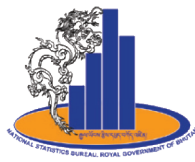


DETERMINANTS OF YOUTH UNEMPLOYMENT IN BHUTAN

NATIONAL STATISTICS BUREAU

JUNE, 2020



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FORWARD

We are pleased to present the thematic research report titled ‘Determinants of Youth Unemployment in Bhutan’. This report is one of the annual performance targets of the Coordination, Information and Research Division (CIRD), NSB for fiscal year 2019-2020. It’s the second issue of the CIRD Thematic Research and Analysis Series and first of its kind to take the analysis at the inferential level.

Promoting youth employment is a priority for the Royal Government of Bhutan as evidenced by its commitment towards reducing youth unemployment rate. At the same time, the commitment to youth employment is also a cornerstone of the Sustainable Development Goal (SDG), particularly SDG Goal 8 which calls for “Promoting sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all”.

The youth (15-24 years) constitute about 20 percent of the population. As such, this presents an opportunity to take advantage of the demographic dividend by creating sufficient, adequately productive and remunerative employment opportunities for the youth.

Towards this, we hope the information in the report will facilitate decision makers and analysts in the formulation of policies, evaluation of development plans and programs particularly towards the reduction of youth unemployment in Bhutan.



(Chhime Tshering)

Director

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ABSTRACT

High rate of unemployment among the youths is one of the growing concerns of the government. The growing unemployment rate not only has economic implications but also engenders social problem. Although, several studies have been undertaken by individuals and institutions, due to the complexities of issues, an attempt is made by NSB to further disentangle its causes and suggest appropriate policy recommendation. The study attempts to examine how socio-demographic factors might be able to explain unemployment among the youths, and suggest way forward towards reduction of the youth unemployment problem. This study used data from the 2019 Labour Force Survey (LFS) conducted by the National Statistics Bureau (NSB). It investigates 30,599 young people aged 15-24 years, both employed and unemployed using Binary Logistic Regression Model to analyse the determinants of youth unemployment in Bhutan. The empirical finding shows that age, gender, skills, migration, disability, education, preference for civil service job, location of the youths in relation to Dzongkhag he/she resides are all significant

factors in explaining the difference in youth unemployment in Bhutan. Based on the findings of the study, few recommendations are proposed. The government should continue its effort to promote private sector development and productivity as the true engine of growth and enable its capacity to generate employment opportunities so that the young people, particularly the educated youth, can have an option to look for employment outside the public sector. The study also recommends that the government and policy makers to re-evaluate and assess our current tertiary education courses at various levels. While the primary goal of education is to provide, and enhance knowledge, it may perhaps be practical to also ensure classroom learnings to be relevant to the world of work. The skills demand in the labour market should be assessed and imparted in the institutions and colleges and their curriculum should be reviewed and changed based on the labour market needs on a periodic basis.

Key words: youth unemployment, logistic regression, private sector, education, mechanization.

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ABBREVIATIONS

CIRD	: Coordination, Information and Research Division
FYP	: Five Year Plan
GNH	: Gross National Happiness
LFS	: Labour Force Survey
NSB	: National Statistics Bureau
PHCB	: Population and Housing Census of Bhutan
MoLHR	: Ministry of Labour and Human Resources
NAS	: National Accounts Statistics
GDP	: Gross Domestic Product
LDC	: Least Developed Countries
ADB	: Asian Development Bank
ILO	: International Labour Organization
OECD	: Organization for Economic Cooperation and Development
LFPR	: Labour Force Participation Rate
GNHC	: Gross National Happiness Commission

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1. INTRODUCTION

Bhutan is one of the rapidly developing countries in the world. Bhutan's development paradigm of 'Gross National Happiness (GNH)' which is people-centric focusses on improving the quality of life for the people through the four pillars: sustainable economic growth, conservation of the natural environment, preservation of cultural heritage, and good governance. The developmental activities aligned with the concept of GNH index, has been first implemented through the 10th Five Year Plan (2008-2013)¹

Bhutan's population increased moderately to 727,145² persons in 2017 from 632,982³ persons in 2005. The youth population accounted for 23% in 2005, while in 2017 it declined to 19.8%. On the contrary, the percentage of youth in urban areas have increased by 16.8% in 2017 from 2005, which is in contrast to 13% decline in rural areas in 2017 from 2005.

The Bhutanese economy recorded reasonably strong GDP growth averaging to 5.4 percent in the past nine years (2010-2018)⁴. The average GDP growth for the 12th Five Year Plan is estimated at 6-7⁵ percent. Achievement of this growth rate is threatened by the current COVID-19 pandemic and it might derail the target of achieving 6.0 - 6.5 youth unemployment rate by the end of the 12th Five Year Plan period.

The tremendous socio-economic development has not been without set-back and issues. Among many such problems, high rate of unemployment among the youth has become one of the most pronounced development issues today. It is very often discussed and debated among the policy-makers. Such an issue has been recognized and outlined in the 12th FYP as "the economy has achieved full employment, but youth unemployment remains high". The issue needs to be addressed through economic diversification and creation of employment opportunities particularly for youth.

Whilst there have been steady increase in the youths entering the labour market (supply side), there has been limited demand of labour from both public and private sector creating excess supply and hence leading to high rate of youth unemployment. The economy has not been able to absorb these youths to maximize its growth due to inherent structural difficulties. The youth unemployment rate is four times more than that of adult unemployment rate in 2019 (National Statistics Bureau, 2019). The evidence suggests that the causes of unemployment among Bhutanese youth are varied in nature and the most prominent is mismatch of supply and demand of skills, followed by the youths' preference for office jobs over physical and manual labour, limited absorption capacity in the job market; and lack of family support while unemployed (Asian Development Bank, 2018).

The problem if not addressed will be further aggravated as nearly 62,743 students will be in the labour market

1 Twelfth Five Year Plan (2018-2023), Gross National Happiness Commission, 2019

2 Population and Housing Census of Bhutan, 2017

3 Population and Housing Census of Bhutan, 2005

4 National Accounts Statistics 2018

5 Twelfth Five Year Plan (2018-2023), Gross National Happiness Commission, 2019

looking for employment by the end of the 12th Five Year Plan. Such a massive inflow of students in the labour market without commensurate generation of employment opportunities may result in growing number of unemployment among the educated youths. Failure to capitalize on such large number of human resources through gainful employment may divert the youths to anti-social behavior creating social problems within the society. Studies have shown that unemployment and poor socio-economic condition have strong correlation to youths committing crimes and coming to conflict with law (Gyeltshen et.al, 2015).

It is in this light that the study has been undertaken to better understand the factors determining youth unemployment which would help in formulation of better policies and programs to address youth unemployment in Bhutan.

2. FACTORS OF YOUTH UNEMPLOYMENT

Youth unemployment has received increased focus and attention during the past decade due to growing youth unemployment across the world. As such, many empirical studies on the determinants of youth unemployment have been undertaken (Ebaidalla, 2016). As per the literature, several variables have been identified as the main factors influencing youth unemployment, including aggregate demand, education, demographic change, wages, labour market policies, individual and household characteristics. However, only relevant variable based on the labour force survey have been considered for this

study and due to paucity of such research in Bhutan, several studies of other countries were reviewed.

One of the factors affecting youth unemployment is the demographic transformations. It is well known that demographic transitions such as changes in the age structure of the population, among others, affect the situation of youth labour markets (Salvador & Killinger, 2008). For instance, an increase in the number of young people in the labour market would have an adverse impact on the rate of youth unemployment. This is because young workers are believed to complement adult workers, in terms of endowments and qualifications.

Many studies (Dickens & Lang, 1995; Burger and Fintell, 2009) have shown that, over the years, a significant number of educated youths have remained unemployed as compared to uneducated youth, particularly in the context of developing countries. They attributed this phenomenon to a mismatch between the supply of education and demand for labour. Rabten (2014) through his study of 'Understanding the Dynamics of Labour Market and Youth Unemployment in Bhutan' provides some baseline empirical understanding on unemployment in Bhutanese context. He argued that higher educational attainment has downturned the employment level. He also added that education and training system has not adequately prepared the youth for the world of work. They lack the required skills, experience, attitude and are not aware of labour market information. Byron Mook (1982), in his article, 'Educated

Unemployment in Developing Countries: A Cautionary Note from Sri Lanka concluded that the actual unemployment among educated young people is not as high as official figures often indicate. He found that young people aspire for government-sector jobs. He also found that only a few young people thought about self-employment possibilities but its pursuance is obstructed by lack of finance.

A probit regression model was used by Tangtipongkul and Wangmo (2017) to study the determinants of unemployment in Bhutan. The study revealed that completion of a lower secondary education raises the likelihood of being unemployed by 1 percentage point; middle secondary by 1.7; higher secondary by 2.7; and, degree and masters by 5.5 percentage points. Similar findings were also reported by Qayyum (2007). In his finding the likelihood of a youth with primary education being unemployed increases by 2.3%; for college graduate, the probability increases by 18.3%; and for highly educated youth, the probability of becoming unemployed is as high as 20.1%. Unemployment was higher among non-married/single young people compared to married youths. This was because married youths have more obligations and responsibility to support their family and take up employment opportunities regardless of remuneration and other conditions.

In their study, Msigwa & Kipsha (2013) found that male youth were 32.6% less likely to be unemployed over female youth in Tanzania. A comparative study of youth unemployment in Germany and United Kingdom also provide evidence of high

youth unemployment rates. The study concluded that female youth are more likely to be unemployed, contributing to higher youth unemployment (Isengard, 2003). Female youth were at disadvantage to acquire jobs in Germany as female youths would seek employment only in areas where it was convenient for them to work, while in the United Kingdom the situation is reversed due to declining employment opportunities in the industries which were by and large male dominated. The growth of service sector which provided flexible working hours attracted female youths to take up jobs and as such the male youths were generally disadvantaged for employment prospects in the United Kingdom.

Kingdon and Knight's (2002) study on job search and its relation to household income found that households with higher income had higher or more likely opportunities in being employed as they have financial means to search for jobs as compared to those individuals who are from poorer household.

Dagume & Gyekye (2016) investigated the nature and factors of rural youth unemployment using sample survey of 580 randomly selected youths from the four local municipalities in the Vhembe district, South Africa. A binary logistic regression technique was adopted to determine socio-economic and demographic factors that influenced youth unemployment. The explanatory variables were age, gender, marital status, educational level, ethnicity, training or skills, geographic location and work experience. They found that youth unemployment in the Vhembe district

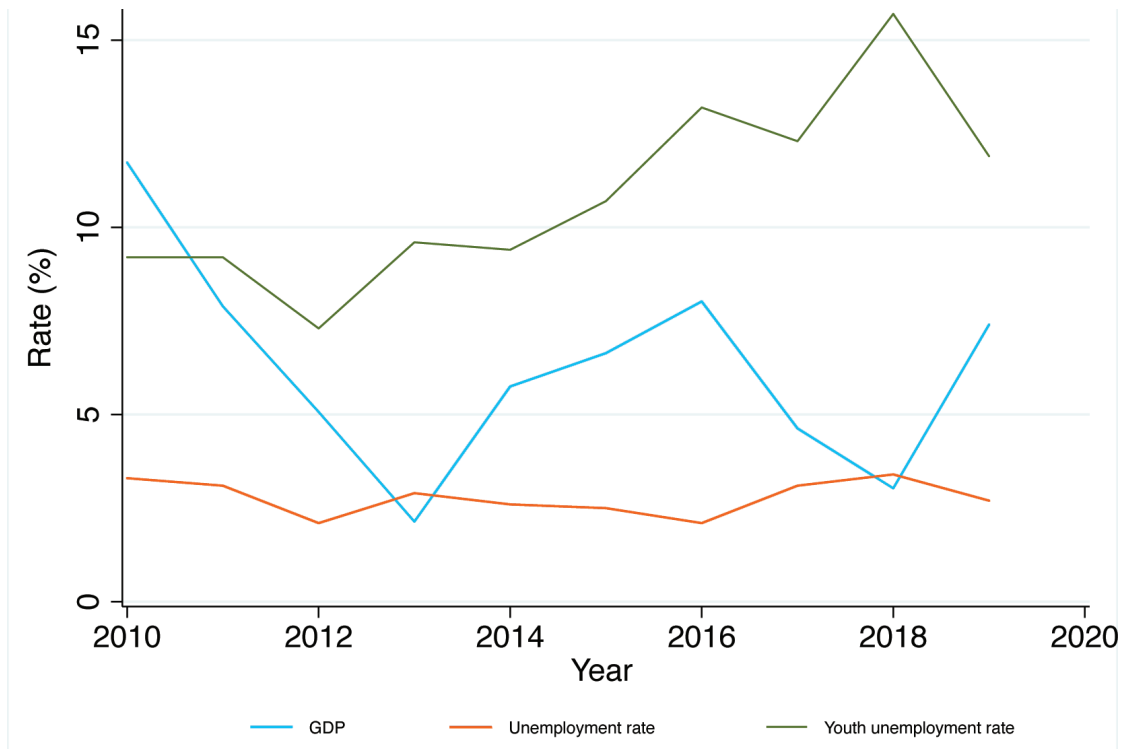
was largely found to be determined by training and work experience. In other words, it was revealed that having acquired (skills) training and work experience were associated with reduced odds of being unemployed. The study highlighted the importance of skills training, including the need for training infrastructure, funding for skills training, work integrated learning, and extended career specific internship programs to mitigate the problem of youth unemployment in South Africa.

3. BACKGROUND: TREND OF YOUTH UNEMPLOYMENT IN BHUTAN

The youth unemployment rates in Bhutan have remained consistently high over the years (2010-2019) ranging from 7.3%-

15.7% based on the Labour Force Survey Reports (LFS) as shown in Figure 1. The youth unemployment rate at 15.7% in 2018 was amongst the highest in recent times. Youth unemployment rate in 2019 stood at 11.9%, a reduction by 3.8 percentage points from the previous year as per the 2019 LFS report. The consistently high youth unemployment rates over the years posed a major socio-economic challenge.

Studies pointed out that despite strong economic growth, high unemployment rate persist and this was attributed to non-pro employment economic growth. A study published in South Asia Economic Journal reported that economic growth had no impact on the reduction of unemployment rates in Bhutan (Tenzin, 2019). Similarly, Rabten (2014) in his



Note: GDP for 2019 is a projected figure from ADB
 Source: Author's computation using National Accounts Statistics and LFS Reports 2010-19

Figure 1: The trend of economic growth, unemployment and youth unemployment, 2010-2019.

Table 1: Economic growth (2010-2019) and share of youth employment by sector (%)

Sector	Average Annual GDP growth			Youth employment	
	2010-2014	2015-2019 ¹¹	Overall (2010-19)	2018	2019
Agriculture	2.06	4.15	2.99	47.0	43.3
Industry	6.18	3.20	4.86	17.9	18.5
Service	8.52	8.28	8.41	35.1	38.1
All sectors	5.59	5.21	5.42	-	-

Source: Author's computation using National Accounts Statistics and Labour Force Survey, 2018-2019

study on 'Understanding the Dynamics of Unemployment in Bhutan' also reported similar findings.

The reason for the strong economic growth not supporting reduction of unemployment rates may be explained by the significant portion of the growth contribution from non-labour intensive sector and slow growth of the high labour intensive sectors. While the agriculture sector still continues to provide the largest employment in the overall workforce (including the youth), it only grew by an average of 2.9% annually during the last decade (Table 1). On the other hand, the service sector, which provided over 38.1% of employment to young people recorded growth at 8.4% annually, while the industry sector grew by 4.8% and employed about 18.5% of the youth (LFS, 2019). Despite the rapid growth of the construction sector, the employment generated within the sector has been by and large taken by foreign workers. This is due to the nature of the work in the construction sector which is generally very physical and labourious. As such very few Bhutanese youth would choose to work under such circumstances.

Furthermore, manufacturing sector which

employs more than 9%⁶ of the country's youth work force managed to record an annual average growth of 7.1%⁷ during the same period. In contrast, electricity, which accounts for 11.9%⁸ of GDP recorded an annual average growth of 5.9%⁹, but employs merely about 1%¹⁰ of youth labour force.

As shown in Table 2, the proportion of youth in the labour force declined from 16.7% in 2010 to 9.6% in 2019. The erratic proportion of youth labour force between 2010 and 2019 could be attributed to the change in data collection methods. However, in 2017, the LFS frame was updated using the 2017 PHCB house listing information, and therefore, a change in the proportion of youth labour force is observed. Likewise, Labour Force Participation Rate (LFPR) also decreased from 40.1% to 26.6% during the same period. Disaggregated by gender, male youths' LFPR have declined slightly higher compared to the female youths. Similarly, youth employment to population ratio

6 2019 LabourForce Survey, NSB

7-9 National Accounts Statistics 2019, NSB

10 2019 Labour Force Survey, NSB

11 Excludes the share for 2019 since NAS report is not published

Table 2: Pattern and distribution of key youth labour force indicators

Indicators	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Proportion of youth in labour force (%)	16.7	15.7	14.2	13.0	11.2	11.9	10.3	13.9	10.1	9.6
Youth LFPR (%)	40.4	38.0	32.4	31.0	26.1	29.6	27.1	34.2	26.1	26.6
Youth LFPR: Male (%)	40.5	35.2	28.3	30.2	25.3	28.0	24.6	33.1	27.5	25.9
Youth LFPR: Female (%)	40.3	40.3	35.9	31.8	26.8	31.0	29.1	35.2	24.8	27.2
Proportion of youth in total employment (%)	15.7	14.7	13.5	12.1	10.5	10.9	9.1	12.6	8.8	8.7
Youth employment to population ratio (%)	36.7	34.6	30.1	28.1	23.7	26.4	23.5	30.0	22.0	23.4
Youth unemployment rate (%)	9.2	9.2	7.3	9.6	9.4	10.7	13.2	12.3	15.7	11.9

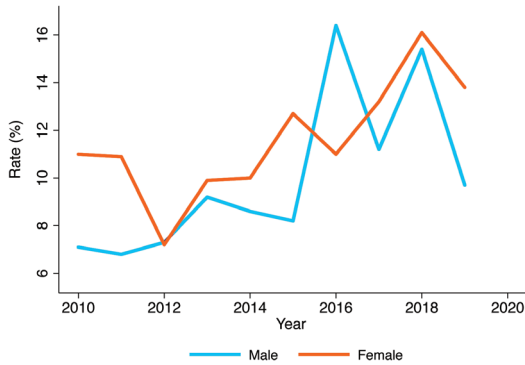
Source: Author's computation using LFS, 2010-2019

(proportion of young people that work amongst all young people) and proportion of youth in total employment also declined during the past decade. The drop in the youth labour force indicators may be attributed to the increased young people delaying their entry into labour force due to their enrollments in tertiary education.

Overall, youth unemployment in Bhutan has been largely an urban phenomenon (Figure 3). The unemployment rate is almost four times higher in urban areas than in rural areas. The migration of people, particularly the youth, from rural areas to urban centres in search of better

decade (Figure 2). Except for 2016, where, male youth outnumbered the total youth unemployed, it has been the female over the male that have remained consistently higher as far as the youth unemployment was concerned.

In 2018, the rate of youth unemployment was highest in Paro (38.5%) followed by Thimphu (29.8%) and Sarpang (19.9%). Similarly, these Dzongkhags continued to report high unemployment rates in 2019 as well (although the rates dropped compared to 2018) while the rates fluctuated in other Dzongkhags (as indicated in Figure 4). For example, Pema Gatshel Dzongkhag had

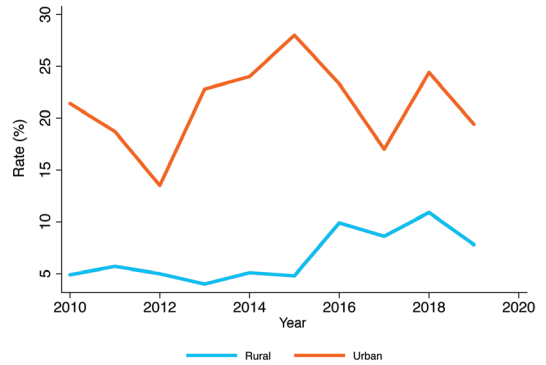


Source: Author's computation using LFS, 2010-2019

Figure 2: Youth unemployment rates by sex, 2010-19 (%)

job opportunities which are limited, largely explains the phenomenon of high urban youth unemployment rates in Bhutan.

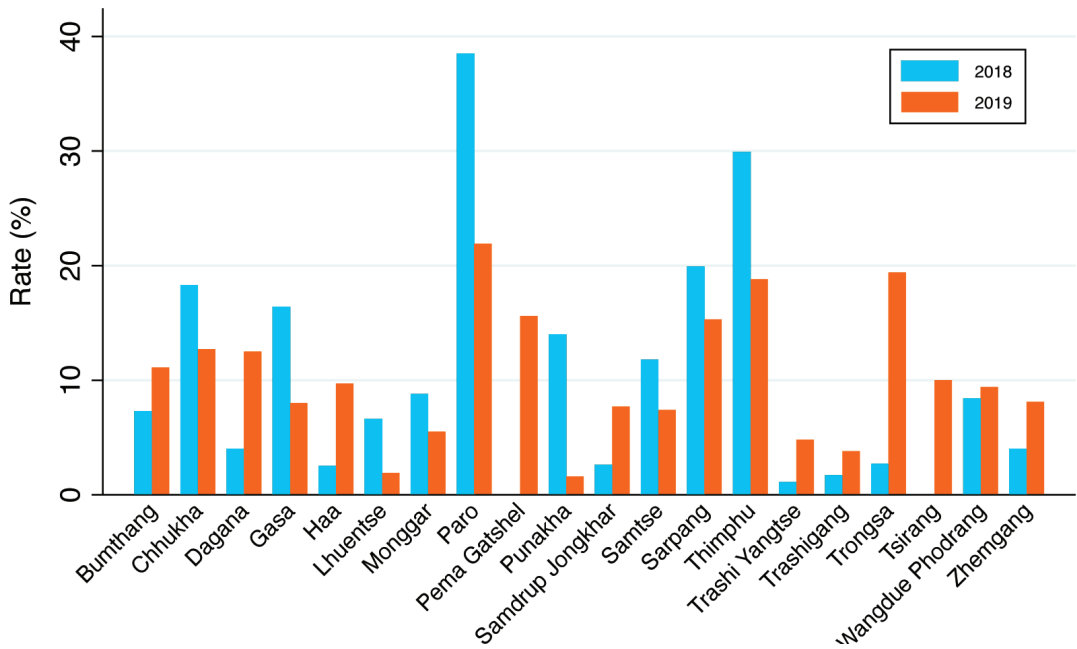
Likewise, by gender, females have suffered the bigger brunt of remaining unemployed than their male counterpart during the last



Source: Author's computation using LFS, 2010-2019

Figure 3: Youth unemployment rates by area, 2010-19 (%)

a zero-unemployment rate in 2018 but reported 15.6% in 2019. Since LFS reports published prior to 2018 have not reported youth unemployment rates disaggregated at the Dzongkhag level, comparisons with previous years could not be furnished beyond 2018.



Source: LFS Report 2018 and 2019.

Figure 4: Youth unemployment rates by Dzongkhag 2018-2019

4. EXISTING YOUTH EMPLOYMENT LEGISLATIONS AND POLICIES

Given the strong legislative and policy support and commitment from the Royal Government of Bhutan, curbing the youth unemployment problem should not be a difficult task provided that policies and programs are streamlined and implemented in a right way.

4.1 Constitution of the Kingdom of Bhutan 2008

The importance of job creation has been explicitly expressed among the country’s legislations and policies. Article 9 of the Constitution of Bhutan, section 11, states:

“The State shall endeavour to promote those circumstances that would enable the

citizens to secure an adequate livelihood”.

Section 12 under the same Article states:

“The State shall endeavour to ensure the right to work, vocational guidance and training and just and favourable conditions of work”.

The constitution underscores creating enabling conditions for the individuals and in generating sufficient jobs for livelihood.

4.2 Labour and Employment Act of Bhutan 2007

The Labour and Employment Act of

Bhutan 2007 provides legal protection governing employment and working conditions of the nation's workforce. His Majesty the fourth Druk Gyalpo envisioned that all Bhutanese, particularly the educated youth are gainfully employed¹². Thus, the act encompassed the country's pursuit of creating employment opportunities along with self-employment avenues, and to encourage private sector development and entrepreneurship. The act ensures that laws, rules and regulations related to employment are equally applied to protect the nation's workers - both employers and employees, including job seekers.

4.3 National Employment Policy 2013

The National Employment Policy 2013, under the vision of maximizing GNH, seeks to achieve full, protective, meaningful, gainful, and decent employment for the people of Bhutan. The policy under the first dimension Employment Creation states:

“The Royal Government shall place employment generation at the core of national and local socio-economic development planning to address the employment needs of its citizens particularly, the youth and vulnerable sections of the society. Each local government/dzongkhag shall be responsible for the creation of local employment opportunities” (Line 1.1, pp.2).

The policy under the same domain highlights the importance of private sector

involvement in the pursuit of developing entrepreneurial skill among the youths and employment creation. It clearly states:

“Leading businesses and employers shall be encouraged to provide entrepreneurship information and counselling services, conduct business competitions and facilitate networking opportunities for youth entrepreneurs” (Line 1.6, pp.2).

Subsequently, Line 1.7 under the same domain states:

“The Royal Government shall encourage Bhutanese Youth taking up part-time work in the prospective sectors”.

While considering the fact that youth are highly vulnerable in the labour market because of their lack of skills and work experience, the policy under the second domain - Employability and the Labour Force - states:

“The Royal Government shall facilitate engagement programs for unemployed youth to gain experience and enhance their employability skills” (Line 2.4, pp.4).

5. OBJECTIVES OF THE STUDY

The objective of the study is therefore to examine possible determinants of unemployment amongst the young Bhutanese population. It will examine the effect of social, economic, and demographic factors associated with youth unemployment and assess to what extent these variables can explain the causal relationship. Past studies have examined these relationships.

¹² Labour and Employment Act of Bhutan 2007

The factors commonly accounted are education, age, households' standard of living, training, and skills.

This study is expected to shed some light on the nature and extent of the problem associated with high level of unemployment among the young cohort of the population in Bhutan. Moreover, the study will be helpful in determining the factors of youth unemployment. However, it does not intend to seek macroeconomic factors of youth unemployment. This study is an attempt to draw policy attention and be useful to the policy-makers, planners, and development partners for making evidence-based policy decisions. It will also be helpful for potential researchers in conducting comprehensive studies on this issue.

6. METHODOLOGY

6.1 Data for Analysis

The data used in this research are sourced from Labour Force Survey 2019 (LFS 2019) conducted by the National Statistics Bureau in 2019. The LFS 2019 involved interviews with 8,770 households out of 9,012 households selected for the survey, accounting for a high response rate of 97.3%. The LFS is a nationally representative household sample survey carried-out annually which focuses on understanding the situation of labour force in the country.

The sample of the LFS 2019 was designed to generate labour force related indicators both at the national and the dzongkhag level in the country, including demographic,

economic, and household characteristics. The country is divided into 20 dzongkhags (districts) by urban and rural areas, and by gewogs and chiwogs.

6.2 Logistic Regression

As mentioned in the preceding section under 'data source', LFS 2019 data are used for this analysis. However, only data pertaining to young people aged 15-24 was considered for the study. The dataset provides profiles of 30,599 youth/young people, both employed and unemployed, out of which, 3,626 were unemployed. The reference period of work activities was 'one week' prior to the interview.

The study adopts logistic regression to examine causal relationships between youth unemployment and associated socio-economic factors, i.e. probabilities of being unemployed. The outcome variable 'youth unemployment' is a dichotomous variable. It is coded as '1' if youths are unemployed, and '0' otherwise. The predictors are: age, skills, migration, disability, area [which is categorized as urban and rural], marital status, highest level of education [which is divided into six groups: no education, primary, lower secondary, middle secondary, higher secondary, and bachelor degree and above], and the occupation status/preferred occupation. All the variables are dichotomous except age, which is a continuous variable. The logistic regression model is expressed as:

$$\pi = \frac{e^{\alpha + \beta_1 x_1 + \beta_2 x_2 + \dots + \beta_k x_k}}{1 + e^{\alpha + \beta_1 x_1 + \beta_2 x_2 + \dots + \beta_k x_k}} \quad (1)$$

The model can be further stated differently in equation (2), where the outcome is the

expected log of the odds that the outcome is '1'. Unlike Ordinary Least Square (OLS) method, the logistic regression applies the method of Maximum Likelihood (ML) to estimate the parameters.

$$\ln\left(\frac{\pi}{1-\pi}\right) = \alpha + \beta_1x_1 + \beta_2x_2 + \dots + \beta_kx_k + e \quad (2)$$

Here π is the probability of being unemployed, while $\left(\frac{\pi}{1-\pi}\right)$ shows the odds ratio. α is the constant or Y intercept; x is the vector of independent variables; β are the logistic coefficients or slope parameters; and 'e' is the error term. When all other predictors are held constant, the odds ratio means the change in the odds of Y given a unit change in X_k . Likewise, each of the parameter β s represents a change in log-odds ratio per unit increase in the value of X_k .

7. EMPIRICAL RESULTS AND INTERPRETATIONS

Results are presented in two separate

sections. The first section displays the descriptive results and the second section reveal the results of the binary logistic regression model.

7.1 Descriptive Results

The LFS 2019 estimated 30,599 young people age 15-24 years. Out of this, 48.2% were male and the remaining 51.8% were female. Looking at the area of residence, the majority of the youth (64.9%) was residing in rural areas compared to urban areas (35.1%). By age group, 84.0% of the youth were between the ages 20-24 years, while the remaining 16.0% were in the age group 15-19 years.

7.2 Results of Binary Logistic Regression Model

A Binary Logistic Regression Analysis is used to identify the determining factors associated with youth unemployment

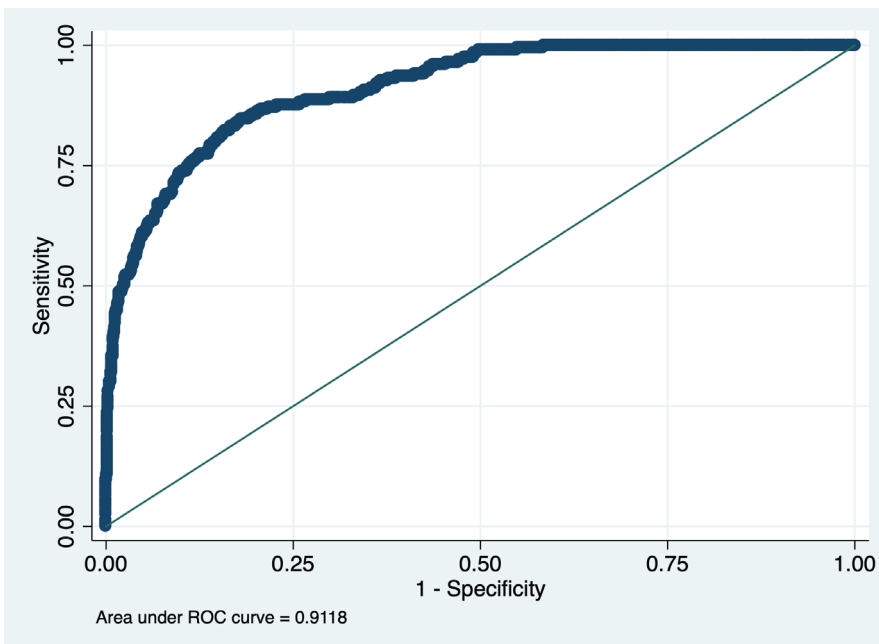


Figure 5: Area under ROC Curve for the Binary Logistic Regression Model

in Bhutan. In order to check the model fit, post-estimation tests such as the Hosmer-Lemshow Test, Receiver Operating Characteristics (ROC), and model calibration were performed on the regression estimates. All the tests showed positive results, indicating that the model is a 'better fit model', except for Hosmer-Lemshowtest (Goodness of Fit test)¹³. In addition, the area under ROC as shown Figure 5 which is closer to top-left corner indicate better performance of the model, which also means the model is able to classify the difference between unemployed and employed youth.

7.3 Interpretation for Results of Binary Logistic Regression Model

Logistic regression was conducted to identify the determinants of youth unemployment in Bhutan. The results are expressed in odds ratio (OR). Table 3 presents the logistic regression model result of determinants of youth unemployment status in Bhutan. The study found that variables related to youth such as age, sex, skills, migration status, disability, higher educational status, and occupational preference are some of the important determining factors of youth unemployment. Some of the dzongkhags are also significantly associated with youth unemployment. On the other hand, the variables such as area of residence, marital status, and lower educational status are not significantly associated with youth unemployment.

Youth unemployment status significantly differs with age of the youth. The likelihood of being unemployed among the youth decreases by 21% with one-unit increase in age, keeping other variables constant.

The result also shows that female youth are at higher odds of being unemployed compared to their male counterparts ($P < 0.05$). That is, being a female youth, one is 1.7 times at greater odds of being unemployed than male youth, controlling for other variables in the model.

Migration status of young people is negatively associated with youth unemployment status (Odds Ratio: 0.381). As a result, those who have migrated are 62% less likely to be unemployed compared to those who have not migrated, keeping the other variables constant. In other words, the finding tells us that youths have a higher chance of getting employment if he/she migrates to places where employment opportunities are abundant. However, it does not entail that all those who migrate will be employed.

The result also shows that youth's unemployment status significantly differs with respect to his/her educational status ($P < 0.05$). Those whose educational level is a Bachelor's degree and above are 3.85 times at greater odds of being unemployed compared to those whose educational level is higher secondary. Similarly, youth with primary education are 62% less likely to be unemployed compared to those youths with a higher secondary education.

Similarly, the youth's occupational preference varies significantly with his/her

¹³ Hosmer-Lemshow Test is sensitive to the large sample size. So, adding new variable and deleting the existing variables will have no effect on the outcome of the test result. So, in such cases we should not worry too much about p-value. <https://www.statalist.org/forums/forum/general-stata-discussion/general/389818-goodness-of-fit-test-for-logistic-regression-on-survey-data>

Table 3: Logistic regression result of youth unemployment status (LFS 2019)

Youth Unemployment	Odds Ratio	P-Value	[95% Conf. Interval]		Sig. Level
			LB	UB	
Age (Continuous)	0.791	0.000	0.700	0.894	***
Sex (Male)					
Female	1.688	0.013	1.117	2.553	***
Area (Urban)					
Rural	0.731	0.230	0.438	1.220	
Skills, Yes	0.555	0.059	0.301	1.022	*
Migration, Yes	0.381	0.000	0.228	0.636	***
Disability	7.194	0.094	0.715	72.408	*
Highest Education Level (Higher Secondary)					
No education	0.199	0.064	0.036	1.097	*
Primary	0.271	0.042	0.077	0.951	**
Lower Secondary	0.764	0.519	0.337	1.732	
Middle Secondary	0.639	0.122	0.362	1.127	
Bachelor's Degree	3.850	0.000	1.999	7.414	***
Occupation status/Sector Preference (Private)					
Civil service	21.054	0.000	10.723	41.339	***
Other public/government	3.396	0.000	1.946	5.926	***
Agriculture farming	0.012	0.000	0.001	0.102	***
Dzongkhag (Thimphu)					
Bumthang	1.313	0.661	0.388	4.442	
Chhukha	3.243	0.002	1.564	6.727	***
Dagana	1.846	0.427	0.406	8.396	
Gasa	1.013	0.982	0.308	3.337	
Haa	1.591	0.396	0.543	4.661	
Lhuentse	0.371	0.341	0.048	2.870	
Monggar	1.003	0.996	0.244	4.123	
Paro	3.434	0.002	1.606	7.344	***
PemaGatshel	2.489	0.039	1.049	5.907	**
Punakha	0.563	0.607	0.063	5.022	
SamdrupJongkhar	1.018	0.966	0.449	2.305	
Samtse	2.090	0.188	0.696	6.271	
Sarpang	3.180	0.010	1.315	7.690	**
Trashigang	1.045	0.946	0.292	3.737	
TrashiYangtse	0.587	0.549	0.103	3.360	
Trongsa	3.502	0.069	0.907	13.521	*
Tsirang	2.003	0.324	0.503	7.980	
WangduePhodrang	2.547	0.168	0.674	9.622	
Zhemgang	0.867	0.822	0.248	3.024	
Constant	13.370	0.070	0.805	222.196	*

Note: Reference Group is in parenthesis. All variables are dummy unless specified.

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

unemployment status ($P < 0.05$), as shown in Table 3. Those who prefer civil service are 21 times at greater odds or more likely of being unemployed compared to those youths' who prefer employment in the private sector, keeping other variables constant. In addition, those who wish to get employed in other public/government organizations are 3.39 times more likely to remain unemployed than those who prefer private sector. Further, those who prefer agriculture are 99% less likely to remain unemployed.

The findings also show that youths who have acquired some form of skills training are negatively associated with unemployment ($P < 0.1$). This means that youths who have acquired some sort of formal or informal training is 45% less likely to be unemployed compared to those who have not acquired any training.

Empirical findings also show that youths who reported some form of disability are positively associated with unemployment ($P < 0.1$). This implies that being disabled by some form of impairment, one is 7.19 times at greater odds of being unemployed compared to those youths who are normal without any impairments.

Further, unemployment status of youths also varies significantly among the dzongkhag. In this regard, the odds of being unemployed for those who resides in Paro, Chhukha, Sarpang, Pema Gatshel and Trongsa Dzongkhags are 3.43, 3.24, 3.18, 2.48 and 3.50 times higher than those youths' who reside in Thimphu. In other words, those who reside in Paro, Chhukha, Sarpang, Pema Gatshel and Trongsa

are more likely to remain unemployed compared to those youths in Thimphu.

7.4 EMPIRICAL DISCUSSION

The variables that significantly explained the association with youth unemployment such as age, sex, skills, migration, disability, higher educational attainment, occupational preference and location of youth relative to which Dzongkhag the youths reside are discussed below.

7.4.1 Age

Youth unemployment significantly differs with age of the youth. The likelihood of being unemployed among the youth decreases by 21% with every additional increase in age, keeping other variables constant. This implies that youth are significantly at higher probability of remaining unemployed in comparison to the older cohort confirming the findings of Boateng (2013). Obviously, it's understandable that young people face a number of challenges relative to their older cohorts that expose them to the challenges of securing employment. In addition, it may also be attributed to the fact that younger youths lack the required skills or confidence to compete in the labour market. It could also be that the employers prefer to hire relatively older youths', particularly in the private sector and other organizations.

7.4.2 Gender

The female youth bearing a significantly higher brunt of remaining unemployed as compared to that of male youth

converges with the findings of Msigwa & Kipasha (2013) and Tenzin (2015). The finding reveals that a male youth is at a greater advantage of being employed, while female youth are greatly affected in the labour market, although the literacy rate for male and female youth varies only slightly¹⁴. Also, the labour force participation rate differs significantly between male and female, particularly among urban females. Maybe it could be because females leave labour force earlier than males after marriage, and they prefer to remain homemaker or helping out in their households' businesses. In this case, the increased maternity leave of six months from three months would have encouraged women working only in the civil service to remain in the labour force, because such privilege has not been extended to women working in the private sectors and the non-government organizations. Such policies to support women in the private or the non-government organizations offer the potential to boost preference for young female entrants in the labour market, and have also proven to be effective in encouraging women to remain in the labour force elsewhere.

7.4.3 Skills

The skills acquisitions being negatively associated with youth unemployment is in line with empirical findings reported by Tenzin (2015) and Tantipongkul & Wangmo (2017), particularly in context to Bhutan. Likewise, studies that have been conducted elsewhere also reported similar pattern. For instance, a study on how unemployment is tackled through skills

acquisitions by the National Directorate of Employment (NDE) in the Nigerian States found that a positive link exists between skills acquisitions and reduction in unemployment (Ekong & Ekong, 2016). The benefits of training in shaping youths' employability is also evidenced by Germany's success in maintaining low youth unemployment rates. According to Isengard (2003), one characteristic of Germany is the fact that unemployment rates do not fall steadily as the level of education increases, but rather depends on whether someone has a vocational qualification. Occupational skill for a specific vocation carries more weight than school education. A successfully completed apprenticeship seems to be an important selection criterion in the labour market.

7.4.4 Migration in search of employment

Migration status of young people is negatively associated with youth unemployment status. As a result, those who have migrated are 62% less likely to be unemployed compared to those who have not migrated, keeping the other variables constant. In other words, the finding tells us that youths have a higher chance of getting employment if he/she migrates to places where employment opportunities are abundant. However, it does not entail that all those who migrate will all be employed. Migration plays an important role when it comes to employment. People usually migrate to urban centres or places where jobs are available in search of work or better jobs. This tells us that most of the job or better job opportunities are highly skewed towards urban centres. Many rural youths come to urban centres in

14. As per PHCB 2017, male youth literacy is 93.3% compared to females with 92.9%

search of more decent employment, and thus, the challenge is to generate more jobs to accommodate educated youths, particularly female youth¹⁵. The effort in bridging the development gap between urban and rural areas has been improving over the years, but compared to increasing rural-urban migration in the country, much remains to be done in terms of balanced socio-economic development.

7.4.5 Educational attainment

The empirical result also shows that youth's unemployment status significantly differs with respect to his/her educational attainment. Those whose educational level is a bachelor's degree and above are 3.85 times more likely to remain unemployed compared to those whose educational level is higher secondary. Similarly, a youth with primary education is 73% less likely to be unemployed compared to those youths with a higher secondary education. This confirms the observation of Tenzin (2015) and Tantipongkul & Wangmo (2017) who also found the effect of higher educational attainment significantly associated with youth unemployment in Bhutan. In contrast, the context of educational attainment in the international arena, particularly in the developed economies appears to be opposite. For example, Isengard, (2003) elucidated that the level of education contributes significantly towards the individual's prospect of finding an employment. The study pointed out that as the level of education rises, the probability of unemployment decreases. The attainment of a vocational qualification, in addition

to school education, also play a significant role. The higher unemployment problems skewed towards the more educated youth population in our context clearly indicates the mismatch between the education and skills in relation to the changing market requirements. While Bhutan has achieved tremendous progress in education in terms of improving the general literacy rate and net school enrolment rate, our education policy, specifically, the tertiary education requires serious re-thinking. Studies have indicated that education in Bhutan is highly oriented to core academic knowledge at the higher level and builds human capital without taking into account the broad pattern of jobs and demand in the economy for educated human resource. Given these circumstances, young people who enter the labour market despite having a university qualification also have deficiencies such as work ethics, unrealistic career/job expectations, interpersonal skills, reliability, creativity and commitment. Our education system encourages lots of memorization to go to the higher grades and hardly tests for logical and analytical thinking, creativity and imagination (Rabten, 2014).

7.4.6 Preference for civil service

The empirical finding also shows that youth's occupational preference varies significantly with his/her unemployment status. Those who prefer civil service are 21 times at greater odds or more likely of being unemployed compared to those youths who prefer employment in the private sector, keeping other variables constant. In addition, those who wish to get employed in other public/government organizations are 3.39 times more likely to

15. Rural-Urban Migration and Urbanization in Bhutan, 2020, National Statistics Bureau

remain unemployed than those who prefer private sector. Further, those who prefer agriculture are 99% less likely to remain unemployed. Civil service continues to remain the most preferred employment choice over other enterprises for the majority of the youth¹⁶ in Bhutan. However, the reality is that not each and every aspiring youth can find their employment in the civil service. Generally, the youth may prefer government job over private job because of better job security in the government. Although the role of private sector has improved in recent years, but compared to the increasing inflow of educated youth, there has not been much that private sectors could do in terms of generating employment opportunities that attracts educated youth. Even the government has remained behind in employment creation in relation to increased supply of educated youth in the labour market every year. Similarly, in the context of Royal Civil Service Commission's (RCSC) policy of maintaining 'Small, Compact and Efficient Civil Service', only a small proportion of youth among thousands can actually make it into the civil service system. The RCSC's current university graduate recruitment practice indicates that only 20-21% of the total graduate supply (as of 2019) could get civil service jobs. This window of opportunity is expected to reduce even further in the coming years due to increased supply of university graduates as a result of the recent policy implementation of raising the basic minimum education level from 10th to 12th standard.

7.4.7 Disability

Although the disability variable is not statistically significant with unemployment at 95% confidence level ($P < 0.05$), it is significant at the 90% confidence level ($P < 0.1$). This suggests that there are large number of youths with some form of disability in the labour force. Studies have shown that persons with impairments face significant problem as it relates to difficulties in entering productive life in terms of having difficulties in competing with the non-impaired counterparts. While physical or intellectual impairments may limit their job options, in most cases, social prejudice makes employers unwilling to hire persons with disability (Groce & Kett, 2014). Recognizing the importance of inclusive development, the Royal Government of Bhutan has already taken initiatives to promote inclusive development as evidenced by the endorsement of the National Policy for Persons with Disabilities, 2019. The policy specifically obligates the government to design and provide incentives/rebates for all individuals and business entities employing persons with disabilities.

7.4.8 Location of residence

Unemployment status of youth also varies significantly among the Dzongkhags. This implies that the individual risk of unemployment also depends on the Dzongkhag that young people reside. It should be noted that youths living in Paro, Chhukha, Sarpang, Pema Gatshel and Trongsa Dzongkhag are more severely affected by unemployment than their contemporaries in rest of the Dzongkhags.

16. Labour Force Survey 2018 and Labour Force Survey 2019.

While there could be numerous factors contributing to the higher unemployment rates in certain Dzongkhags, one may largely attribute this to youths migrating from one Dzongkhag to another in search of job. This has significant impact on the work availability for the youth job seekers. The current situation suggests that most of the employment opportunities have been available in Thimphu, the capital city. The findings of the study suggest that youth residing in Thimphu are less likely to be unemployed. For example, youth in other Dzongkhags such as Paro, Sarpang, and Chhukha have a higher chance of being unemployed than those youth in Thimphu. This suggests regional disparities in availability of employment opportunities.

8. CONCLUSION AND POLICY RECOMMENDATIONS

The purpose of this study was to examine the determinants of youth unemployment in Bhutan, and suggest way forward towards reduction of the problem. The study used a binary logistic regression model to analyse the factors of youth unemployment in Bhutan. The dependent variable of the study was youth employment status, which was categorized into dichotomous variables viz. employed and unemployed. The study sourced the data from the latest Labour Force Survey (LFS) of 2019 conducted by the National Statistics Bureau. The findings from the study concluded that age, gender, skills, migration, disability, educational attainment, sector preference, and youths' location in relation to the Dzongkhag he/she resides are all significant factors in explaining the difference in youth unemployment in Bhutan.

The finding of the study shows that gender is a significant determinant of youth unemployment implying male youth stand a high chance of being employed over being unemployed as compared to the female youth. This result reflects the general observation of many countries wherein women and girls have inferior labour market chances as compared to men and boys. Due to socially recognized labour alternatives, unemployment seems more reasonable for women, although women today increasingly achieve educational qualifications equivalent to those of men but are still disadvantaged in the job market.

Youths who have acquired some sort of formal or informal training is 45% less likely to be unemployed compared to those who have not acquired any training. This suggests that training has a significant impact on the employability of the youth, which converges with global pattern. However, youth's higher educational attainment not translating to higher probability of finding employment is a worrying indicator. This reflects the mismatch between the education and skills in relation to the changing market requirements.

The empirical finding also shows that youth's occupational preference varies significantly with unemployment status. Those youths who prefer civil service are at 21 times more likely to be unemployed compared to those youths who prefer employment in the private sector. Youths' overwhelming preference of civil service job clearly reflects the imbalance of the labour market in terms of its ability to create decent employment opportunities in the private sector. Therefore, unless the

government comes up with appropriate policy measures to foster private sector development, the cycle of youths preferring civil service job will continue and, in the process, youth unemployment rates in the country will only escalate.

The study shows that a significant number of youths' employment status is determined by migration. Over 62% of the youth who migrate are likely to find employment compared to those who do not migrate. Most of the studies elsewhere have also concluded that people move from one place to another, particularly from rural to urban areas in search of better employment opportunities and livelihood. Similarly, the disparity in unemployment rates among the Dzongkhags, particularly the youths residing in Thimphu, Paro, Chukha and Sarpang may be the implications brought about by migration. Therefore, while efforts in bridging the development gap between urban and rural areas has been improving over the years, but compared to increasing rural-urban migration in the country, much still remains to be done in terms of balanced socio-economic development.

The recent corona virus (COVID-19) pandemic has had tremendous impact globally in terms of employment. According to the preliminary estimate of ILO (2020) on the wake of the current global COVID-19 pandemic indicates an additional 13 million people in the world will suffer from unemployment. Similarly, for example, during the global economic crisis in 2008-2010, the number of unemployed youths increased from 73.5

million in 2007 to 77.7 million in 2010¹⁷. Such global crisis or pandemic have an unprecedented impact on Bhutan's labour market, which will exert increased pressure for employment generation. The youth unemployment rate will increase by manifolds.

Recommendations

Bhutan has achieved reasonably high economic growth in the last decade bringing significant improvements in various socio-economic dimensions like education, health, poverty, longevity, income and so forth. However, a closer examination of Bhutan's labour market reveals areas of serious concern. Vast majority of the national labour force including youth are still engaged in low productivity agricultural and low earning jobs in rural areas, rural to urban migration mainly triggered by employment search, limited employment opportunities outside civil service (particularly in the private sector) to absorb the growing number of educated workforce which are some of the serious issues that needs not only policy attention but those policies translated into actions. Recognizing these problems, the government should ensure that everyone has access to productive and decent employment. The following recommendations may be considered to help reduce the youth unemployment issue in the country.

1. Reorienting education to the world of work and changing times

With our success in education programme, there has been an increase in the number

¹⁷ ILO, 2011

of university graduates entering into the labour market every year. The growth in employment opportunities on the other hand has been limited and not in pace with the growth of new entrants into the labour market. In order to better prepare our youth and improve their prospects of employment, the current tertiary education courses need to be re-evaluated and assessed at various levels. While the primary goal of education is to provide, and enhance knowledge, it may perhaps be practical to also ensure classroom learnings to be relevant to the world of work. The skills demand in the labour market should be assessed and imparted in the institutions and colleges and their curriculum should be reviewed and changed based on the labour market needs on a periodic basis.

2. Promote private sector development as an engine of growth and enable its capacity to generate employment opportunities

The significant proportion of youth with university degrees (bachelor's degree) remaining unemployed and their overwhelming preference for civil service job clearly suggest the lack of employment opportunities available outside the civil service. It is reported that university graduates prolong their entry into the workforce even to the extent of 2-3 years to attempt Bhutan Civil Service Examinations (BCSE) thus contributing to high youth unemployment rate in the process. Therefore, it is crucial to promote private sector development and make the employment in the private sector attractive for job seekers, ensuring job security mechanisms and other fringe benefits.

3. Increase investment in agriculture to increase productivity and create decent employment opportunities

In terms of employment provision, agriculture continues to remain the largest sector employing over 51% of the total labour force. Agriculture also has the overarching mandate of fulfilling the national food security aspiration. But the reality has been that the sector recorded the least growth over the last decade and worryingly remains the least preferred job, particularly by the new labour market entrants. The share of budget for agriculture sector since the 7th Five Year Plan (FYP) shows a decreasing trend until 11th FYP from 16% to just 6.4%. However, it has increased to 11% in the 12th FYP. While increasing agriculture productivity faces some challenges given our rugged land topography, continued efforts should be put in place to create an enabling environment to derive the best results out of the available resource. Hence, investment in agriculture should be increased substantially to encourage mechanization and commercial farming through access to affordable financing and leasing of viable government land, which will increase growth and productivity of the sector and thereby create more employment opportunities in the process.

4. Promote balanced regional development

The findings from the study also suggest disparities in the labour market among the Dzongkhag. Dzongkhags like Thimphu, Paro, Chhukha and Sarpang have consistently reported high unemployment rates over the years. This is due to the

higher number of unemployed youths migrating from other Dzongkhags seeking employment opportunities. Towards this, the government should therefore implement measures to reduce the pressure of high unemployment rate by enhancing more employment opportunities in Dzongkhags outside Thimphu, Paro and Chhukha. This can be done by promoting and developing growth centres with good infrastructure such as industrial estates and economic zones wherein individuals/entrepreneurs can pursue economic activity without bottlenecks. It would also help in decongestion of some of the existing towns.

5. Create and promote employment opportunities conducive for female job seekers

One of the study findings also indicated that female youths are at a significantly higher probability of remaining unemployed over their male counterpart. The analysis reveals that most of the female youths are engaged in agricultural farming and low paying jobs. Further, female youths are mostly employed as unpaid family workers. Therefore, the government should implement policies to encourage industries such as those in tourism and hospitality sector to come up with women friendly occupations in order to scale up the availability of employment for women in general and female youths in particular. Those policy packages should include the provision of skill-based training for self-employment through access to affordable financing.

6. Provide skills development through specific training programs including re-skilling and up-skilling opportunities depending on the labour market dynamics

The prospects of being employed increases significantly based on the skills the youths possess as per the study. The current vocational training programs are biased to only construction sector and the preference for youth in taking up jobs in the sector is low in their priority. There is a need to provide more diversified vocational training based on the skills demand and this should be supported by creating conducive working environment.

7. Design and provide appropriate incentives to encourage agencies both in the public and private sectors in creating a conducive work environment and accessible facilities for persons with disabilities

The study revealed that impaired youths are more likely to be unemployed. To address this issue, there is a need for the government to formulate employment strategies for the disabled and implement the National Policy for Persons with Disabilities 2019.

9. LIMITATIONS OF THE STUDY

Finally, the present study has several potential limitations that should be considered. Although the LFS 2019 data is representative at the national level, not all the variables that would be important in explaining youth unemployment are available. Thus, owing to data limitation,

this research considered only nine variables that would determine youth unemployment in Bhutan, namely, age, sex, area, skills, migration, disability, educational attainment, job preference, and Dzongkhag. However, although it is difficult to exactly pin down, it is important to know that there are numerous other factors affecting youth unemployment. Some variables such as household asset, reasons for preferring sector of employment, skills mismatch, duration of unemployment, and the structure of education system could be explored. The variable on 'field of study' was tried to fit in the logistic regression model, but excluded

as the variable correlated with other variables, particularly with the 'highest education level'. Further, the 'region' was also excluded because it strongly correlated with the variable 'Dzongkhag'. Also, 'marital status' showed high correlation with other variables in the model. Thus, the need for additional variables present an impetus for more comprehensive research to further elaborate on the issue and also streamline the findings. Apart from looking at quantitative analysis, qualitative analysis may be necessary to investigate the 'why aspect' of youth unemployment issue in Bhutan.

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