers of TVET graduates have identified specific skills gaps that currently exist in the renewable energy sector. These gaps include skills in the fields of solar and wind technology; hydropower plant operation; and repair, maintenance, and commissioning of renewable energy infrastructure.⁷⁶

6.4.5 Entrepreneurship

Effectively addressing the issue of youth unemployment requires focusing not only on providing young people with skills for employment but skills to start their own businesses. This is particularly critical in a small economy like Bhutan’s where it is difficult to absorb the increasing number of tertiary education graduates into the labour force.⁷⁷ Fostering entrepreneurship skills among TVET trainees is a strategy that will not only equip them with the technical skills needed to enter the labour force but also provide them with the option to start their own technical businesses.

The private sector has historically been very small in Bhutan. It is also dominated by very small enterprises. Cottage and small industries (CSIs) make up around 95% of businesses in the country.⁷⁸

⁷⁵ IRENA. (2019). *Renewables Readiness Assessment: Kingdom of Bhutan*. Abu Dhabi: International Renewable Energy Agency.

⁷⁶ DTE. (2022). *TVET Graduate Employer Survey 2022*. Thimphu: DTE, MoLHR, p. 20.

⁷⁷ MoLHR and UNDP. (2022). *Bhutan Workforce Futures: Stepping Stones to Industrial Strategic Propositions for the Agriculture, Creative and Digital Sectors*. Thimphu: MoLHR, p. 12.

⁷⁸ Ministry of Economic Affairs. (2019). *Cottage and Small Industry Policy 2019*. Thimphu: MEA.

Entrepreneurship also faces notable challenges in Bhutan. Complex administrative procedures and access to capital are particularly challenging.⁷⁹ More critically, some argue that Bhutanese collectivist cultural values impede the development of a meaningful entrepreneurial culture.⁸⁰ In contrast, others argue that the cultural values at the foundation of GNH hold the promise of a more sustainable form of entrepreneurship, but more suitable support is needed to foster this.⁸¹ In this context, the RGoB has taken extensive steps to promote entrepreneurship. The Economic Development Policy of 2016 prioritizes start-ups and entrepreneurship skills development as does the Cottage and Small Industries Policy of 2019. The 12th FYP identifies fostering entrepreneurship as an NKRA and a Flagship Program was initiated to promote start-ups and entrepreneurship within the cottage and small industries sector. While CSIs unsurprisingly declined during the pandemic, in 2023 the RGoB re-confirmed its continuing support for entrepreneurship through grants and machinery with a particular focus on youth skilling and employment.⁸²

While entrepreneurship education at the tertiary level has historically been poor in Bhutan,⁸³ reforming TVET courses and trainee supports to incorporate a focus on entrepreneurship skills can play a key role in fostering entrepreneurship more broadly in Bhutan and addressing youth unemployment. Viewed as a cross-cutting theme, entrepreneurship training can be applied to any TVET course to build business skills alongside technical ones. Moreover, Humber's IDI already has experience with infusing entrepreneurship training at the tertiary level across disciplines, programs and institutions.

Incorporating entrepreneurship training and support into the TVET reform process would be particularly beneficial in the IZC institutions with their focus on training in traditional arts and crafts. This work lends itself more readily to self-employment given the relatively few businesses beyond own account workers engaged in this work. Moreover, the BEST project's baseline study found that building entrepreneurship skills is very attractive to people with disabilities, including women with disabilities, as starting their own businesses can be easier than finding employment within a context of societal attitudes that often view PWD as helpless. Fostering entrepreneurship skills and opportunities alongside technical skills in TVET institutions can therefore act as a potentially effective vehicle for promoting assets and agency among vulnerable populations.

7. Conclusion

A reformed TVET sector in Bhutan represents a significant opportunity to address the issue of youth unemployment while also contributing to a more innovative and robust economy. Implementing such reform through a gender lens further offers an opportunity to create more equitable opportunities for women and people with disabilities. The identification of economic subsectors with high opportunities

⁷⁹ Ayaji Fujita, A. et al. (2022) *Promoting Entrepreneurship in Bhutan*. ADBI Development Case Study No. 2022-6 (December). Asian Development Bank Institute.

⁸⁰ Valliere, D. (2014). Culture, values and entrepreneurial motivation in Bhutan. *Journal of Enterprising Communities: People and Places in the Global Economy* 8(2), 126-146.

⁸¹ [Schroeder, K. \(2017\). Re-thinking entrepreneurship through the lens of culture: Snapshots from Indonesia and Bhutan and their implications for sustainability. In Dasho Karma Ura & Sangay Chopel \(eds.\) *GNH of Business: Proceedings of the Seventh International Conference on Gross National Happiness*. Thimphu, Bhutan.](#)

⁸² [Poudel, YK. \(27 January, 2023\). Government to continue supporting enterprises: MoENR. *Kuensel*, January 27 edition.](#)

⁸³ [GNH Commission \(2019\). *Twelfth Five Year Plan 2018-2023. Volume 1*. Thimphu: GNH Commission](#), p. 58.

for employment, including employment of those who are currently marginalized, is central to informing how TVET reform can be operationalized to achieve these objectives. Using an index created for measuring high opportunity subsectors for employment, this labour market analysis illustrates that the subsectors of *Electricity, gas, steam & air conditioning; Information & communication; Health & social work activities; Administrative & support services; and Manufacturing* offer high opportunities for employment, including women's employment. Moreover, *Electricity, gas, steam & air conditioning; Health & social work activities; and Administrative & support services* are currently characterized by elements that are, to some extent, already fostering women's assets, agency and abilities to contribute to change. The BEST project should focus efforts on consolidating and building on these existing elements to further strengthen them. On the other hand, the high opportunity subsectors of *Information & communication* as well as *Manufacturing* are characterized by some challenges to effective women's labour force participation. The BEST project will need to take a different approach to these subsectors, focusing on improving the situation for women through the design of appropriate gender sensitive courses, pedagogies, policies and industry relations.

The LMA also illustrates that there are other economic subsectors that, while not designated as high opportunity subsectors for employment, are important to include as areas of focus given a variety of contextual factors. This includes the subsectors of *Hospitality, Agriculture, forestry & fishing, and Arts & entertainment* given their importance to foreign currency reserves, the percentage of the labour force, and cultural identity respectively. Lastly, the LMA results also demonstrate that *renewable energy* and *entrepreneurship* are important areas, and a cross-cutting area in the case of the latter, for focus within the BEST project.

Overall, the results of this LMA are shaped by the sole use of secondary sources and some of the limitations that characterize the data in these sources. The BEST project is committed to completing a more in-depth follow-up LMA that uses both primary and secondary sources. Key recommendations for this follow-up LMA include collecting updated data on the Royal Government's economic priorities once the 13th FYP is released in late 2023; consulting primary sources that can provide a deeper exploration of other intersectional identities that may experience different challenges and opportunities in the labour force; and potentially revising the index used in this LMA to incorporate additional indicators that allow a more nuanced assessment of high opportunity subsectors.