

YOUNG MIND

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Foreword

I am very pleased that finally the students' journal 'Young Mind' has taken off and its first issue is ready. Rational Expectations Economics Society has created yet another milestone by taking a lead to publish academic journal. 'Young Mind' intends to provide a space to research work undertaken by economics students during the course of their graduation at RTC. It aims to communicate the research findings of the students to a wider audience and foster meaningful academic discourse on the works of students.

Through this journal, we want to promote the spirit of academic inquiry among our students so that they actively participate in the process of knowledge creation. It is important that students understand that research is a scientific process and it requires sound theoretical knowledge and extensive referencing. It is important that a research work is subjected to critical review by experts and this can happen only when the work is communicated to a wider audience. "Young Mind" aims to provide this platform for budding researchers in the Department of Economics at RTC.

At this moment, we have made a humble beginning. There are eleven articles in the first volume of this journal. These articles cover a broad spectrum of socio economic development issues which are contributed by students from all the years of undergraduate study. We are definitely not satisfied with this and aim for higher achievements. In future, we target to get a wider acceptance for our journal and have a wider hinterland of contributors. In very near future, we also aim to move towards getting the articles reviewed by a panel of experts so that only high quality research papers get published. I wish that 'Young Mind' becomes an important resource for policy makers in coming decades.

A journal needs commitment from its editorial board as well as from the contributors. Without strong commitment and conviction from the members of the editorial board, we would not have been able to start this journal. I thank this team for turning a dream into reality. My special thanks also goes to the authors of research papers. I am aware that sending articles for public scrutiny requires self-assurance about the quality and our students have shown this courage. It is by no mean a small feat. It would definitely encourage others to come forward and contribute articles. Let us become harbingers of knowledge creation.

Sanjeev Mehta
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Need Assessment for Micro-Finance Institution (MFI) in Tshaphu Village, Thimphu

Kuenzang Dorji, Dawa Penjor, Vanbiet nguyen, Kinley Tandin, April 2015

Abstract

In Bhutan, as of now, the knowledge of micro-financing opportunities is a new concept to the farmers living in rural areas. This research paper is an attempt to find whether there is a need for micro-finance institutions, especially in the rural areas where development has mostly been stunted. This study is mainly based on primary data. Survey was undertaken in Tshaphu, a rural area on the outskirts of Thimphu. We applied convenient sampling method. According to the survey, there is a lack of overall knowledge about MFIs as well limited outreach of financial institution. Many of samples were old of age persons, with an average age of 56, and they lacked any sort of formal education experience. Almost all of the respondents were agrarian workers, with a few who engaged in manufacturing in the form of handicrafts. Many of the participants purveyed some need for financial assistance. Despite the lack of any formal financial institutions, we did find that many of our respondents claimed at least some level of indebtedness. An important area for improvement for us is to reformat the questions so that they would be much more appropriate for the target audience which were those who were largely uneducated lacking any sort of formal education experience and old of age. Other than a few shortcomings, our data shows that there is a need for micro finance institutions. They are not aware of the presence of these institutions, but they have a need for financial assistance.

Introduction

Microfinance institution is a financial institution that targets low income groups in providing financial services that would lift them out of poverty. Wrenn (2005) defines microfinance as “the provision of financial services to low-income poor and very poor self-employed people”.

Microfinance Institutions are uniquely different from other financial institutions in that they target the underprivileged population. Based on many research findings, there is no correlation with success in business and socio-economic status. Therefore, microfinance institutions have been finding large success in developing regions whose farmers are illiterate and are unable to access other forms of financial services. MFIs not only aim to provide financial services, but target a

certain demographic, namely, the poor and underprivileged in an effort to reduce poverty and empower women.

Microfinance Institutions (MFI) are increasingly becoming popular in developing countries. In Bhutan, the concept, however, is a burgeoning one. Despite giving immense benefits for farmers who are not able to acquire traditional forms of financial services, the MFI still remains unknown to the farmers in Bhutan. This is because farmers, especially in Bhutan, are severely isolated from the information of the rest of the world. While MFIs are popular in the rest of the developing countries of the world, there are no real organizations that support rural farmers through any initiatives and development in Bhutan. Our research, however, focuses on the need assessment of MFIs in Bhutan. The need assessment is derived from a survey purely based upon primary data.

The survey is done in Tshaphu village. Tshaphu village is in the outskirts of Thimphu town. It is located south of Thimphu in Kharsa Drapchhu Gewog. Tshaphu has around 50 households. They are mainly dependent on agriculture for their livelihood. The average income of Tshaphu village is around Nu 5900.

Methodology

Our research focuses on the need assessment of the MFIs of the farmers and also looks at the behavior of the farmers in terms of their borrowing. Based on convenient sampling of 17 respondents who were farmers, the data was collected from Tshaphu village. The data is analyzed with the use of Microsoft Excel and the software SPSS 22.

Discussions; Results and Findings

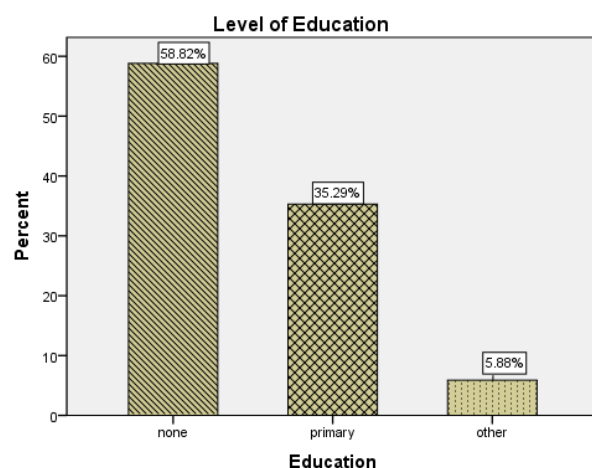


Figure 1: Level of Education

The above graph shows the level of education of the respondents. It was seen that approximately 60% of the respondents had no education. They are illiterate. 35% however has at least primary education. Nonetheless they didn't had any further education. 5% has monastic education or are either lay monk who knows Buddhist scriptures. The respondents attribute the low level of education to lack of schooling facilities and the importance of agriculture. They never had schools in their village where they could go and attend classes. They were considered as the source of income since they have to work in the fields. The more children the family has in their fields, the wealthier the family is. This has prevented the children from going to the schools at their time. The respondents said that their parents would literally requests the officials from Ministry of Education to not take them for schools. They are all left back home to work in fields. This was 30 years ago.

The concept however has totally changed according to the respondents. They now send their children to schools nearby. They said they even borrow to send their children to study to different regions.

Table 1: Descriptive statistics for monthly household income

	N	Range	Minimum	Maximum	Sum	Mean		Std. Deviation	Variance
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Statistic
Monthly income	17	11000	4000	15000	100500	5911.76	679.58	2801.98	7851102.94
Valid N (listwise)	17								

The average income of the respondents is Nu 5911 per month. The minimum income they earn is Nu 4000 a month. There are respondents who earn the maximum income of Nu 1500 per month. Most of the respondents are however low income earners.

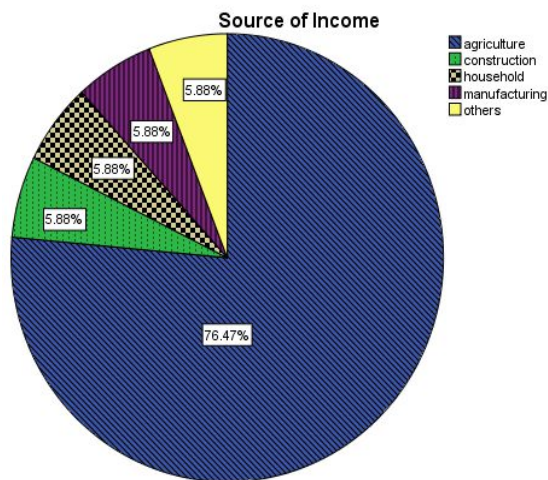


Figure 2: Source of Income for the Households

The respondents are mostly dependent on the agriculture. According to the survey, 76% of the income is generated from the agriculture. Almost all the respondents depend on agriculture for their livelihood. Most of them however has apple orchard which help them generate income. They also earn income from construction (5.8%), manufacturing (5.8%), and through household works (5.8%) like weaving. The rest comes from remittances sent by the family members working away from the village.

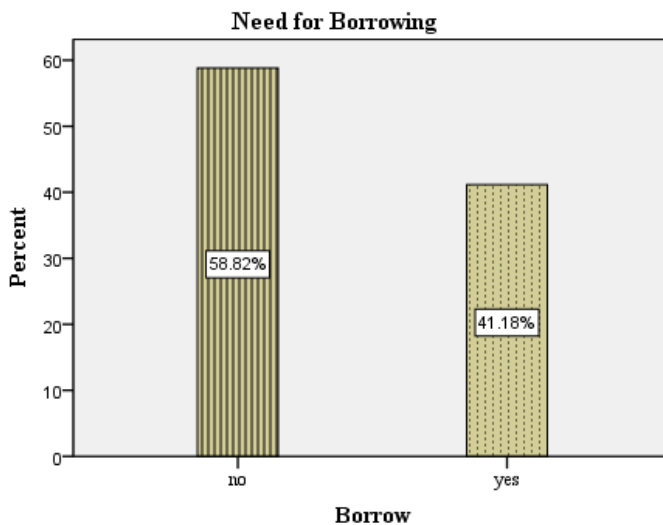


Figure 3: Need for Borrowings

The low level of income forces them to borrow. As shown in the graph above, 41% of the respondents borrow more than 3 times every year. The 58.8% however said that they do not need

frequent borrowings. They however said that they will borrow if any emergency arises. This is because the respondents do not have any saving accounts. All their income is consumed. They hardly save.

It is learned from the respondents that none of them borrow to invest or to insure themselves or the property. This is another reason they have to borrow. If they invest or insure, they would not have to borrow. This is because investments would generate additional income that would supplement what they earn. The insurance would take care of any uncertainties.

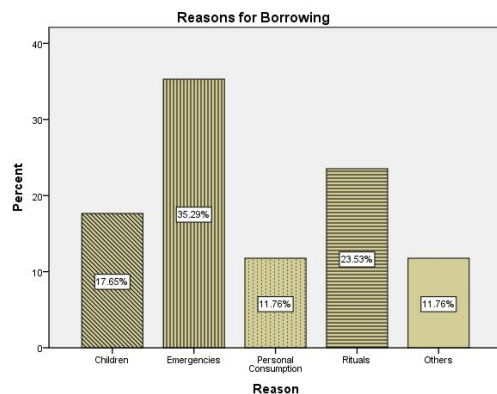


Figure 4: Reasons for borrowings

Most of the respondents borrow during the times of emergency. According to the above graph 35.2% of the respondents borrow during the times of emergencies. That is when any of the family members falls sick or die or during any problems and misfortunes. This is because they do not have any savings that can help them during emergencies. 23% of the borrowings is for the rituals. The Buddhists believe that performing rituals every year would please their deity who would then bless with good health and harvest. A ritual is performed every year in every household. The respondents then borrow for their children (17.6%). This happens mostly during the beginning of the school. The farmers borrow to finance their school going children since they won't have cash at that time. They repay during the harvest or whenever they get their income. They also borrow for personal consumption (11.7%). That is when they don't have any income, they borrow to buy the food grains. 11.7% is borrowed for other purposes.

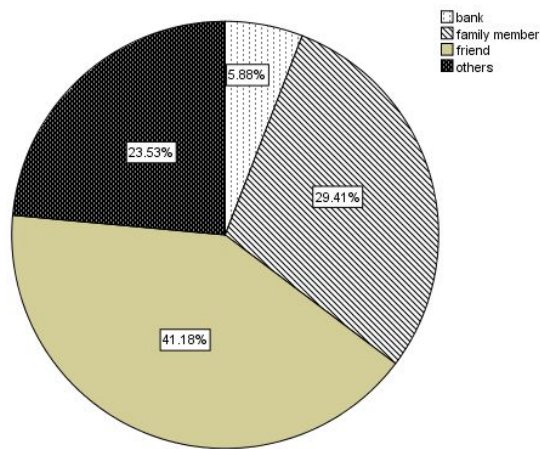


Figure 5: Source of Borrowings

According to the survey, 41.18% of the money is borrowed from their friends. Friends makes the highest source of borrowings. Banks contribute about 5.8% of the borrowings. According to the respondents, the main reason is the inconveniences in borrowing from the banks. The first reason is they have to come all the way toward town leaving behind their works. When they reach the town, they have to depend on someone who will fill up the forms and help them get the loan. This usually is very hard for them since they don't get easy help. Then the collateral acts as another hindrance. The respondents said that they literally have to mortgage their land just to acquire small amount of loan. This is riskier for them since they are not certain if they will be able to pay back the loan on time.

Then the greatest challenge for the respondents is repayment of the loan. This will depend entirely on their harvest. If their crop are harvested well, then they get to pay the loan on time. But many times, the crops are either damaged by heavy rain or wild animals which makes them borrow from another to repay the debt thus accumulating more debt or are not able to repay.

They thus prefer to borrow from friends even if it means higher interest rates. The respondents also borrow from their families (29.4%) or from other sources (23.5). the main reason for borrowing from friends, families and others is to avoid inconveniences in getting loan, avoiding collateral and timely repayment. The respondents said they don't have to go through any formalities in borrowing from their friends and families. The risk is very low despite the high interest rates.

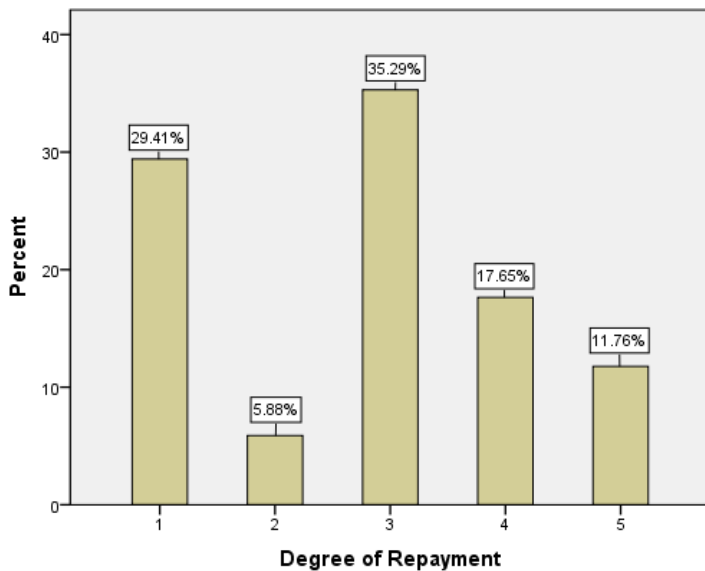


Figure 6: Degree of Repayment

The respondents fear borrowing mainly due to repayment. The above graph shows the degree at which the respondents are able to pay back their borrowings, 1 being the least and 5 being the most. According to the graph, only 11.7% of the respondents are able to pay back the loan on time. 29.4% are not able to pay back the whole money. Many of them however are either not able to pay back their money or are not able to repay on time. This way they keep on piling up their debt. The respondents borrow every year and are not able to pay back the loan.

The respondents says the reason is due to poor harvest or the uncertainty of harvest of their crops. They said that they are able to pay back their borrowing on time if they have good harvest and are not able to repay during bad harvests. The repayment of the borrowed money entirely depends on the harvest of the crops.

Another reason is due to lack of collateral. Most of the respondents borrow from their friends and families which put them at lesser risk. They don't worry much to repay for which repayment are done the next year. The debt then accumulates which translates into increase in debt burden.

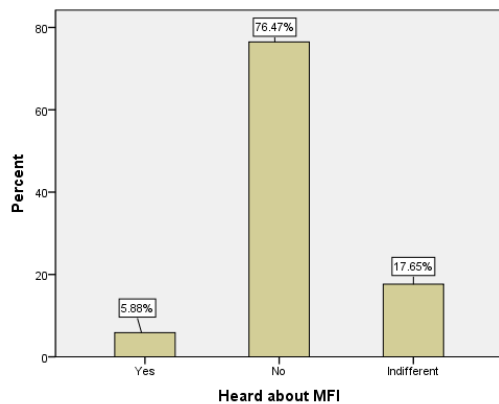


Figure 7: Knowledge on MFIs

When the respondents are asked on Micro Finance Institutions, 76.4% responded with having no idea. 17.8% are indifferent. They didn't know what we asked. 5.8% however have heard about the MFIs either from friends or through different organizations. They don't exactly know what it is but knows that it is similar to cooperatives but deals with financial services.

Despite having immense benefits for farmers who are not able to acquire traditional forms of financial services, the MFI still remains unknown to the farmers in Bhutan. This is because farmers, especially in Bhutan, are severely isolated from the information of the rest of the world. The illiteracy bars them from having access to such information. While MFIs are popular in the rest of the developing countries of the world, there are no real organizations that support rural farmers through any initiatives and development in Bhutan.

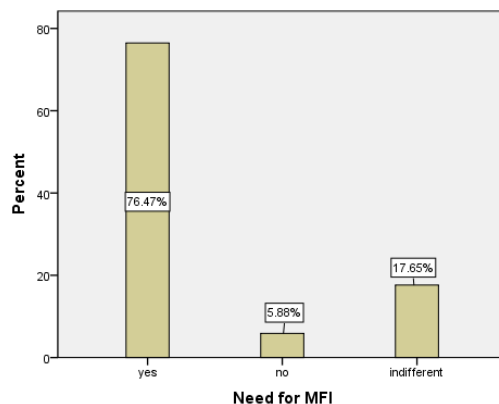


Figure 8: Need of MFI

Despite the limited knowledge on MFIs, 76% of the respondents said they would welcome such an institution in their village. This shows the very high demand for the institution. Microfinance Institutions are uniquely different from other financial institutions as they target the rural

population where the farmers do not have access to proper financial services. According to Aghion and Morduch (2005), microfinance institutions have been finding large success in developing regions whose farmers are illiterate and are unable to access other forms of financial services. MFIs not only aim to provide financial services, but target a certain demographic, namely, the poor and underprivileged in an effort to reduce poverty and empower women.

The respondents would welcome the MFIs if it ever comes to their village because it would not only serve their borrowing purposes but also other financial services. MFIs would help in enhancing productivity of the agriculture as it would focus more on investments. The institution would also help empower women in their village and enhance their productivity.

There is thus need for microfinance institution in that village. 76% of the respondents demanded the need of microfinance institution in their village. Despite no knowledge, the respondents are desperate to have the microfinance institution in their village. The survey clearly shows how the respondents are in need for financial assistance. The microfinance would not only serve their borrowing purpose but also help acquire other financial services like deposits and insurance.

Table 2: Indebtedness of the Farmers

Level of Debt (Nu)	Assets (Acre)
35000	0.9
0	1.4
0	0.99
0	15
0	0.5
40,000	4
25000	2
5000	1
13000	1
0	0.65
40,000	3
30,000	4
0	0.4
0	0.8
0	0.9
0	1
0	0.4

Many respondents are migrants from different places. According to the respondents, they were given a land *kidu* by His Majesty the 4th king. They therefore own less lands. Those respondents who have higher borrowings are those that have larger land holdings. According to the table, the level of debt shows that some of the respondents have higher debt but it is not a major issue since they own larger amount of land. They however need to enhance their productivity to be able to repay back the debt. Most of the debt however had already crossed the repayment time and the respondents are skeptical that they will be able to pay back during this year's harvest. The borrowing are mainly for consumption purpose rather than for investments. This puts them at higher risk of repayment.

Conclusion

In conclusion, most of the people in the area of Tshaphu that we have surveyed would like to have access to micro-finance institutions. Due to the lack of formal education and lack of asset holdings, people in this region cannot access banks, loans or other types of financial assistance in Bhutan due to the absence of a sufficient amount of collateral or knowledge on the processes of finance. Furthermore, the geographic location acts as a natural preventative for any real form of financial development. At the present moment, the rural areas are not at all conducive to the development of agrarian businesses or improvements in living conditions of those living there. The government however is focusing on alleviating poverty that would also find a way in establishing MFIs in future which would help long term strategies to alleviate poverty. While the rest of Bhutan is developing and modernizing at a quick pace, the rural areas are left behind due to these restrictions and barriers. The addition of microfinance institutions in these specific regions would prove to be vital for equitable development and improvement of the living conditions of people living there.

The research is based on primary data which we have collected from Tshakha village. Tshakha village is a resettlement village which was formed under His Majesty the 4th King. Therefore it doesn't clearly provide the rural characteristics of Bhutan. The best ways to get the most accurate behavior and perception would be to survey the authentic rural Bhutan. This would provide the needs of rural Bhutan. Moreover the village is located in Thimphu which is capital city of Bhutan. The results would have been better if the survey is conducted in one of the rural village in other parts of the country.

Acknowledgement

We would like to thank Sir Sanjeev Mehta for giving us this research. This research work has provided us with immense ideas on how to do research. It has also provided us with insight on the rural livelihood and different issues our farmers face. Then we would like to thank the college for facilitating us with transport. We would also like to thank our classmates (ECO&EVS Class of 2012) for helping us with our survey.

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Socio-Economic Determinants of Fertility in Thimphu, Bhutan: A Linear Regression Model

Wangchuk, Enrolment Number 101323, Final Year

Abstract

A study was conducted in Thimphu city to examine the impact of socioeconomic determinants of fertility viz. income level; education level; age at marriage and age of the respondents on deciding a number of children by married couple. A linear regression model was used to study the functional relationship with the dependent variable; the number of children a family would have in Thimphu city. Today, as majority of the spouses go to work, it has become inevitable to find someone to look after the baby. The issue got exacerbated due to family system being changed from extended family to nuclear family, unlike in extended family where grandparents would look after the baby. Thus, impact of availability of baby sitter on the dependent variable was also examined.

The regression analysis exhibited that only the age at marriage and age of the respondents had significance at 95% confidence level. Although 64.4% of the respondents agreed that they cannot go for two or more children due to lack of baby sitter, it did not have statistical significance to predict the dependent variable.

Various fertility indicators were studied in the country; however, there is lack of literature on the determinants of fertility level in the country. This study establishes the feasibility of conducting such study and attempts to provide a baseline for future studies to help evaluate the impact of various socioeconomic determinants of fertility in Bhutan.

Key words: Fertility; Fertility Determinants; Socioeconomic; Linear Regression; Bhutan.

Introduction

The natural increase was the main cause in the past to have caused increase in population; however, the factors got complex in the contemporary period as several other factors influenced population either explicitly or implicitly. Education of the parents allied with increasing cost of raising children influenced fertility to a great extent. Moreover, with rapid development in Bhutan, children as an additional labour input in the farm is disregarded.

Nuclear family began to emerge in urban areas such as Thimphu and with it, the class of both the spouses working began. Therefore, there was the demand for baby sitter being created to look after the children in absence of grandparents in extended family who take care of the children. Moreover, with increasing living standard in Thimphu allied with frequent occurrence of inflation; people could not simply afford more number of children.

Education level and female labour force participation has definite implicit impact on the number of children born by women. According to Karakaya, (n.d), adult literacy rate, female work participation and proportion of people living in urban areas had significant statistical impact on the determination of fertility rate in the provinces of Turkey. As the spouses are literate and become aware, the taste for children become different as per the Backer's model of economic theory of fertility. Thus, various method of family planning are adopted to control the children.

Total Fertility Rate have been constantly declining in Bhutan since 1991 from that of 6.1 to 3.6 in 2005. The decline was ascribed partly to increasing number of girls' enrollment in schools and their work participation rate (Gross National Happiness Commission, 2010). With the introduction of parliamentary democracy in 2008, girls' enrollment in schools have significantly increased with every party pledging to achieve universal primary education through different strategies. According to MDG Report, Bhutan has already achieved gross enrollment ratio which is 117% and Net Primary Enrollment Ratio being 93.10% as of 2010.

Till 2010, there were substantial number of illegal workers particularly from neighboring states of India working as baby sitters in urban areas such as Thimphu. According to APFANEWS (n.d), a total of 130 people were arrested in 2010 for illegally working as housemaids and baby sitters in the western Districts including Thimphu. Therefore, such stringent implementation of rules, working spouses were finding difficult to manage households and thus influenced the number of children they would have.

Purpose of the Study

The objective of the study is to investigate whether number of children (NC) in Thimphu is determined by the following independent variables;

- i. The combined income level (IL) of both the spouses have effect on the number of children.
- ii. Highest education level (EL) achieved by either of the spouse has impact of the number of children they have.

- iii. The age of the responded (AR) can predict the number of children.
- iv. The age at marriage (AM) has impact on the number of children.
- v. The availability of baby sitter (BS) has impact on number of children.

Methodology

The target population under study was the married population in Thimphu within the reproductive age range for women and there was no age restriction for husband. According to Population and Housing Census of Bhutan 2005 (2006), there were 28,590 married population considering women only within reproductive period. However, as only one questionnaire is administered to either of the spouses, the target population becomes half of that which is 14,295 assuming there is no change in married population. All the proximate determinants as stated by Bongaarts, 1978 (as cited in Bhende & Kanitkar, 2010), could not be used to determine family size due to the scope of the study. However, the reproductive span is found out through the AM albeit in women it begins from onset of menarche and ends at menopause.

The income of the spouses was combined together in a household and log of the income was used in the model to linearize the huge variations in income gap. A multiple linear regression method is used to find the functional relationships between the dependent variable, number of children and the independent variables of socioeconomic determinants. The model will test the null hypothesis: $H_0: \beta_1 = \beta_2 = \beta_3 = \beta_n = 0$ and an alternative hypothesis: H_a : at least one $\beta_i \neq 0$ at 0.05 significance level. Thus, H_a will test at least one of independent variables viz. IL; EL; AR; AM and BS is not equal to zero. The functional relationship of model is as follows:

$$NC = \beta_0 + \beta_1 IL + \beta_2 EL + \beta_3 AR + \beta_4 AM + \beta_5 BS + \epsilon$$

Results and Discussions

The ANOVA analysis of the model suggest that the model is fit (Refer Table 1) and thus can be used to test the individual independent variables. However, when individual variables were tested, only the AR and AM were found to be significant at 0.05 significance level and the rest were insignificant (as shown in Table 2). There is no existence of multicollinearity between the independent variables as variance inflation factor (VIF) is less than 10 and the tolerance is greater than 0.10 (as shown in Table 3). Therefore, the model for prediction of number of children is as follows:

$$NC = 0.21 - 0.117AM + 0.159AR + \varepsilon$$

According to Karakaya, (n.d), the GDP (income level) did not have predicting power in total fertility rate in the provinces of Turkey where 81 sample size were studied. Although IL has impact on the family size, the sample undertaken in the study exhibit that statistically, it do not have predicting capacity even at 90% confidence interval. One of the possible reason for insignificance of IL could be due to the very small sample size under taken. The Person's correlation analysis also exhibited a very weak positive correlation between the income level and the number of children (Refer Table 4). Although 64.4 % (33.3% agree and 31.1% strongly agree) agreed to the statement that they cannot go for two or more children because of lack of baby sitter (Refer figure 1), BS did not also had capacity to statistically predict the NC.

Similarly higher education level responded more strongly to the statement. For instance, 33.3% of those who completed either Master or Phd. strongly agreed to the statement while only 14.3% of without any education strongly agreed to the statement (Refer Table 5). This is possibly due to both the spouses working and thus greatly in need of baby sitter. The result is further reinforced by those with professional level agreeing to the statement more than those of elementary level. For instance, 36.4% of professional level strongly agreed to the statement while only 20% of the elementary worker agreed to the same (Refer Table 6).

Conclusion

This study examined the socio-economic factors impacting the NC a family will have in Thimphu city. The AR and AM are only the variables under study capable of predicting the number of children. The AR exhibited positive relationship with the NC while that of AM negative with other variables including those beyond the scope of this study remaining *ceteris paribus*.

With the rising class of nuclear family in which both the spouses are working, there is need created for housemaid to look after the baby and manage the household chores. The inadequate supply of such worker played a role in determining family size as majority of the respondents agreed to the statement albeit statistical insignificance.

Further study is recommended to study the fertility with reasonable sample size. The study of fertility differentials particularly between the urban and rural areas would better aid in understanding the determinants of fertility. Although there is no sex preference of child in Bhutan, however, parents prefer to have children of both sexes. Therefore, parents having children of same

sex in the second birth order go for third child hoping that the child born will be of their desired sex. A demographer may be oblivious of such situation, but it plays a vital role in determining fertility at least in Bhutan. It would be interesting that future fertility study would take up such issues.

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Table 1: ANOVA Analysis of the Model

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	37.974	5	7.595	13.379	.000 ^b
Residual	21.003	37	.568		
Total	58.977	42			

a. Dependent Variable: NC

b. Predictors: (Constant), BS, EL, Age, IL, AM

Table 2: Linear Multiple Regression results: Coefficients

Model	Unstandardized Coefficients		t	Sig.
	B	Std. Error		
(Constant)	.201	2.135	.094	.926
AM	-.129	.050	-2.587	.014
EL	.037	.036	1.039	.305
IL	-.040	.592	-.068	.946
AR	.159	.021	7.629	.000
BS	-.155	.106	-1.466	.151

Table 3: Test of Collinearity Statistics between the Predictors

Model	Collinearity Statistics	
	Tolerance	VIF
AM	.376	2.663
EL	.337	2.969
IL	.415	2.409
AR	.701	1.426
BS	.908	1.101

Table 4: Pearson's Bivariate Correlations between the Variables

	NC	IL
AM	.055	.624**
AR	.755**	.171
IL	.002	

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

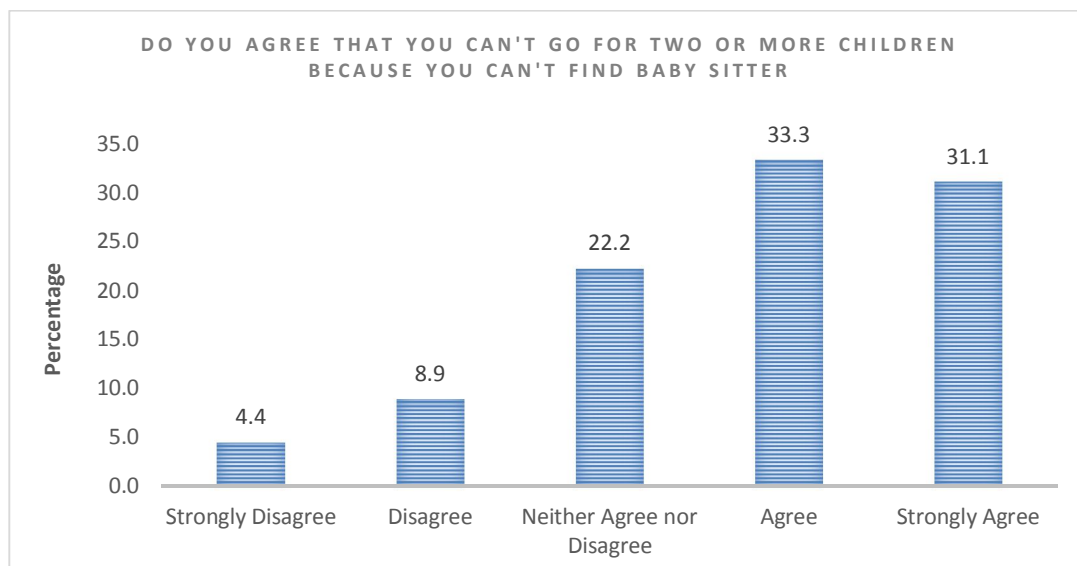


Figure 1: Response to the Statement in Percentage

Note: Likert scale 1 through 5 were used to measure the agreement on the statement in which the score were: 1= Strongly Disagree; 2= Disagree; 3= Neither Agree nor Disagree; 4= Agree and 5= Strongly Agree.

Table 5: Response as per Education Level whether they Agree that they cannot go for two or more children due to lack of Baby Sitter

Response	Education Level				
	No Education	Primary Education	Secondary Education	Undergraduate	Master/Phd
Strongly Disagree	0.0%	0.0%	0.0%	4.5%	16.7%
Disagree	0.0%	33.3%	10.0%	9.1%	0.0%
Neither Agree nor Disagree	57.1%	0.0%	20.0%	18.2%	16.7%
Agree	28.6%	33.3%	30.0%	31.8%	33.3%
Strongly Agree	14.3%	33.3%	40.0%	36.4%	33.3%

Note: Level of Education are graded as: 0 = no education at all; 6 = primary level completed; 12= secondary level; 15 = undergraduate and 17= Master/PhD.

Table 6: Response as per Occupation Level whether they Agree that they cannot go for two or more children due to lack of Baby Sitter

Response	Occupation Level			
	Professional	Supervisory	Operational	Elementary
Strongly Disagree	4.5%	0.0%	0.0%	10.0%
Disagree	9.1%	12.5%	0.0%	10.0%
Neither Agree nor Disagree	13.6%	0.0%	50.0%	40.0%
Agree	36.4%	37.5%	33.3%	20.0%
Strongly Agree	36.4%	50.0%	16.7%	20.0%

Note: Occupation classified as: Elementary; Operational; Supervisory; Professional and Executives.

Unemployment in Bhutan

Passang Lham, Second Year

Unemployment takes place when a person who is actively searching for employment is not able to find work. Unemployment is often used as a dimension of a health of the economy. It is calculated as a percentage by dividing the number of unemployed individuals currently in labor force. According to Bureau of labor statistics (BLS) unemployment is defined as the people who do not have job, have actively looked for work in the past four weeks, and are currently available for work. Unemployment rate is more or less high especially during the period of recession.

In Bhutan a person is considered to be working or employed if a person works at least one hour in the last seven days (Bhutan living standard survey BLSS 2012). Since Bhutan have more young age population the unemployment problem in Bhutan is mainly focused among the youth (15-24) and it is an important issue of youth as the youth are the future of the country. In the past Bhutan had only about thousands students when the government pursued the provision of modern education to its people. The government had to pick up children from each household to put into schools because parents were not so willing to send their children to school; they begged the local authorities not to send their children to schools as they wanted their children in the farms. But in a decade people have realized the importance of education and supported the construction of schools in their villages. This has given rise in the enrollment rates in schools. Although there is an increase in the number of students in middle school but these students will not be able to get the opportunity to pursue higher studies and these students have to look for jobs but they won't get the job they prefer so the unemployment rate will increase over the period of time.

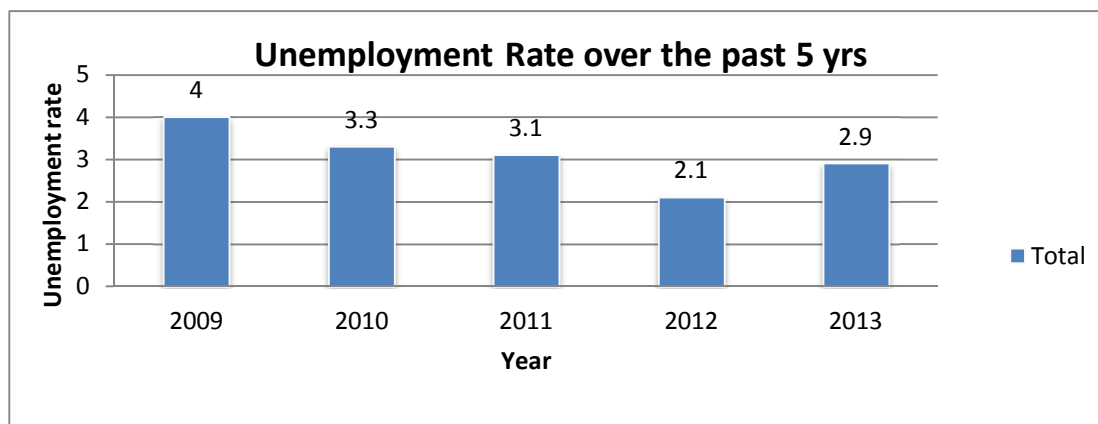


Figure 1: Total Unemployment Rate

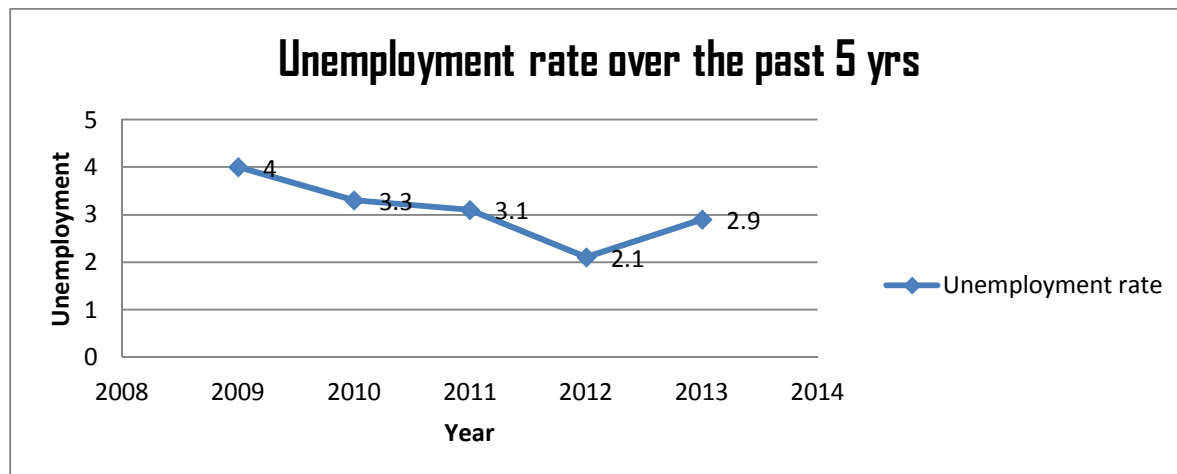


Figure 2: Unemployment Rate for the year 2008 - 2014

Above graph shows the unemployment rate of Bhutan from the year 2009-2013. Comparing a gap between the rate of unemployment in 2009 and 2013, it shows a major gap. In 2009 the rate of unemployment was 4 whereas in 2013 the rate of unemployment was 2.9. The highest unemployment rate was in the year 2009 and the lowest was in the year 2012 there was a decrease in unemployment rate from 2009 to 2012 and from there it increased from 2.1% to 2.9 in 2013 because the number of graduates increased whereas the number of jobs did not increase.

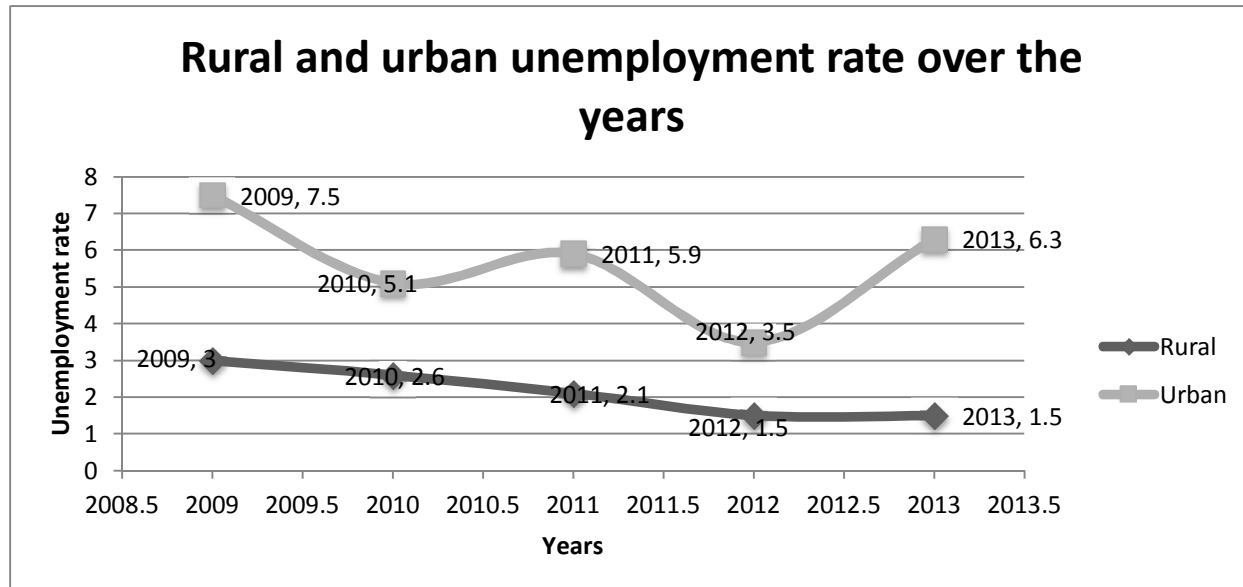


Figure 3: Comparison of Rural and Urban Unemployment Rates

The graph shows the unemployment rates in both rural and urban areas. We can see the unemployment rate is high in urban areas than in rural areas over a year where in rural unemployment rate have not changed much but in urban area there is a vast difference over the

years. This is because the number of people living in rural is less than people living in urban as many people migrate from rural to urban. People coming from the rural have not many skills and the jobs they are seeking will require higher skills so there is a mismatch match between the employee and the employer.

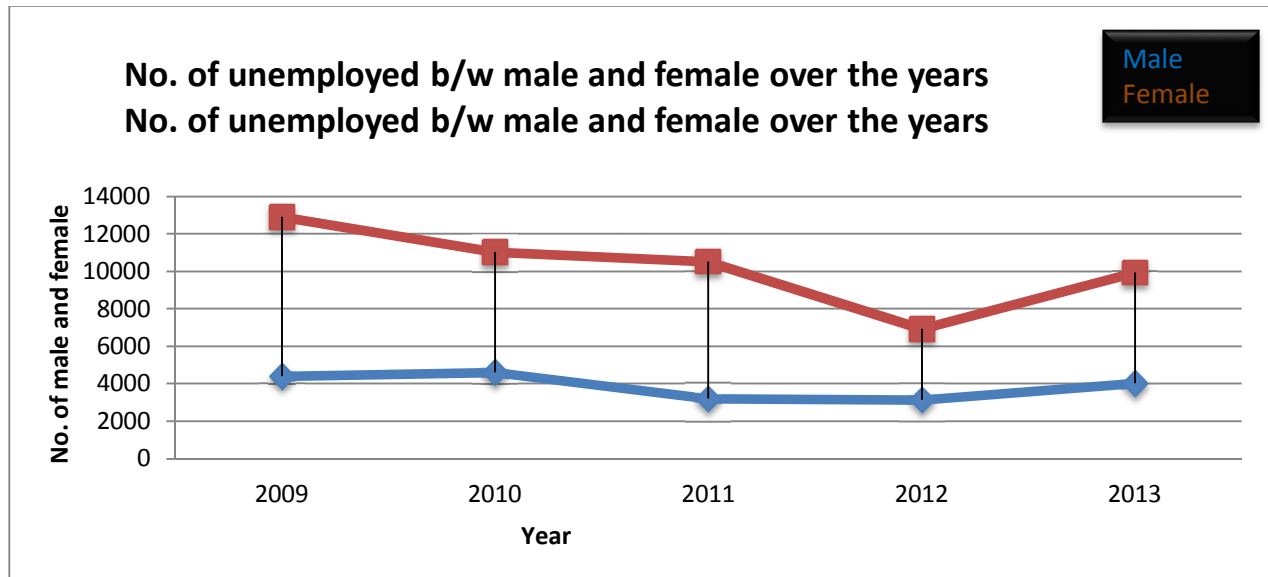


Figure 4: Employment of Male and Female

The graph above shows the difference between the number of male and female in the unemployment sector. We can see that more number of females are unemployed compared to the males. The higher female unemployment rate in Bhutan could be because the presence of gender discrimination and preference for male workers in private sectors. This could be because many consider female as weaker sex and not able to perform task like that of males' counterpart. Another reason for high female unemployment could be because of low level of literacy and education compared to males. It is also because females become pregnant and after giving birth they have to stay at home and look after the family but the males do not have to look after the babies like females so they work in offices.

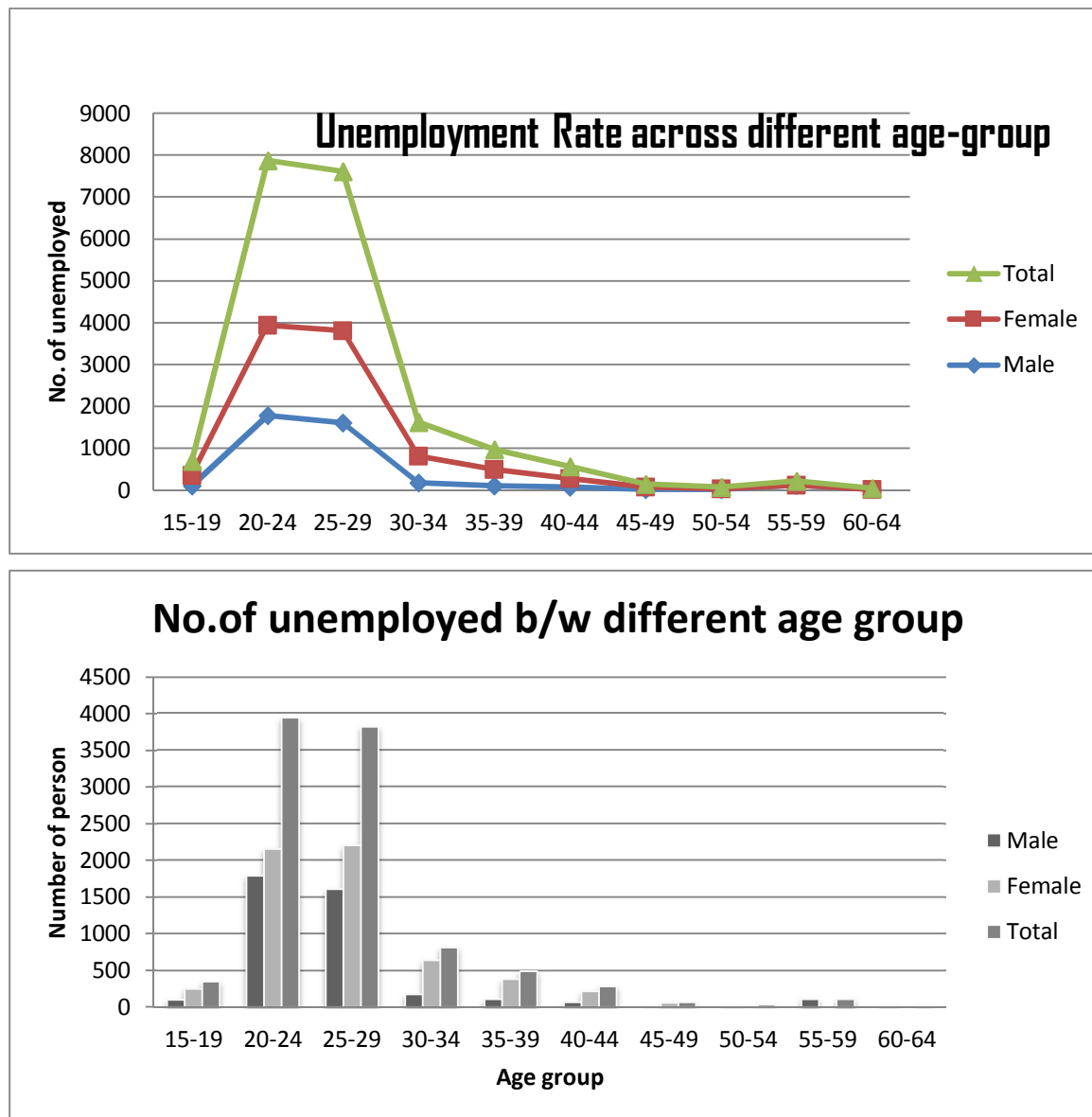


Figure 5: Unemployment by Age Groups

By looking at the graph above we can see that the unemployment rate is higher in the age group of 20-29 mainly in the young adult group which may be fresh graduates or a school drop outs. The age group from 30 and above have less unemployment rate because the number of employee was less than the jobs available in the past so there was demand in job seekers in the past but now the situation is the opposite as the number of job seekers are higher than the jobs available.

One of the main causes of unemployment in our country is due to the choice of the people. The majority of people do not look for jobs in the private sector. They prefer to wait for the opportunity to get into public service and corporate sectors. Majority of job seekers will not be able to make it to the civil service and corporate sectors. The government has started to rely heavily on the private

sector as the driver of the socioeconomic engine of the country. However, the private sector is currently not in a position to respond to the expectations of the government. The private sector is not in a position to provide opportunities to employees. Therefore, the youths generally view the private sector as an indiscrete pond in which employees would never have opportunities to develop, both in terms of career and academic enhancement. They feel that the private employers can hire and fire their employees at any time. Youth in Bhutan are of the view that blue collar jobs are meant for those who are not educated or for those who are illiterate. Taking up a blue collar job would set an image of backwardness both socially and economically. They feel that they deserve much higher opportunities since they have acquired some educational qualification. Our government continues to encourage the development of diverse private business firms. However, due to lack of idea and enterprising nature among our youth, the response has not been so good. Many job seekers at the moment do not possess the capability to set up their own business firms, rather they choose to work for other firms and live on their salary.

There are many problems of jobless growth it may cause the country's Gross Domestic Product (GDP) to go down and the number of dependent ratio to increase. The dependence on the other countries will also be more as there won't be workers to do even a simple work. Our country might become poor as the country's economy will drastically go down. There are many ways to solve unemployment one way could be efforts to bridge the gap between demand and supply of labor in the job market which will promote youth employment. Choosing labor intensive technologies and developing soft skills among the youth will also help to solve youth unemployment in Bhutan. Another way of solving youth unemployment in Bhutan is developing positive attitude towards available works and promotion of agro-based industries and agriculture sector. Therefore, expansion of employment opportunities in agriculture sector will solve the major issues of youth unemployment.

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Energy Conservation and Efficiency may be the most promising Energy sources available

Namgay Choden, First Year

Energy is an essential part of our life. Energy is not only necessary for survival, it is also necessary to generate income for countries. “Our energy demand increases each year as our population and economy grow - we are using about 2% more energy each year” (Energy Efficiency and Conservation Authority, 2015). According to Wikipedia the free encyclopedia, Energy conservation means reduction in energy consumption by using less of an energy service. Efficiency on the other hand refers to using minimum energy to provide the same services. The international Energy Agency (IEA) defines energy efficiency as an approach to administering and controlling the growth of energy consumption.

Energy efficiency and energy conservation are usually considered as a cheap and clean source of energy and it may be the most promising energy sources available. Energy conservation in general refers to a change in behavior such as switching off the lights when not in use or walking to office instead of driving. Energy efficiency means using energy more effectively such as choosing a fluorescent bulb over incandescent bulbs or purchasing fuel efficient cars over cars that are less fuel efficient. Energy conservation involves sacrifices or foregoing using energy whereas energy efficiency involves innovation of technology or improving the standards of appliances but providing the same services. Conservation definitely reduces the amount of energy used, however it may affect contentment or welfare. Efficiency inputs the same output but uses reduced energy to attain that output. Energy conservation and Energy efficiency when combined provides the best possible solution (Natural Resources Canada, 2014). **For Example;** To conserve energy, you can walk to work or use public transport services or carpooling would reduce the use of energy however it might affect your level of comfort, therefore to be more energy efficient, purchasing a car that gives a higher mileage could reduce the use of energy and at the same time give the same level of comfort. Turning off and unplugging electronic appliances when not in use could also contribute to less energy being wasted.

In Bhutan, due to the demonstration effect, every person wants to own a car and in some families there are as many as 5 cars in just one family and people are either ignorant or care less about its impact on the environment. The buildings in Thimphu and other colder places are not insulated and this results in huge loss of energy in heating the houses especially in winter. Bhutanese people

living in cold places use 'Bukhari' to heat their houses and this contributes hugely to air pollution. Since there is no regulations on building energy efficient buildings or incentives for importing fuel efficient cars, people construct energy inefficient buildings simply to lessen construction costs. Our people are not very educated about energy consumption and it has impact on their lives as well as the lives of other people and many, even if they are educated enough, care too less about the consequences.

Over the last 30 years, energy efficiency has been the largest energy resource in the U.S

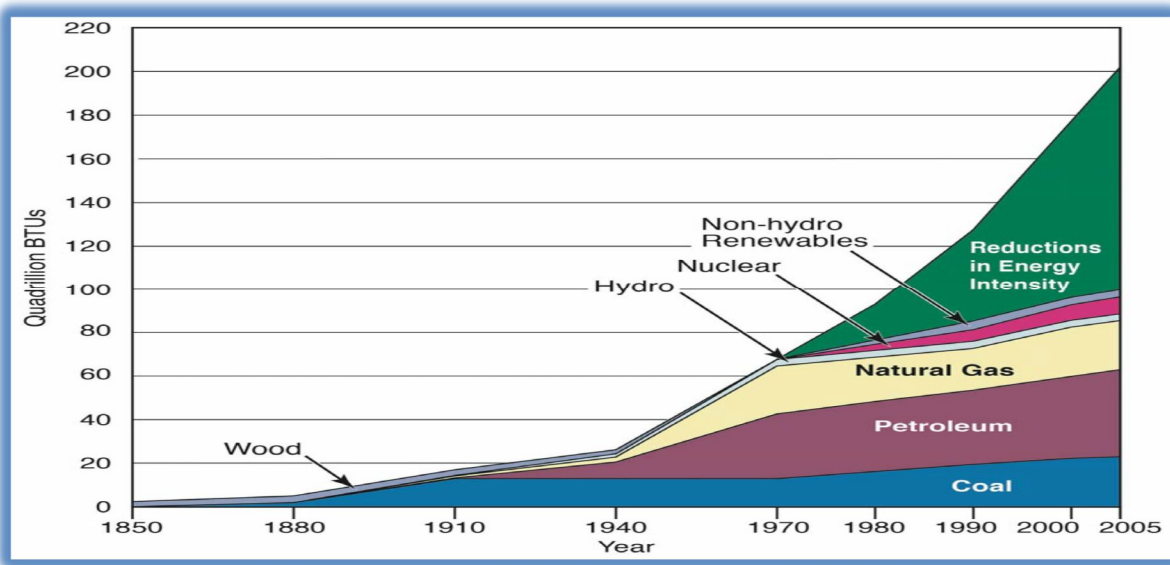


Figure 1: Reduction in Energy Intensity as the Major Source of Energy in US

Benefits of energy efficiency and conservation

Energy efficiency and conservation at individual, community and at national level can contribute largely to the national economy as well as benefit every individual. Energy conservation and efficiency can reduce costs for businesses or households helping them become more productive, and more profitable. Conserving energy decreases the need for new power projects thereby reducing greenhouse gas emission and environmental degradation. According to the International Energy Agency, as pointed out by Hebden, (2006), energy efficiency in buildings, industrial processes and transportation could cutback the world's estimated energy needs in 2050 by one third, and reduce greenhouse gas emissions. An attempt to enhance energy efficiency and conservation can also result in hidden benefits, for example driving efficiently associates to driving safely, and insulating buildings to can give improved health benefits from living in a warmer drier

home (Energy Efficiency and Conservation Authority, 2015). Minimizing energy consumption may indirectly result in an addition to the personal savings of individuals in the form of reduction in the utility bills which in turn can lead to an increase in the national income. Energy conservation and efficiency at the national level can reduce the amount of energy imports from foreign countries and this could result in a boost in the country's economy. "Every unit of energy saved waives off the requirement to produce that energy and thus saves us money" (Miller & Spoolman, 2015). Energy conservation and energy efficiency can contribute to lesser environmental degradation, increased savings and reduced wastage.

Energy Conservation and Efficiency at home

Domestic energy consumption contributes hugely to the total energy consumption. Therefore it also results in huge amount of energy being wasted. Domestic energy consumption includes the energy consumed by electronic appliances that are used in our homes such as television, computers, washing machines, microwave ovens, water boilers etc...these appliances use power even when they are not in use. **For example**; the microwave oven uses power to keep the digital clock running. Even computers use energy when in standby mode. Scientists at the US Department of Energy's Lawrence Berkeley National Laboratory say standby power accounts for 5-10% of household electricity consumption (Energy4me, 2015). Energy wastage can therefore be reduced by unplugging the appliances when not in use. The IEA estimates that at least 3.7 EJ per year could be saved cost effectively by 2030. Large amounts of energy are being wasted through the use of energy inefficient electronics and also through consumer's insensitivity towards energy dissipation. Currently, the world wastes about USD 80 billion due to inefficient technology by the world's 14 billion online electronic devices such as set-top boxes, modems, printers and game consoles (IEA, 2014). "The proliferation of connected devices brings many benefits to the world, but right now the cost is far higher than it should be," said **IEA Executive Director Maria van der Hoeven**. "Consumers are losing money in the form of wasted energy, which is leading to more costly power stations and more distribution infrastructure being built than we would otherwise need – not to mention all the extra greenhouse gases that are being emitted" (IEA, 2014). Energy wastage can be reduced if consumers are not indifferent to energy depletion and make an effort to conserve and use energy efficiently. **For example**; Cleaning or replacing air filters in air conditioners and hot air furnaces can help reduce energy use since these appliances use extra energy to draw air through dirty filters. Using natural ventilation can also be an option to energy conservation. Refrigerators contribute about 20% of household electricity use (Energy4me, 2015).

Decreasing the temperature and keeping them free of ice can save huge energy wastage. Energy can be saved by not letting water run while rinsing dishes, brushing teeth or shaving. Fixing faucets or any leaky pipes can help reduce energy waste. Using energy efficient fluorescent bulbs in place of incandescent bulbs can reduce energy use by 75 percent, and save about \$30 per bulb over its lifetime (David Suzuki foundation, 2014). Compact fluorescent and LED bulbs also last much longer than standard bulbs. Fixing leaky taps and insulating electric water heaters can save up to 1400 kilowatt hours per year (David Suzuki foundation, 2014). Modern appliances are more energy efficient than traditional appliances, therefore replacing old electronic appliances can help contribute largely to energy conservation and efficiency.

World Energy Consumption by Sector, 2012 (EIA Data)

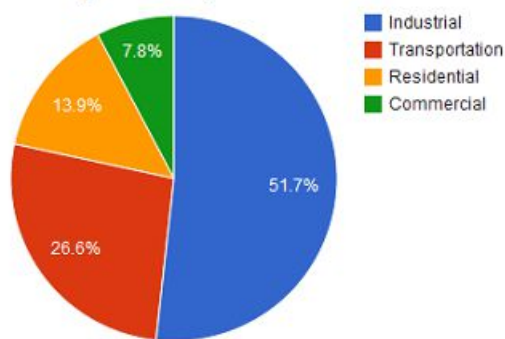


Figure 2: Global Sectoral Energy consumption in 2012

Source: <http://news.thomasnet.com>

Energy Conservation and Efficiency in vehicles

One way to conserve energy and use energy efficiently in vehicles at the individual level is to make the right decision in choosing your car. Purchasing fuel efficient cars not only consumes less energy but also reduces the money spent on fuels and reduces greenhouse gas emissions. Energy in vehicles can be saved in several ways such as keeping the tires properly inflated since additional fuel is required if cars are under inflated and regular maintenance of the car. Maintaining the pace of the driving saves fuel as abrupt speed ups and slowdowns uses more fuel. Increase in speed also

increases fuel consumption. Nowadays, especially in Thimphu, there are as many as 3-4 cars in each family. Every member of the family buys a car each not realizing the impact on the environment directly as well as indirectly. Aside from the direct impacts there are also hidden impacts which the consumers do not realize. These hidden impact includes costs of pollution control, cost of traffic police required to maintain smooth traffic, more the number of vehicles more the number of people required to regulate traffic. Consumers also pay in the form for health problems caused due to pollution from automobiles.

At the national level, our government is already taking steps to reduce the number of cars in Bhutan by increasing vehicle taxes and encouraging fuel efficient cars by giving tax breaks for fuel efficient electric cars and electric hybrid cars. Majority of the Bhutanese people are however not very educated to understand the hidden impacts and are heedless to the consequences so long as their desires are fulfilled. The introduction of the city bus in Thimphu has helped ease the crowd to some extent since many of the people; especially students who take private car to go to school are now using the public transports instead.

“Another approach to save energy in transportation could be to encourage bicycle use by designing bike lanes on highways and city streets” (Spoolman & Miller, 2015). Government could also introduce electric mass transit system to connect nearby dzongkhags such as Thimphu-Paro-Punakha-Wangdue-Phuntsholing to reduce the number of vehicles plying through these places. The government could also raise taxes based on the number of cars a family can own. **For Example;** if a family owns only one car, they can be taxed 20% (suppose), if the same family buys another car he/she can be taxed 30%. Similarly taxes can be raised depending on the number of additional cars bought in the family.

Energy Conservation and Efficiency in what you buy

Energy conservation and energy efficiency is perhaps the fastest, cheapest and the cleanest resource of energy. Energy can be conserved with every single action you take. Energy can be conserved by making a wise decision about what you buy. Buying organic food produce can save energy in many ways and at the same time benefit your health and your environment. Buying locally produced food can reduce the cost of fuel burned to transport from the production site to the store, reduced packaging and, reduced exposure to pesticides and other chemicals (Energy4me, 2015). Buying locally produced food can help reduce wastes in the form of plastics used for packaging, thereby reducing greenhouse gas emission. Using recycled products means using less energy. Buying local fresh fruits and vegetables in season can help reduce the amount of energy

required to produce off season goods which require energy-intensive greenhouse conditions (Energy4me, 2015)

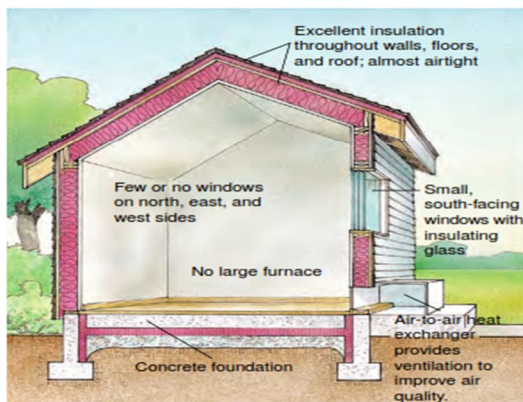
Energy Conservation and Efficiency in Buildings

Buildings in Bhutan consume a great deal of energy since most of them are very lowly or not at all insulated and it takes a lot of energy to keep the rooms warm. Traditional Bhutanese houses use more energy to heat or to cool since the windows and doors leak heated or cooled air.

Improved efficiency in buildings can save energy, reduce emissions and contribute to a better quality of life. Single paned windows can be replaced by an energy efficient window to prevent heat from escaping in the winter. Planting shade trees and painting your house a light color can keep your house cooler (Energy4me, 2015). Insulating walls and ceilings can retain heat inside. This can save 20 to 30% on home heating bills and reduce CO₂ emissions (Energy4me, 2015).

Superinsulated buildings • Figure 18.11

a. A superinsulated home is so well insulated and airtight that it doesn't require a furnace in winter. Heat from the inhabitants, lightbulbs, and appliances provides most or all the necessary heat.



b. A superinsulated office building in Toronto, Canada, has south-facing windows with insulating glass. The building is so well insulated it uses no furnace.



Figure 3: Energy Effective Design of Construction

Source; Miller, G.T., and Spoolman, S.E. (2010). *Environmental Science, 13th Ed.* Belmont: Brooks/Cole. Ch.13

Energy Conservation and Efficiency in Industries

Industry is the largest consumer of energy resources worldwide. According to the U.S energy information administration (eia), Industry currently accounts for 32% of the total energy consumption followed by the transportation sector accounting for 28% of the total consumption (data compiled from IEA (2014)). Industries generate huge amounts of waste heat and gas which can be reused for power generation or steam, either within the factory itself as captive power

production or exported to neighbouring industries or the public electricity grid. These projects can help reduce emissions by replacing other sources of energy production, mostly from fossil fuels (UNEP Riso Centre, n.d). Development and implementation of energy efficient measures in industries can contribute largely to the global energy resources. “Recycling materials such as steel and other metals E.g. producing steel from recycled scrap iron uses 75% less energy than producing steel from virgin iron ore and emits 40% less CO₂” (Miller & Spoolman, 2015). “Some Industries conserve energy and save money by using cogeneration, which includes using a combined heat and power systems where two useful forms of energy are produced from the same fuel source” (Miller & Spoolman, 2015).

Conservation and efficiency of Energy can help the world save money. It is one of the cleanest and most promising sources available. If people can realize that conserving energy can make huge impact on the environment, the world would be better, cleaner and healthier than ever. Energy conservation and efficiency is nothing but a small change in your behavior and actions that can bring huge impact to the earth, to every sentient being, to your nation, and eventually to yourself. Reduction in energy consumption means reduction in consumer’s utility bills, protection against hazards of climate change and global warming, decreased cost for additional energy generations, thus reducing GHG emissions. Every individual can play a part to conserve energy since conservation and efficiency can be as simple and as easy as turning off the lights when not in use, replacing an incandescent light bulb with a fluorescent bulb or insulating your house to protect from heat and cold. Not only does energy conservation & efficiency benefit individuals but it can also contribute to your nation’s economy and conserve non-renewable resources for years to come

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Income and Living standard of ZHIWA-LING STAFFS -Five-star Hotel in Bhutan

Choening Zangmo (Final Year)

Abstract

This study investigated the income range and livelihood of Hotel Zhiwa Ling staffs according to their post from sweepers and security guards to human resources manager.

The study used twenty five sample respondents of different position and different income level to find out their work scenario; income earned and their managerial skills of their monthly salary. This survey tried to relate living standing and income; which showed the positive correlation between living status and income of an individual. This study moreover revealed the controversy between number of children and vehicle owned by both the low and high income earner.

Introduction

There are various source of income for every individual but the level of one's income differs from others based on individual knowledge, talents, skills and hard work in any society. Income can either be in kind or cash; but in modern world, cash is more acceptable and common too. Income of individual are earned through their physical services both in government or private sectors or through trade receives in exchange for providing a good or service through investment of capital. Money/cash is required for everyone's life, for money is only the basic item in present world which is widely accepted as means of exchange. Thus, to obtain anything in life 'Money' is the most important obsession, even to get basic necessities of life and maintain one's status in society.

Standard of living which include the level of wealth, comfort, materials and necessities available to a certain socioeconomic class in a definite geographic region which have positive relation with income of individual in an economy since wealth cannot be acquired without money for upholding one's standard of living. Standard of living in relation to income of an individual can also be measured with regard to their ability to expend on both food and non food items.

According to Poverty Analysis Report (PAR) 2012 cited in National Statistic Bureau (NSB), established total poverty line of Bhutan is at Nu. 1,704.84 Per person per month, which they found some households below this line. PAR 2012 also have found out that disparities between poor and rich households in terms of average income exist both in rural and urban areas but in urban average income of rich are three times higher than that of poor households. It also shows the extreme fall in poverty rate in Bhutan from 23.2% in 2007 to 12% in 2012.

Veenhoven (1988 and 1991) cited in Gross National Happiness (2014) found that people with higher income levels had higher levels of happiness or subjective well-being. He also found out that after a certain threshold level of income, it did not impact subjective well-being so much.

Methodology

In this study, the analysis is based on the primary data collected from few staff of Zhiwa Ling Hotel. I set some related questions which are suitable to my research topic. Then I gave my questionnaires to few staff of Zhiwa Ling hotel for their responses and support for my survey. I explained the questions to those who are illiterate and requested others to fill and answer my questions to rest of my respondents. This research was done at Zhiwa Ling Hotel, Satsam Chorten; Paro: Bhutan.

Objectives of the study:

1. The main objectives of carrying out this study is mainly to know the real living status of those people who are employed in tourism industries.
2. Income and education level of employee.
3. To find out whether their income affects their living standards or not.
4. Their concerns for the future of their children's education and old age.
5. Family size in context with income and living condition.

Findings and Discussion

In the course of this pertinent research, I felt contented with all my findings in accordance to my survey topic with lots of support from all my respondents.

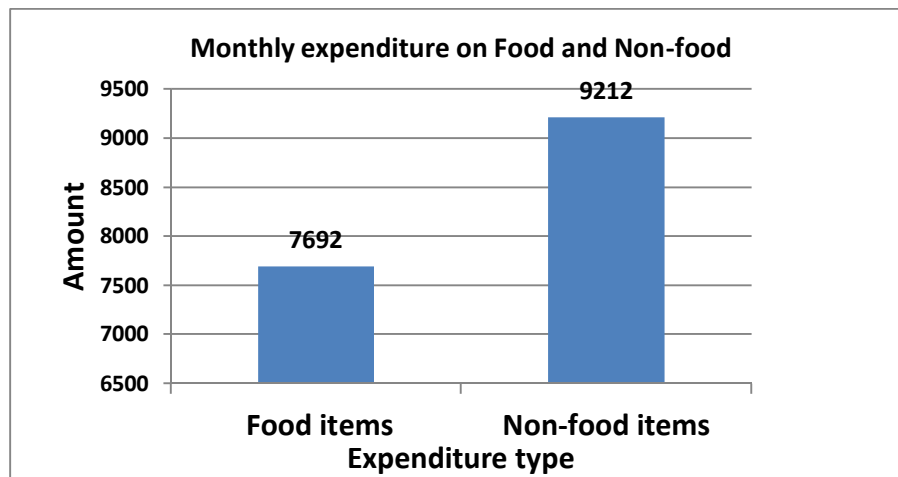


Figure No.1: Monthly Food Expenditure

The figure no.1 above shows the expenses of twenty five households on food and non food items in a month of this survey. This study found that people habitually spend more on non food items than that of food items. However, it is also seen that most of high income people spend more on conspicuous goods; as they mentioned that they usually go for new vehicle; branded home stuffs and fashionable cloths. They also mentioned that to keep their savings at constant rate; they try to use the commission amount on conspicuous goods.

According to Bhutan living standard survey 2012, have also found the mean monthly household expenditure nonfood consumption rising every year; whereby they have mentioned 34% of expenses rise from 2007 to 2012 and only 32% rise in expenses on food items. Respondents also added that they usually enjoy more of commissions which they say as ‘service charge’ during peak tourist season; which they get as per the maximum number of tourists.

They mentioned that usually during spring and autumn are the desired time for tourists to visit Bhutan and to enjoy higher commission. Nature lovers who are enthusiastic on local flora should consider visiting Bhutan end of April or in May; whereby flowers would be on full bloom then and to attend various festivals in the month of September and October which even include the yearly festival of Thimphu; capital of Bhutan (Druk Asia, n.d).

This study found that about 40% of respondents had suffered from common disease cough and cold within a month prior to this study. Nevertheless; of the respondents who suffered from various reported sickness such as minor headache; chest pain and muscle crime 67% of low income group

have visited to Paro District Hospital, Paro, Bhutan and 56% of high income group to hospital. As a result, it shows the higher standard of living of respondents since more people are accessible to health facilities both in government hospital and from medical shops (private sectors). They are also accessible to both traditional and modern medicines. They are able to afford all those expenses such as travel charges and operating cost for minor medicines and contraception trial.

This survey found out that there are more of male population taking over high post jobs in comparison to female, which reflects low literacy rate of female in contrast with male. Figure no.2 below shows the literacy rate of male and female:

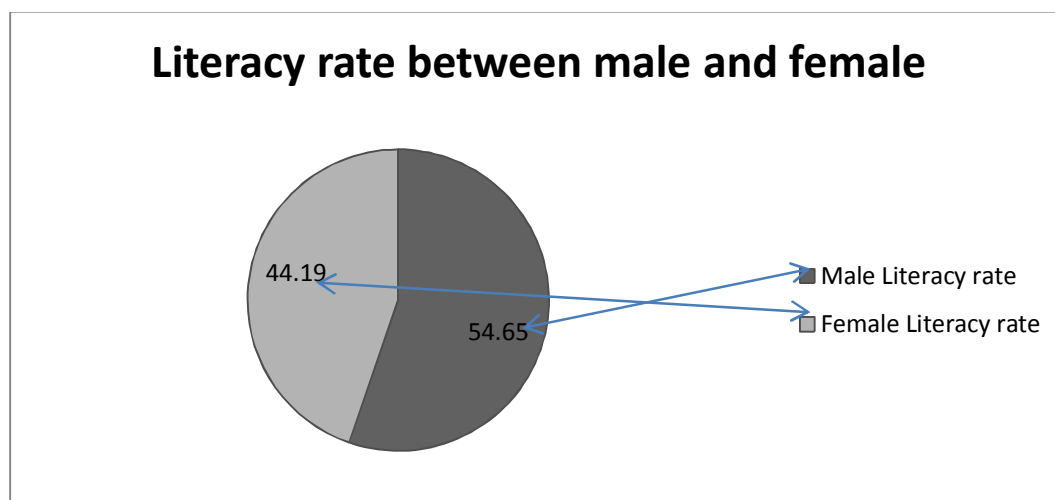


Figure No.2: Comparison of Male and Female Literacy Rate

This graph shows the difference in the level of literacy rate among male and female employee in Zhiwa Ling Hotel. As we can evidently see that intensity of male literacy rate is with 54.65% in association to female literacy rate of 44.19%. It is mainly because in Bhutan as level of education boost; number of female enrolment to school falls due to parents objections to look after family and help in household chores, and many women believe that they can always depend on their partner so they leave school at low grade. Further it is also due to social problem such as teenage pregnancies and rape case whereby girls can no longer continue their studies due to down look by society. According to Bhutan Living Standard Survey (BLSS) 1.9% of teenage women (aged 15–19) gave birth in the past 12 months. Hence, at later stage they are able to acquire jobs with low earnings owing to their low education, experiences and skills.

This study also explains the affirmative relationship between income, qualification level and standard of living of an individual as many of the researchers have already revealed. People of high income are usually with high education level, well settled, with luxurious goods like vehicle, owned land and houses. It indicates that there is greater possibility for people with high qualification to lead a better life in comparison to people with low qualification since they are well equipped with all the knowledge regarding their own life and consequences of pathetic living situations.

Table 1: Income as per Education Level

Literacy rate	No. of respondents	Monthly income
Illiterate	4	5,000-10,000
Lower Sec.	5	10,000-15,000
Middle Sec.	5	15,000-20,000
High Sch.	7	20,000-25,000
Degree	4	25,000+

The table No. 1 above it reveals that as the criterion of individual increases; their level of income also amplifies, while we usually believe and know that people with higher qualification always conceive greater comprehension and skills as compared to illiterate or low tutoring person. In addition we can also find more demand for people with higher qualification in job market.

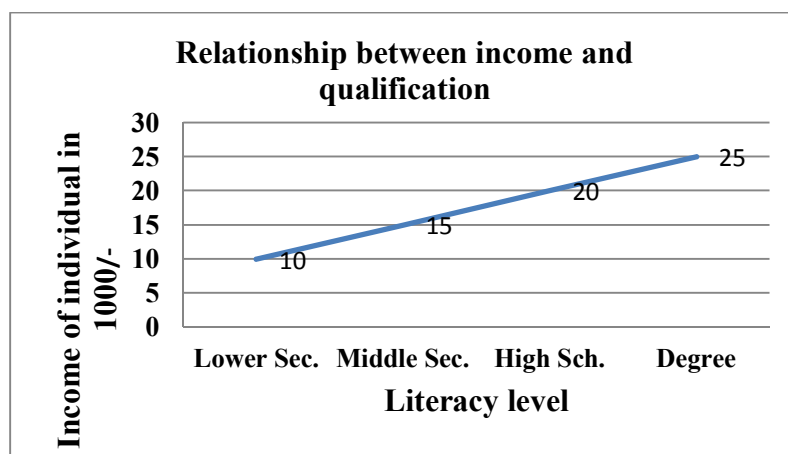


Figure No.3: Showing the Relationship between Income and Qualification of Person

The graph above reflects the relation between qualification and number of respondents. It shows that most of the workers in tourism industry are mostly of high school pass out and less people

with degree qualification. People with higher income also provides some minor jobs to those illiterate people, commonly as baby sitter, which mostly include underage group irrespective of their gender and are paid low wages which is at maximum of 3,000 and mostly about 1,500. Thus, it indicates that some of the high class people are exploiting the group with low or no education or family background.

This study also demonstrates that person with higher income have greater ability and willingness to save. It is because they already have enough of disposable income in their hand to spend due to higher income. Therefore they are more interested in saving for future which they can use it for investment in upcoming time for their own business, children's education and old age use. The table below shows the number of respondents with their monthly income and saving per month.

Table 2: Showing the income; saving and number of respondents.

Monthly income	Saving in %	Respondents
5,000-10,000	2	17
10,000-15,000	5	2
15,000-20,000	8	2
20,000-25,000	12	1
25,000+	15	3
Total no. respondents		25

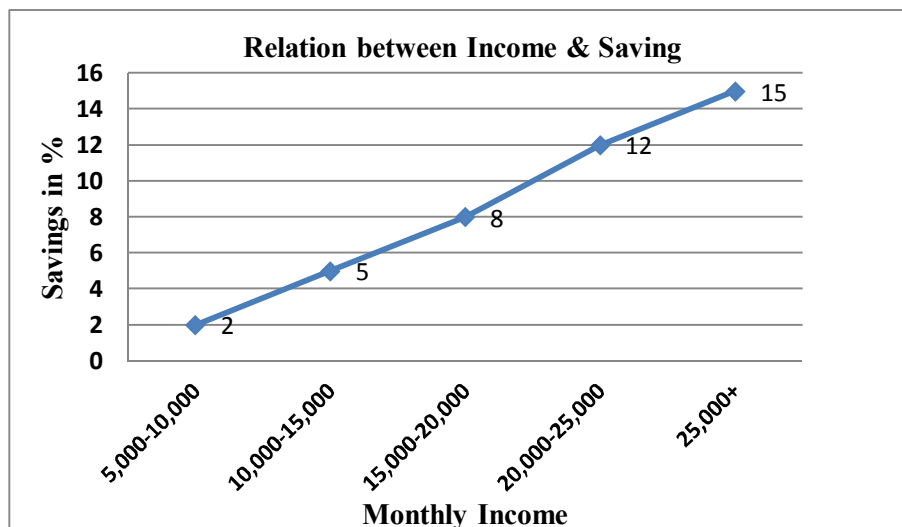


Figure No.4. Showing relation between income and savings.

The table and graph above depicts that people with low income ranging from five thousand to ten thousand (5,000-10,000) have very little aptitude for saving which is at 2%, whereas people with higher income have more capability for saving as clearly shown in the graph above and also have surplus money for saving for future. It also shows the positive relation between income and saving.

There is also some controversy; whereby irrespective of one's income, person still have one vehicle each as clearly revealed in table below.

Table no. 3: Showing contradictory between income and living status

Monthly income	No. of vehicle
5,000-10,000	1
10,000-15,000	0
15,000-20,000	1
20,000-25,000	0
25,000+	1

This table concludes that regardless of differences in income of a person, they still manage a car each, on other hand even some people with higher income do not own vehicle. However, when this curious questions are being asked to some of my respondents, they mentioned like though people earn less income from one job, they join in other sector to do 'part time jobs'. Men drive taxi and women they do weaving and knitting at home for sale. Some even revealed that although some people earn less, they still manage to have luxurious life because of their inherent assets, which have direct relation to an economics book written by the French economist Thomas Piketty titled "Capital in the Twenty-First Century" (2014), in which it noticeably stated there is no natural forces pushing against the steady concentration of wealth as people with inherent assets seem to develop faster than that of people with limited inherent assets.

Another controversy was despite of disparity in qualification, they still have equal number of children about two to three for each respondent. Therefore there is greater application of 'Malthusian Theory of Population' in which one of his law states that "The passion between two sexes is necessary and will remain nearly in its present state" (Malthus, 1798). Consequently with the existence of obsession for sex, people do not really bother regarding their expenses for child, living situation and rather keep on producing children.

Recommendations

Bhutanese people are not really concerned about their own living standard, because almost all of my respondents told that they do not keep any account of their expenses and they were just providing me the rough account.

Through this study I felt that Bhutan is developing in its entire field for better future, for country's economic development; as there are several jobs being created which can reduce the current unemployment issues of the country.

The employee of tourism industry seem to earn better income but I feel they do not have much of leisure time or security in their work, since during my survey time they seem to be in hurry to go for their work and were bit worried when I kept them for my survey.

I also felt that some of them are trying to hide their real income amount; which might be due to their own suspicious feeling of judging their living standard by others. It is because the respondents at ease for countering my questions; they were rather smiling; murmuring and taking sometimes for responds.

Conclusion

Bhutanese people had always have been concerned with their income in order to maintain their own standard of living; which is well supported by tourism industries with provision of jobs in accordance to individuals qualification. Nonetheless; there are many people who earn very low income owed to low qualification level and are struggling to acquire even their basic need and wants. Academics and policy analysts often use real income as a proxy to measure living standard, but this focuses on cash-income alone and leaves out the possible effects of non-cash income on the well-being of individuals. This report shows that low standard of living is low income phenomenon in most of the places and also exist controversy with regard to inherent assets.

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How Family size determine level of education

Phub Gyem (Final Year)

Abstract

Education is important for all people and family size is one of the determinants of education attainment. Dechencholing Bodyguard colony is a place where the families of all bodyguards live there and are from different parts of the country. There were about 106 people from 20 households and around 61 of them are children indicating that there are more number of children than adults. More than half of the children are in primary school and very few are at tertiary level. Studies have shown that increased number of children in the family negatively affects their education. However here it revealed that as family size increases the enrolment of children in school also increases. Small family size and free facilities provided helps to spend more on children and children's education level.

Objectives

The study mainly aims:

To know the education attainment of children.

To know the Expenditure on each child and to find out association between such expenditure and education level.

To know the perception of people on more number of children and their effect on the family.

Lastly, to find the trade-off between number of children and their education attainment.

Introduction

People of Bhutan were not educated in olden days and were mainly involved in subsistence agriculture. Modern education came very late and monastic education was the only form of education in Bhutan. Buddhism was studied formally when monastic education started in 1622 with the establishment of the formal monk body at Chari in Thimphu.(Dorji, 2005). From there a system was made that each household should send one male as monk to the monasteries.

With development and modernisation, the influence of western culture on the way of living increased. Children were enrolled in schools and only limited people were left in villages as

children migrate to different places for studies. The importance of education is known and it is becoming difficult for the parents to educate their child though education is provided free of cost by the government. According to Black (2005), “greater family size may negatively affect child outcomes through resource strength or because the average maturity level in the household is lower”. He also asserts that one could also imagine a positive relationship between family size and child quality. So my study aims to find the relation between family size and education.

More number of family members determines different aspects of our life such as quality health, education, living standard and many more whereby less number of children is better for the child themselves and also for the parents.

The study area was taken as Dechencholing, Royal bodyguard colony, and there are about 100 households. Most of the families are joint and medium sized. Some families solely depend on the salary of the father but majority of them are from eastern part of Bhutan and they do weaving which can add to the income of the family.

Methodology

The survey is based on the family size, number of children and their education level. It is mainly to study the relation between family size and the quality of education that children receives. The survey is done for 20 households and all the respondents were female that is housewives. The survey could have been done for more than 20 households but due to more interviewers we divided the colony amongst us. The place of Dechencholing is chosen due to the convenience of our work and willingness of respondents.

The questionnaire of the study contains 11 questions and is based on family size, number of children in school, expenditure on a child and their education level. Interview is done personally with one member of the household and the data is compiled in excel sheet where average expenditure and income were found. After that relevant graphs were constructed to show the relations and result of the study.

Results and findings

Family size can not only have effect on the education attainment of children but also on the consumption pattern and living standard of the family. In Dechencholing area, family size was medium and it ranged from 3 to 8 members where most were children aged below 10 years. All

the family members mainly depends on the salary of father and for some families, women were weaving to help in their expenditure. The families hardly depend on their children's income as children are small who are in primary schools and only few are doing their graduation. The number of children in different education level is shown below:

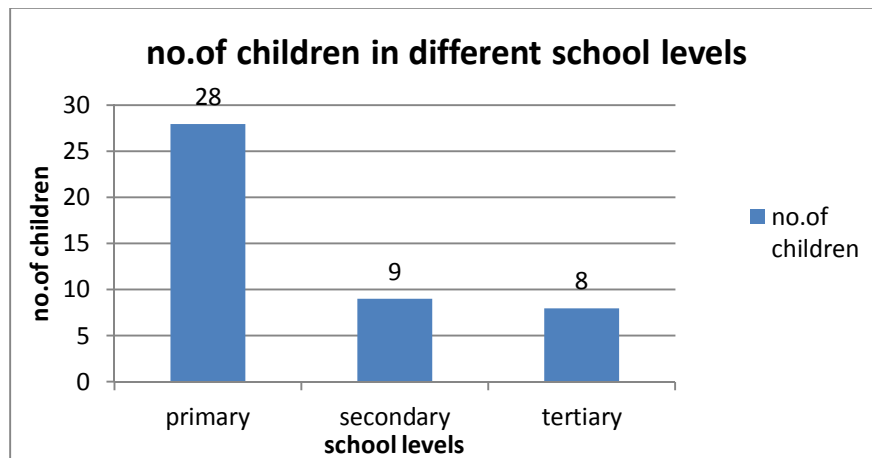


Figure 1: Children in Different School Level

The sample consists of 106 people including 61 children among 20 households. From 61, only 45 are in school as some are under aged and drop outs. From the 45 students more than half of them are in primary school level which is 28(refer fig1). In the secondary level that is till class 10, there are 9 of them and 8 of them are in grades above 11. This means most of the children in Dechencholing colony are young and there are not much older ones who studies at graduation level. For some families their elder child is also not in school as he/she is not above 6 years and they usually send them to early learning centres.

The culture of enrolling their child in day care is very popular in Thimphu as it helps the child to develop and also helps those parents who are civil servants or does business as they don't have to look for baby sitters. The government of Bhutan provides free facilities like water, monthly rations to the families and also a new day care centre is opened so that their children can be enrolled. This had helped the parents to send their children in the day care and most of the families are availing the facility.

Children's education level and expenditure

Education as one of the important need today, parents and also the government is taking lots of initiative to provide education to children. Unlike other countries where people have to pay huge

amount for education, education in Bhutan is provided free of cost till 10th grade. If not many of the youths in Bhutan will be left uneducated as parents are earning less income being farmers.

Even then due to the problem of inflation, things are becoming expensive and money value is falling which is affecting the people and also the economy of the country. This is leading to the rise in expenditure level that affects the purchasing power of the people. This is then affecting the education of the children as things becomes expensive, educating children also becomes difficult. Average expenditure of family on a child based on education level is shown below:

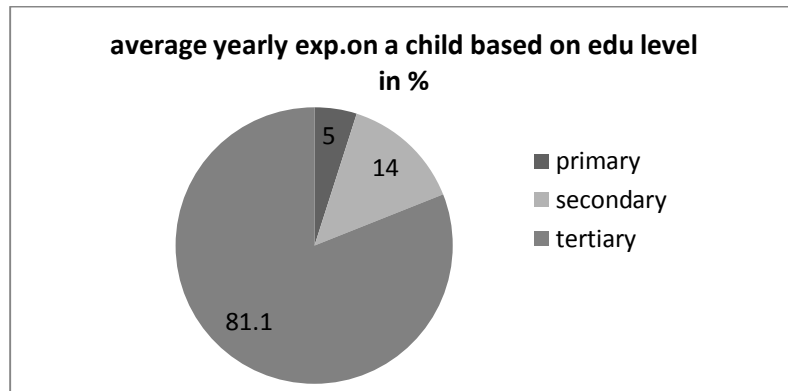


Figure 2: Average yearly Expenditure on a Child based on Education Level

The education level is classified in three as primary (pp-6), secondary (7-10) and tertiary (11-15). The numbers collected for the expenditure are not accurate as they keep fewer tracks of their income and expenditure but the fact is expenditure for a child studying at tertiary level is always higher than those in primary level. At the primary level, the expenditure amounts to around 6 to 7 thousands as parents have to only spend at the beginning of the school year, after that they don't have to have more expenditure. For children in secondary level, the expenditure goes more than the primary that is 10 to 15 thousand a year and for tertiary level, expenditure exceeds 2 lakhs. So the average yearly expenditure on a child who is studying at a primary level is about 5% which means if the expenditure is kept as 100%, then out of 100 only 5 goes as expenditure for each child. 5% converted to actual terms, it comes around Nu. 5260 which means on an average, an expenditure of around Nu.5260 has to be made for a child studying in primary level.

A child at secondary level education needs an expenditure of around 14% which is more than at primary level. While converted, a child in secondary level education approximately needs about Nu.14890 yearly for expenditure. For tertiary level (11-15), the expenditure exceeds far more with around 81.1% which means keeping the total expenditure as 100, expenditure is close to the total

expenditure. It could be because till secondary level, education is freely provided by the government and only the expenditure for clothing and stationeries is required. When reaching to the tertiary level, some will not be able to qualify in Government school and have to study in private which incurs huge expenditure.

Perceptions of people

The questionnaire contains two questions to know the perceptions of people based on burden of more number of children and its effect on education attainment.

The increased number of children in the family can have positive effects as well as negative. More number of children can help the family as when they grow up and start earning; they will help the family members with money. The perception of people on burden of children is shown below:

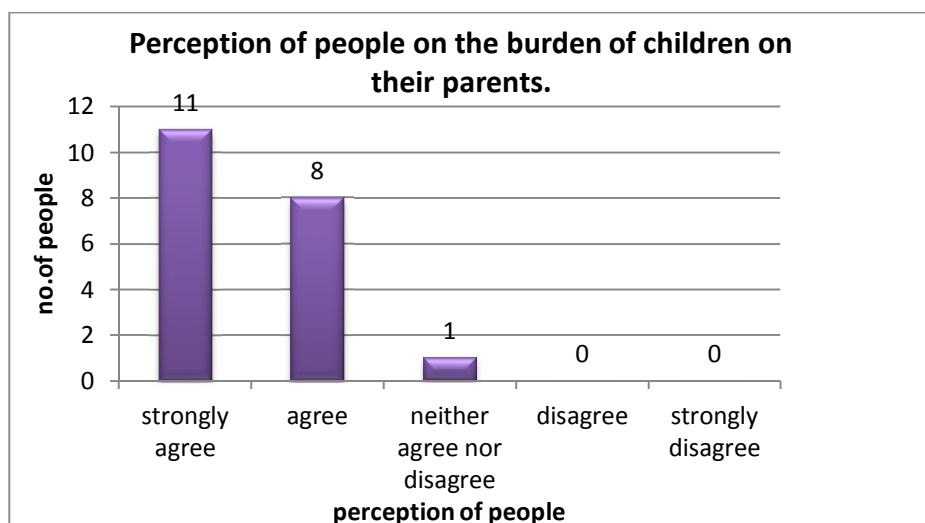


Figure 3: Perception of People on the Burden of Children on their Family

The children can contribute to the family's income when they start earning but it's difficult for the parents to educate their child. Expenditure increases and parents face problems especially when the child is at higher education level and parents beliefs that more number of children is burden for them.

The people of Dechencholing also believes that the burden increases as number of children in the family increases and also affect in providing quality education. There were 11 people who strongly agree that as number of children increases, burden also increase. It becomes hard for the parents to educate or meet the needs of children if the number of children is large which then compels the

child to drop school. With modernisation, the wants of people increases and the same applies for children as well. So, the things they are provided with will not be sufficient for them and start demanding more which affects the parents as well as themselves. This kind of problem is mainly faced by the low income people and faces the burden of educating, providing the wants and all.

Families of respondents have not faced such problems as they said till now the income was enough for the family and also most of the children are small and studying in primary schools where the expenditure is less as compared to other levels. However they believes that more number of children is burden for the family so it shows (refer fig3) that there is no respondents who disagrees with it. There was one who neither agrees nor disagree mainly because she beliefs that it depends on our wealth. If the family is wealthy, then they can provide everything for the children even if the number of children is more so the burden is only experienced by the low income groups.

They also agree that more children in the family can affect the education of the children. As the number of children going to school is more, parents will not be able to finance them properly which will lead to drop outs especially at higher level. In Bhutan, many of the youths study up to 10 or 12th grade and start looking for job so that they can help finance their younger ones in studying. So, small family and fewer children are better as parents will be able to provide better facilities and good quality of education to their children.

Relation between family size and education

As mentioned earlier more number of children leads to the problem of educating them especially by the low income families. The graph below shows the relation between family size and education:

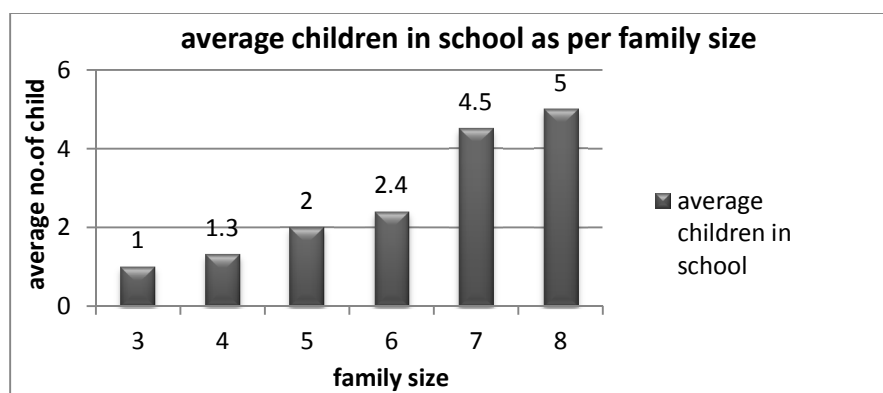


Figure 4: Average Children in School According to Family Size

The highest family size of the respondents was 8 and lowest was 3 and the effect of family size on education of children is studied (refer fig4). Many of related studies revealed that as family size increases, it will affect the education as the parents will not be able to send their children to school. According to Bagger (2013), birth order and family size effects in individuals' years of education thereby confirming the presence of negative relation between the quantity and quality of child.

In the above diagram instead of negative relation between the quantity of child and the education, it's showing positive relation. It may be due to small family size and also due to income of the family. The families of Dechencholing area are small compared to the families in rural area, if it was in rural the family size would have been more than 13 Or 14. The number of children who are in school in the family size of 8 is 5 which mean all the children in the family are enrolled in school (refer fig4). So, it is showing the result in contrast of the other research done by the scholars. It could be due to the less number of samples taken for my research. If it has been done for more or one community then, it would have been accurate. Income of family also plays a greater role as even if the family size is more, family with more income can afford to educate their child. People of Royal Bodyguard colony, Dechencholing are provided with free facilities such as water, electricity and monthly rations. With this they can save some and could be able to finance the expenditure of their children. The children going to school are also provided free transport facilities which help the children and expenditure on them.

The families are not facing much problem in financing their children to school as most of the children are young and does not need huge expenditure. Later, as the children grows and progresses through education level, they may face problem in educating them. We have to study the family for longer duration to know the effect which is not the case in this research, so, the outcome is different.

Recommendations

The journey through collection of data was interesting and challenging. Some of the respondents were kind and more friendly in responding to the questions where as some of them are not trusting on the reason for our interview even if we explain to them about our study. So, it would have been better if the government could do something like campaign to inform people about importance of responding to the youths who do studies on different issues.

The people living there are keeping fewer tracks on their income and expenditure level. The income earned from weaving and other small business is kept less track and they only know their monthly salary. The expenditure on each child is also less known so, the record of all this things should be kept so that the exact and expenditure can well be known. The practice of keeping the records of income and expenditure will help the family's expenditure as by referring to the previous record they can reduce or increase their expenditure. Overall the study was successful and information needed were compiled and studied.

Conclusion

Family size can have effect on many aspects of life such as education, health and living standard. The effect could be negative as well as positive but negative effect is always more than positive. Family size in Dechencholing is medium and most of the children are studying at primary education level and as education level of children increases, the expenditure also increases. Expenditure is much less in Bhutan compared to other countries as education is freely provided and much cheaper in Bhutan. People of Dechencholing strongly support that burden on parents increases as number of children increase and more number of children affects the education of children. However, increase in enrolment of children with increase in family size came in contrast with lots of other scholarly research. The reason behind could be due to less sample size, availability of free facilities that helps in the income of the people and the education level of children. As most of the children are in primary level, the expenditure is much less compared to other education level. For the study to be more fruitful, study over longer period of time is needed so that comparisons can be made properly.

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Peoples' opinion on waste management system in Thimphu

Chencho Dorji, Final Year

Abstract

Waste in the country is increasing and the problem of waste management too. There are few studies carried out in the country about the waste management issues. This particular study tries to find out the public opinion on waste management in Thimphu under Greener Way. The main findings from this study are: there is increased production of different kinds of waste, people are segregating the waste, there is waste management problem in some areas and people are willing to pay for the waste they generate.

Key Words: Waste Management, Segregation, Greener Way, Thromde

Introduction

The issue of waste management is a challenge all across the world. Waste production is increasing due to change in consumption pattern, Lack of public awareness and advocacy, Lack of civic responsibilities among the public at large, lack of coordination among institution's responsible for waste management, lack of strong legal framework and implementation mechanisms, Rural-urban migration contributing to rise in population (RSPN, n.d) and it is contributing to environmental and health problems. In Bhutan waste is increasing and it is a challenge for the city corporation and the responsible authority to manage waste. Waste issue is high in urban areas compared to rural areas. Currently the Thromde had handed over the waste management to Greener Way a private firm. Therefore this particular study tries to find of the perception of public on the current waste management practice under greener way and their challenges in managing waste

Methodology

The study was based on primary data collected and some secondary information. A survey questionnaire was prepared and survey was carried out in five different areas (VegetableMarket, Babesa, Kawangjangsa, Town and Kalabazar) of Thimphu with 7 respondents from each area. The method adopted for survey was cluster and convenient sampling and the data was all qualitative data. After completion of the survey the data was punched into Microsoft excel and charts, graphs and tables were used to analyze.

Findings

Demographic information

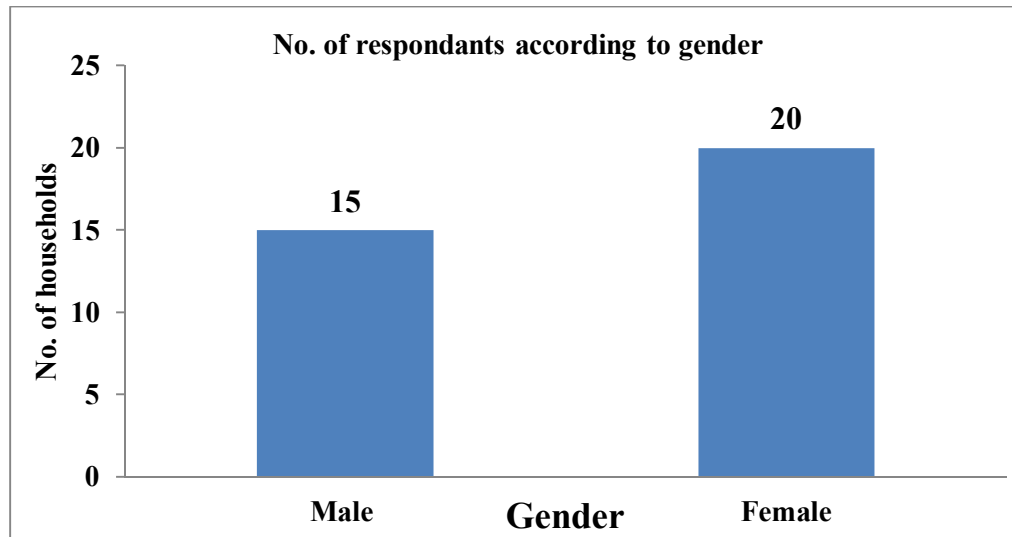


Figure 1: Gender of the Respondents

The sample size was 35 consisting of 7 samples from each area and out of the total sample 15 are male and 20 are female. The reasons for having more female respondents could be because of male going out for work and female staying in house doing household chores.

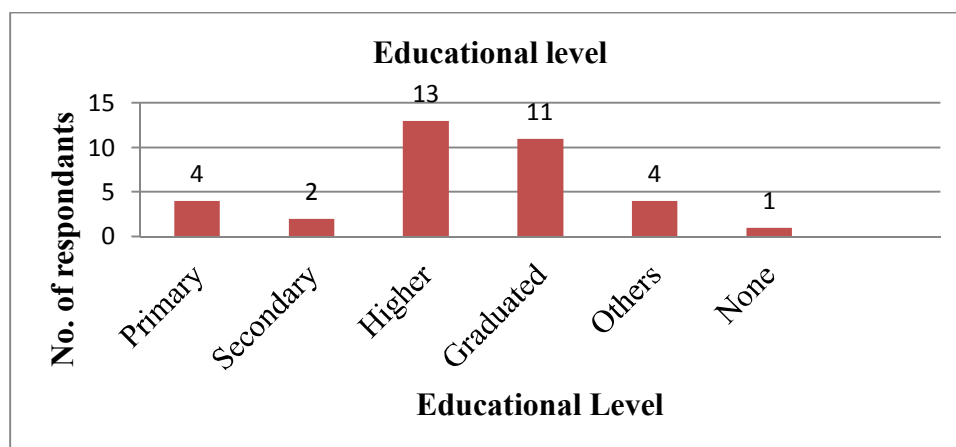


Figure 2: Educational Level

The highest educational level attained by the respondents is Higher secondary which is equal to grade 12 and followed by Graduate.

Household that produces waste and types of waste produced

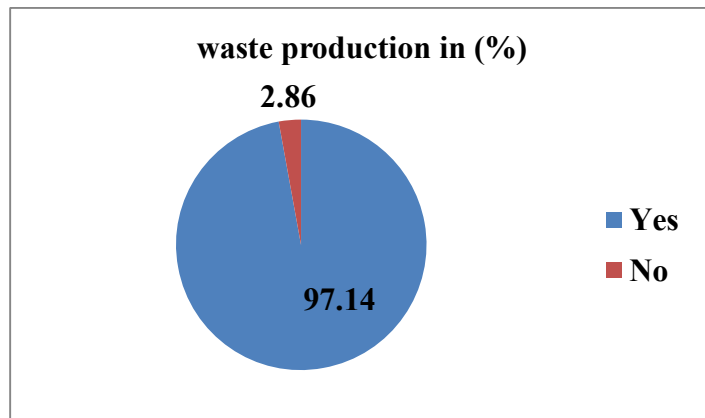


Figure 3: Household that produces Waste and that Do Not Produce Waste

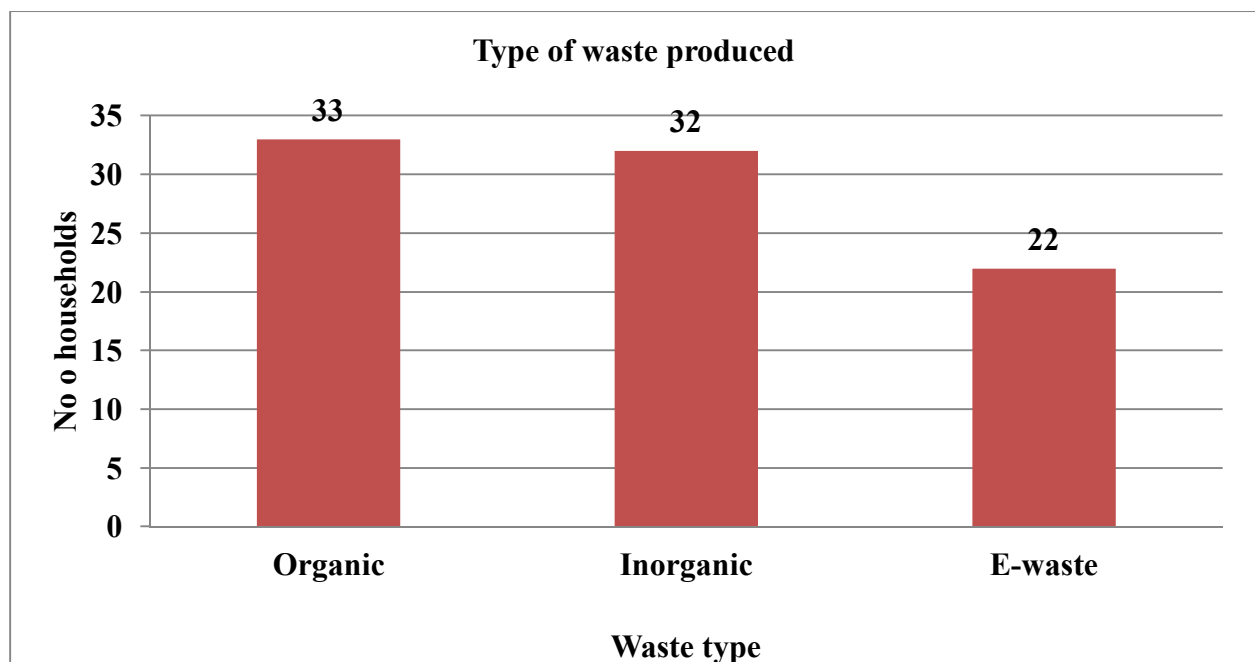


Figure 4: Types of Waste

Out of 35 households 97% (34 household) responded that they produce waste and 3%(1 household) responded that they do not produce waste (Refer Fig3) . out of 34 household almost every house produce all kind of waste (Organic, inorganic and e-waste) and organic waste is the highly produced in every sample household (refer fig 4).

Perception and reasons for not able to manage waste

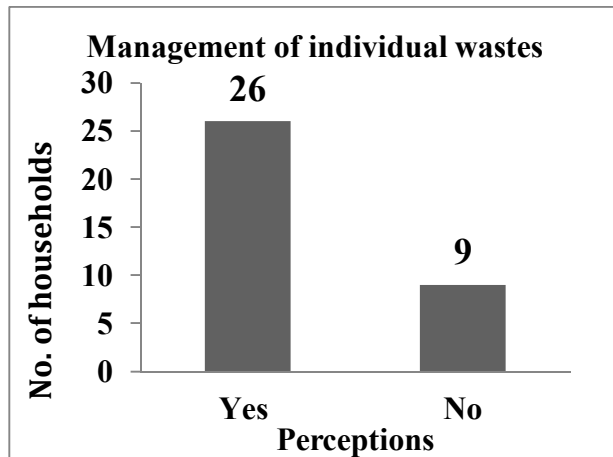


Figure 5: No. of Households having and not having Waste Management Issues

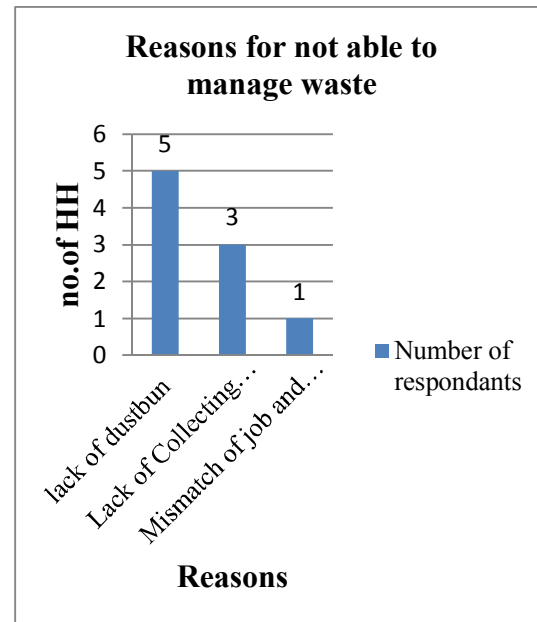


Figure 6: Reasons for Not Able to Manage Waste

Most of the household (26) are able to manage their waste properly and can hand over to the waste collecting authority but some of the households (9) are having difficulty in managing waste. On further analysis it was found out that the reasons for 9 households who are not able manage waste was mainly contributed due to lack of dustbin, followed by lack of vehicle and mismatch of job timing and waste collecting timing.

Perception of respondents on waste collection on timings and number of waste collected in a week

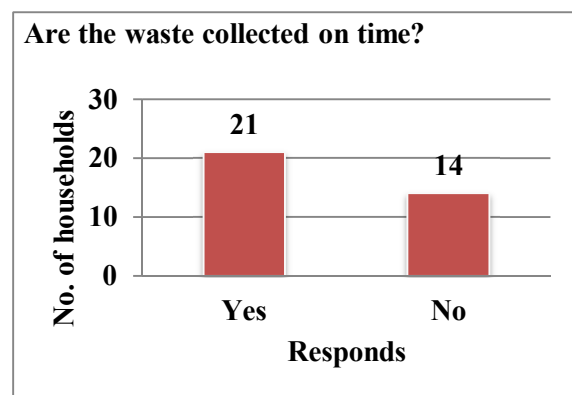


Figure 7: Respondents' Perception on Waste Collection made by Greener Way

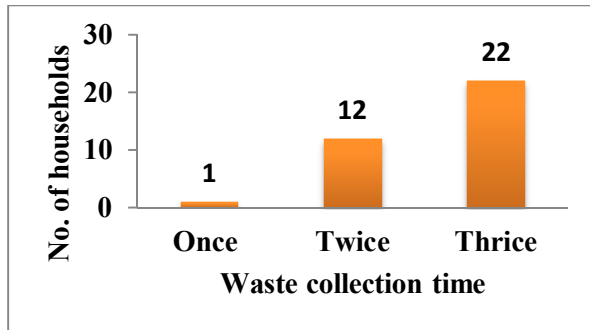


Figure 8: Waste Collected in a Week as per Respondent

Majority of the household (21) responded that Greener way is coming on time to collect their waste and 14 household responded that they are not coming on time to collect the waste. Similarly 22 household responded that Greener way collect waste for three times in a week and there is separate day for different waste.

Household having access to dustbin as per area

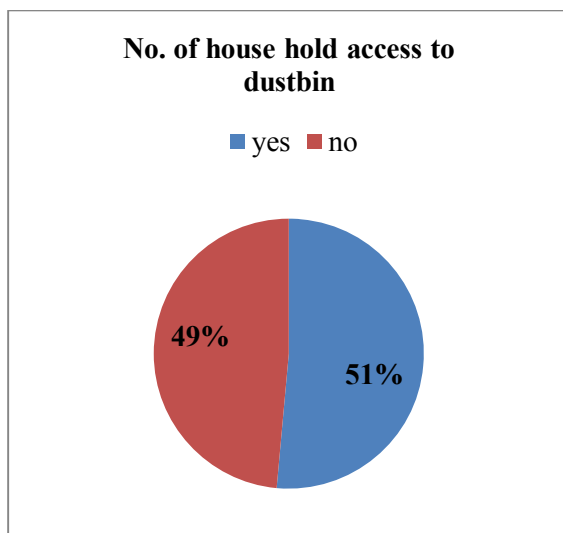


Figure 9: No. of Household access to Dustbin

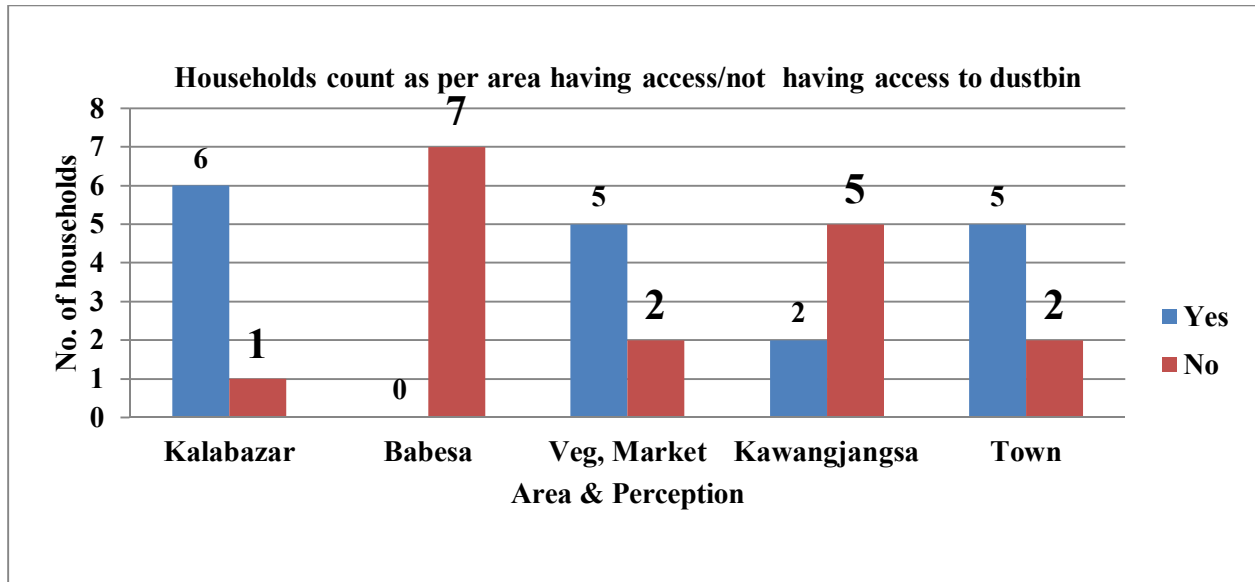


Figure 10: Households Count as per Area Having access/not having access to Dustbin

Out of 35 household 49% responded that they don't have access nearest dustbin provided by the municipal and 51% said that they have access. On further analysis it was found out that all 7 respondents from Babesa area said they does not have access to dustbin followed by Kalabazar area with 6.(refer Fig 9).

Waste segregation and opinion on segregation strategy

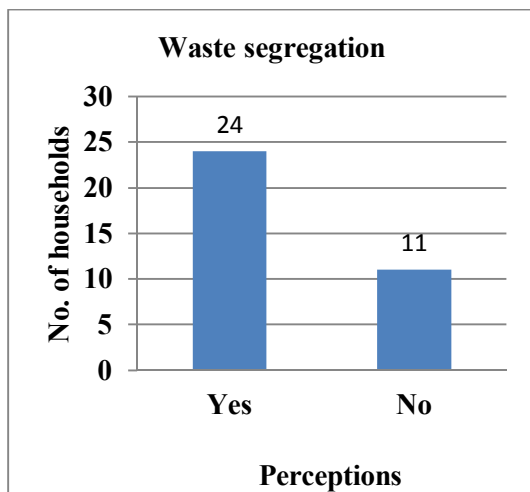


Figure 11: No. of Households Segregating and Not Segregating Waste



Figure 12: Perception on Waste Segregation

Out of 35 household 24 household responded that they are segregating their waste and 11 said that they are not segregating and all those who responded yes are saying segregating waste is a good way to manage waste.

Public opinion on waste disposal by the Greener Way

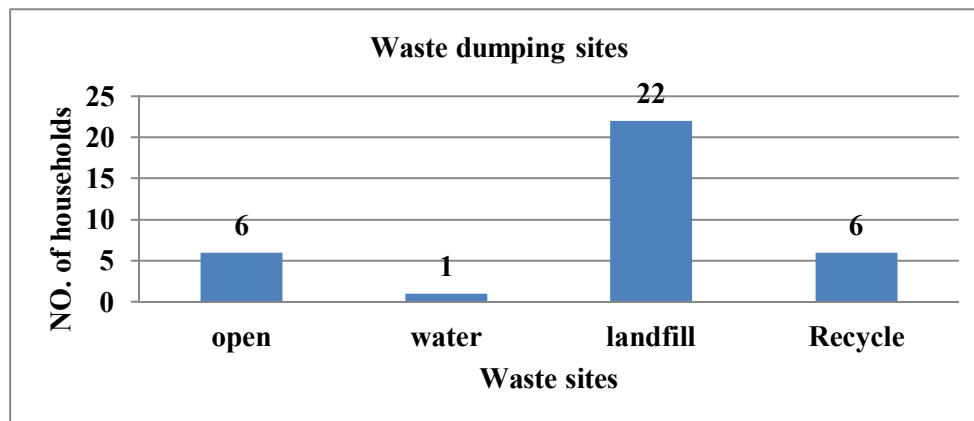


Figure 13: Perception on Waste Dumping

Most of the respondents said that Greener way is dumping the waste in land fill, followed by recycling and dumping in open area (Ref fig 12)

Willingness to pay for the waste generated

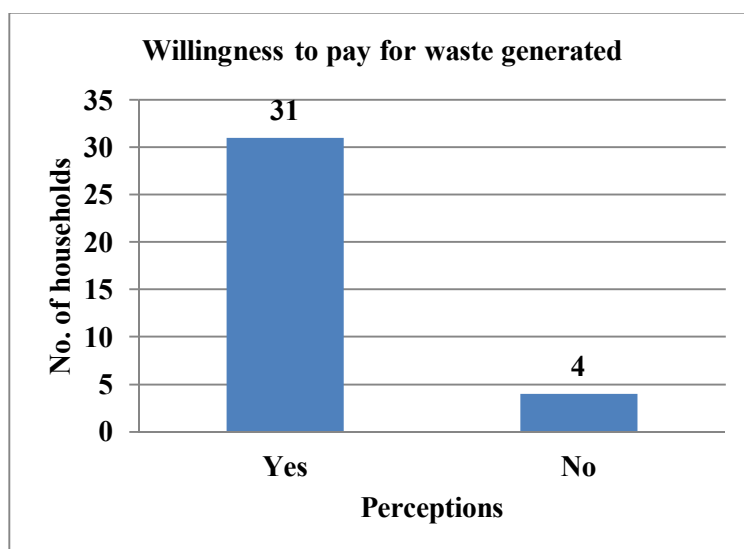


Figure 14: Opinion on Willingness to Pay for Waste Collection Service

31 household responded that they are ready to pay for the waste generated and they are paying for the waste. They also responded that charging fee on waste is a better option for waste management since people will try to reduce the waste amount when the burden of fees is felt.

Conclusion

With rapid development and change in consumption patterns waste production in the country had increased significantly over past few years. Authority responsible for managing waste is also facing problem in waste management and currently waste in Thimphu is managed by greener way. People are facing some challenges in managing their waste due to lack of dustbins in some areas , they are also helping in waste management through segregating their waste and willingness to pay for waste they generate. Therefore to have a proper waste management in the country the government should place several dustbins where people can dispose their waste and Greener way should focus on providing efficient waste collecting timings to the residents of Thimphu. This particular study is carried out as part of Academic learning and have less sample size compared to the population of Thimphu and may have some deficiency in it so, further research can be carried out to have better understanding.

Acknowledgement

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Determination of Literacy rate at Dechen Choling village

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Abstract

This paper describes the literacy rate of people residing at Dechen Choling in Thimphu Dzongkhag and examines the possible ways to increase the literacy rate. Face-to-face interviews, supported by structured questionnaires, were conducted to determine literacy rate, illiteracy rate, and male and female literacy rate. Many respondents are willing to educate their children. However 1) family income 2) government support 3) parents education and ability and interest of children are the bottle necks to improve literacy rate at Dechen Choling. So it is responsibilities of government, parents and individual child to increase literacy rate in Bhutan.

Introduction

The development of human capital helps in developing the nation as a whole and education is the part of human capital. According to United Nations Organization for Education, Science and Culture (2003), “a person who can independently read and write for communication and solve new problems using literacy skills” is known as literate person. According to National statistics Bureau (2007), the general literacy rate of Bhutan was 56% and the male literacy rate was 65.7% and female literacy rate was 46.3%. In year 2012, according to National statistical Bureau (2012), the general literacy rate of Bhutan has increased to 63% and male literacy has increased to 71.6%, female literacy rate has increased to 54.7% youth literacy rate was 86.1% in year 2012.

In this research paper I would mainly focus on study of people living in Dechen Choling village under the Thimphu Dzongkhag. It takes 20 to 30 minutes drive from Thimphu city. In Dechen Choling we can see many people work under royal family, especially as Royal Body Guards (RBG). According to the respondent the residents of Dechen Choling primarily depends on their father's salary and some of them does business and weaves cloths to support their livelihood.

In this study, an attempt is made to study about literacy and illiteracy rate, gender literacy rate in Dechen Choling Gewog under Thimphu Dzongkhag. The incomes of family, government policies, parent's education and ability and interest of children are the factors that affect the literacy rate. Through this study, I would like to know about how the above factors affect the literacy rate in

Dechen Choling village. I would also want to know about gender wise literacy rate and find out how many children are enrolled in primary, secondary and tertiary schools. In Bhutan there was high literacy rate among male as compared to female in past, but now a days we can see that female's literacy rate is also growing as equally as of male, so I want to know the current literacy in Dechen Choling village for male as well as female.

Methodology

In this research paper I have mainly focused on convenient sampling and collection of primary data in which I have collected information from the residents of Dechen Choling under Thimphu Dzongkhag with preparing structured questionnaires. I have collected information from 25 household, which have 6 family members on an average. This survey was conducted on 4th October 2014. The data was analyzed using excel sheet graphs and charts are also prepared using excel sheet. To collect information on people's perception I have used likert scale, especially to find out how the respondents are satisfied with education system in Bhutan.

To find out literacy rate, illiteracy rate, male and female literacy rate I have following formulas.

1. Literacy rate = $\frac{\text{literate population}}{\text{total population}} * 100$
2. Illiterate rate = $\frac{\text{illiterate population}}{\text{total population}} * 100$
3. Male literacy rate = $\frac{\text{total educated male population}}{\text{total literate male population}} * 100$
4. Female literacy rate = $\frac{\text{total educated female population}}{\text{total literated female population}} * 100$

Results and findings

The survey was done on 25 household at Dechen Choling village, which have total population of 170. On average the family size of Dechen Choling resident was about 6 family members.

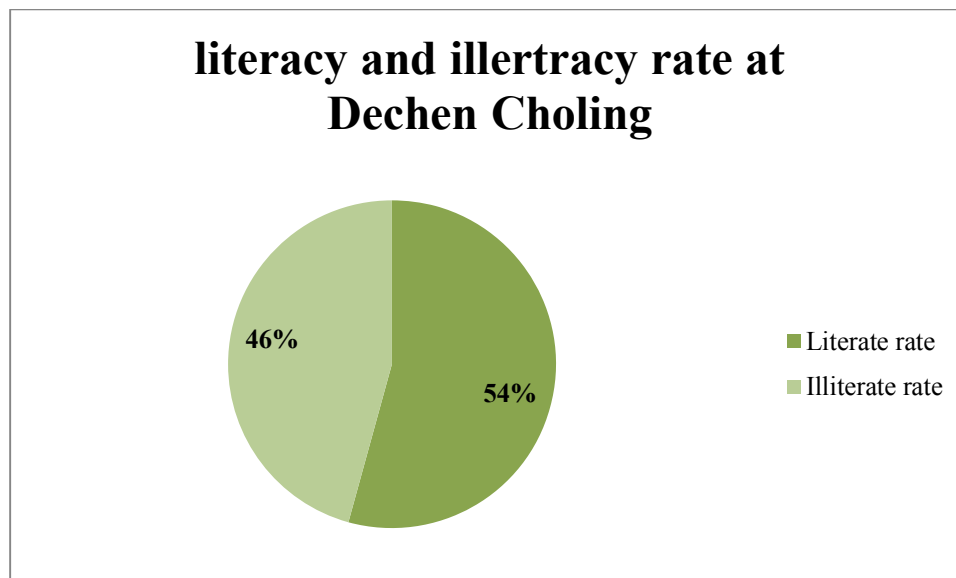


Figure 1: Literacy and Illiteracy Rate at Dechen Choling.

At Dechen Choling I found that 54.29% of populations are literate, which means about 54 people out of every 100 people are educated and 45.71% of populations are illiterate, which states that about 46 people out of every 100 population are uneducated or illiterate. The most of the illiterate people consist of father and mother in the family. The illiteracy rate at Dechen Choling is very high, so governments have to concentrate on increasing literacy rate and provide them education facilities like Non- Formal Education centre.

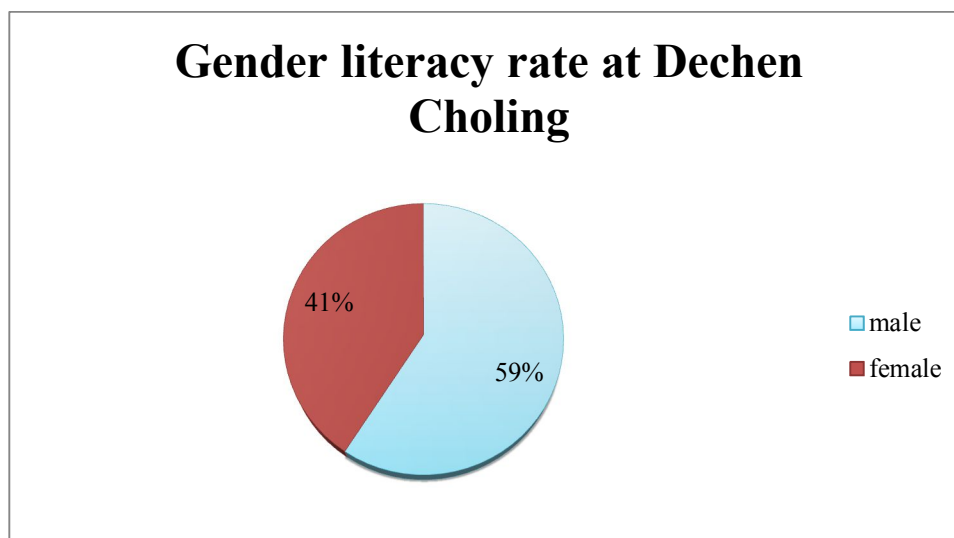


Figure 2: Gender Literacy Rate at Dechen Choling

In gender wise literacy rate, I found that more male are literate or educated as compared to female at Dechen Choling village. The male's literacy rate is 59.21% and female's literacy rate is 40.79%. Some of the respondent still beliefs that educating male is better than female because they told me that man can learn more than women and get good jobs as compared to female child and help them. So there is no gender equality in educating their children and there is huge gender disparity on educating children at Dechen Choling. Therefore the peoples in Dechen Choling should keep their orthodox belief aside and educate their children equally.

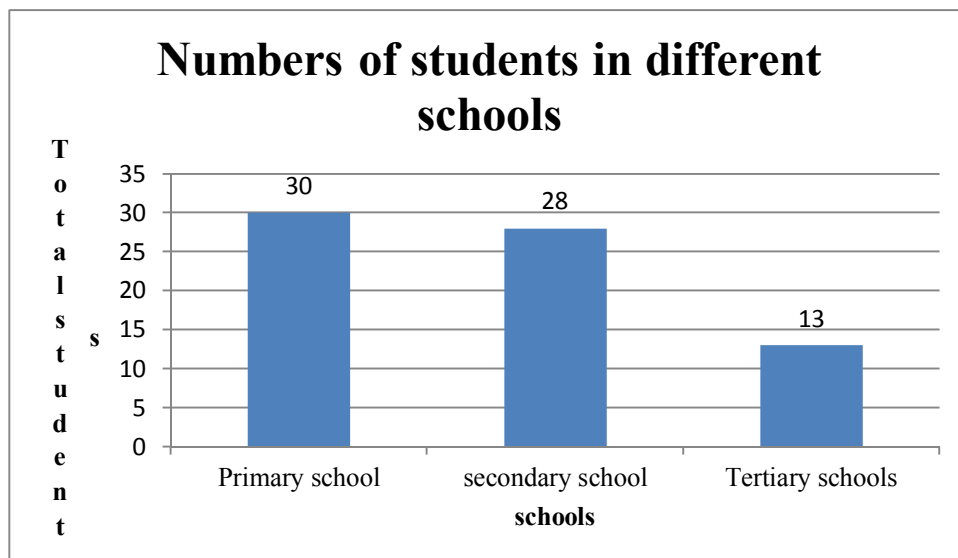


Figure 3: Number of Children in Different Schools

The above bar graph shows the total number of children of Dechen Choling residents studying in primary, secondary and tertiary schools in Bhutan and other part of the world. There about 30 students who are studying in primary school, 28 students in higher secondary school and 13 students in tertiary school. The primary schools students includes the children from pre primary to class 6, secondary school students includes the children's from class 7 to 12 and the tertiary school students includes children's in colleges and universities.

Table 1: Represents the Perception of Respondents, How they are Satisfied with Education System in Bhutan

How people are satisfied with education system in Bhutan	extremely satisfied	moderately satisfied	less satisfied	not satisfied at all
	13	12	0	0

The above table shows the perception (satisfaction level) of Dechen Choling of residents to the education system in Bhutan. Out of 25 residents at Dechen Choling almost 13 respondents are extremely satisfied with education system and 12 are moderately satisfied and no respondents are less satisfied or not satisfied at all. While I was collecting data most of the illiterate people are extremely satisfied and most the educated peoples are moderately satisfied with education system in Bhutan. Therefore we can conclude that the education system in Bhutan is good.

Table 2: Perception of Respondents that who should be Responsible to Increase Literacy Rate

Responsibility for increasing literacy rate	Government	Parents	Children them self
	2	16	7

The above table represents the thought of people residing at Dechen Choling for increasing literacy rate for their children. About 16 household thinks that it is sole responsibility of parents to give education to their children, 7 respondents said that it is responsibility of children themselves to get educated and 2 respondent told that it is responsibilities of government to increase literacy rate in Bhutan. Therefore it is responsibility of parents and children themselves to increase literacy in country.

Table 3: Factors that Play as Bottle Necks for Increasing Literacy Rate

Factors that affects attainment of education	Family income	Government policies	Parents education	Children's interest
	16	6	1	2

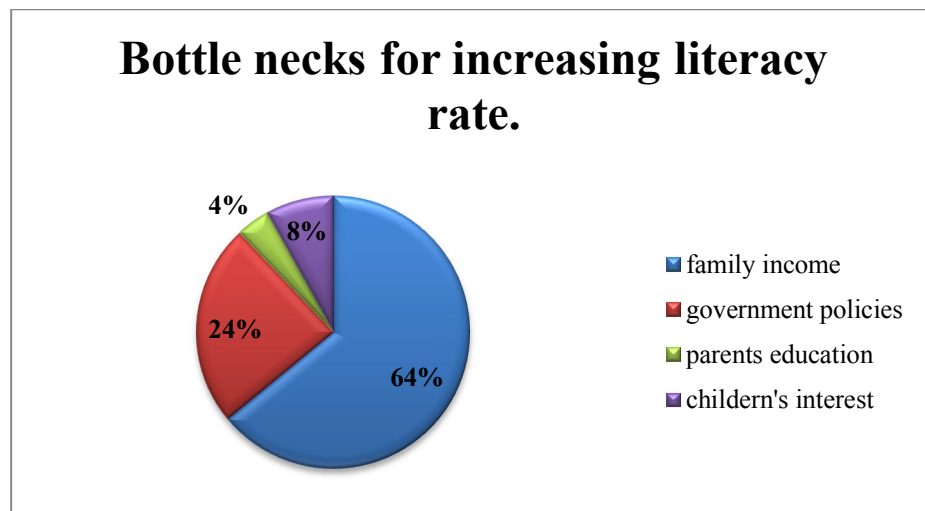


Figure 4: Factors that Play as Bottle Necks for Increasing Literacy Rate

While finding out the factors that affects the literacy in Dechen Choling, I found out that family income, government policies, parent's education and children's interest are the most prominent factors that determines the literacy rate in Dechen Choling village. From above factors family income plays are a vital role in increasing literacy at Dechen Choling and the parent's education was the least factor that undermines literacy rate. Therefore, if Bhutan government want increase literacy rate in Bhutan, than government have to first try to increase family income.

Limitation of the study

To do such survey was difficult, but it was more informative and interesting. In this study many of the respondents were illiterate and some of them are not willing to share their information. Another limitation was that more women than men were available to give interviews during the house-to-house visits and many of them not able to respond in English and I have used different local dialects to convey them.

Recommendation

The best method the government can use to improve literacy rates in Dechen Choling is to advance the system of education and education facilities. Increasing literacy rate isn't as simple as it sounds. Increasing the budget on education and education facilities is a good start but without a proper plan; there is a possibility that the increased budget will only provide unsatisfactory results. Therefore, the first priority should be given to researching the effectiveness of schools when it

comes to increasing literacy rates. So, the government can increase literacy rate in country. There is also the possibility that some of the households aren't accessible to the education facilities, so government need to provide support. This is the reason why innovative research is needed before advancing further into the plan. After adequate information is gathered, the Department of Education can plan a nationwide plan to enhance the education system.

It is not a sole responsibility of government, when it comes to increasing literacy rates. Parents of children also have a huge role in fighting against illiteracy. Encouraging children to read from a very young age can help them develop their reading and writing skills. If education starts at home then schools will have a much easier time teaching their students. Parents should also check on the progress of their children to make sure that they aren't lacking the required skills for reading and writing. It is important for parents to support their children if they have trouble in understanding the lessons they have in school.

It is also not a responsibility of government and parents, but it is the main responsibility of individual child to improve the quality of education and increase literacy rate in country.

At Dechen Choling female literacy rate is very low as compared to male literacy rate. According to Naizi (2014) "If you educate a woman, you teach the whole family" so it is very important to educate women to increase literacy rate in country. Therefore Bhutan government should formulate the plans and policies to increase female literacy rate in Dechen Choling and increase literacy for female

Conclusion

The study reveals that most of the respondents living at Dechen Choling rely on the salaries and wages of their family head. At Dechen Choling there are more literate people as compared to illiterate people and male literacy rate is higher than the female literacy rate. The study also reveals that there are more children who are in primary and secondary schools as compared to children's in tertiary level schools. According to National literacy policies of Bhutan (2003), Bhutan government has set a target to eradicate illiteracy by year 2012. However, study area (Dechen Choling) has only 54.29% of literacy rate prevailing and rest 45.71% remains illiterate. This shows that the illiteracy still exists in Bhutan and target is not full fulfilled.

Acknowledgement

I extend my appreciation to the people of Dechen Choling who have provided their information without any hesitation, though it was very difficult to answer my questioners as most of them are illiterate. I also would like to thank module tutor Dr. Leishipem Khamrang for giving me a chance to do research on this topic.

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Need Assessment Case Study of Micro Finance Institution at Chapcha Village, Chhukha Dzongkhag

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Date: 18th April 2015

Abstract

As of today there was no study being carried out to ascertain the requirement of microfinance institution in Bhutan. Therefore, this particular paper attempts to study the need assessment in a small hamlet of Chapcha located above Thimphu-Phuentsholing highway which is undertaken as class project. The data collected is based on primary data. The study covers 23 households in which 35% of the respondents were male and that of 65% were female. 56.5% of the households are male headed and that of 43.5% are female headed. Out of the 23 households, 17 households borrowed from the Lhakhang while 6 households deposited their savings.

The survey method used was complete enumeration as the population size is small but very few persons could not be reached due to their absence from the village during survey time. The research is based both on qualitative and quantitative method.

The average saving is Nu. 1,30,333.00 and the average borrowing is Nu. 57,831.76 However, there is no significance difference on the means of amount spent on investment and consumption with Nu. 30,758.75 and Nu. 30,687.50 respectively.

The main findings from the study are that there is need of microfinance in the village to a great extent with 79% willing to shift to formal MFI albeit informal MFI existing through community Lhakhang.

Introduction

Chapcha is a small village under Chukha Dzongkha with the population size of around 500. It is located 54km away from Capital City (Thimphu). The village is connected with all modern facilities such as internet, roads, Schools, hospital and telecommunication but does not have banking services. To access banking services the villagers has to go to Tsimalakha which is around

24 KM away and it makes villagers difficult to access. As the banking service is far away from the community the people have formed groups which acts as a non-formal micro finance institution in the name of Lhakhang. People who has surplus can deposit in the Lhakhang and those who are in demand of money can avail loan from it. The main source of income is from agricultural activities such as potato cultivation, peas, beans and chilly. However, the villagers focuses on potato cultivation as it is the major contributor to their income.

History of the institution

According to the committee members of the Lhakhang, the institution in the village was first formed in 1990s. In 2006 the institution was set up again as it was not effective earlier. The motto of the institution was to generate revenue for the Lhakhang, make their capital up to sixty lakhs (6000000) and to carry out Lhakhang related activities. The capital of the institution was first raised through contribution from the members and later was generated from the interest earned from its lending. Currently there are 37 households registered under the Lhakhang. People have access to deposits and borrowings only once a year. The institution is managed by 3 leaders known as the Tshogpa with three different post viz. Thrizin, Drungchen and Tshizen. The Lhakhang has a capital of forty lakhs (40,00,000) including deposits from members. Out of Forty lakhs (40,00,000), twenty lakhs (20,00,000) is in form of deposits from the members and the balance belongs to the Lhakhang itself. The institution charges interest rate of **sum key** on deposits and charges **nga key** on borrowings. The balance 10% interest is kept as Lhakhang's capital. The mode of lending is through a legal agreement with a witness. As of today there are some defaulters but the committee has no problem in handling because of the witness and legal agreement made. Despite borrowings and deposit facilities the committee also provides technical and managerial support to its members.

Methodology

Complete enumeration was undertaken as the target population size i.e. households who availed the services of informal MFI at Chapcha was small. There were only 37 households who either borrowed or deposited money in the Lhakhang which acts as informal MFI in the village. In this research project, the analysis is based on the primary data collected. The questionnaire is divided into two parts viz. section A and section B. The section A was for the committee members of the informal MFI and the section B was for the community people who availed the services of informal

MFI within the past one year. The section A covers the management aspects of the informal MFI while the section B encompasses the use of the borrowed money such as expenses on various consumption and investments.

The data are being analysed using SPSS software. A simple multiple regression tests was also done to understand what could determine the amount of money borrowed.

Results

The analysis of pie diagram indicates that 79.95% (Figure 1) of the respondents would prefer to shift to a formal microfinance institution albeit having informal access to credit in their community. The rest 21.05% of the respondents were content with the present system of informal MFI existing in the community. Similarly, 78.57% of the interviewee responded that they avail managerial support from the members of the informal MFI (Figure 2). Community social welfare was the major reason for people saving their money in the community Lhakhang as 67% of the sample cited this reason while only 33% cited the reason as convenience for the same. However, on the contrary, 76% of the sample said that they borrow from Lhakhang as it was convenient for them while only 24% cited the reason for borrowing as community social welfare.

Respondents' Preference to Shift to Formal MFI

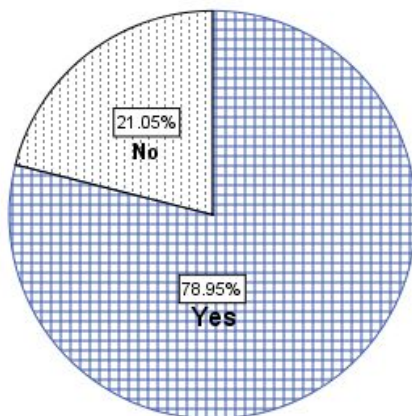


Figure 1: Pie chart showing respondents' preference to shift to formal MFI

Availability of Managerial Support

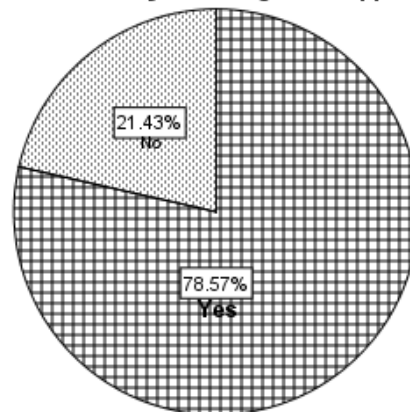


Figure 2: Pie chart showing availability of managerial support from Lhakhang

The mean amount borrowed on investment was Nu. 30,579 (Table 1). The majority of the amount was spent on children's education with 44% which is followed by fertilizer with 31% (Table 2). The average amount spent on consumption was Nu. 32,200 (Table 1) and the maximum percent was spent on buying food items with 50% which is followed by 25% on performing annual puja (Table 3). 87% (Figure 3) of the respondents strongly agreed to the statements about the economic benefits by the Lhakhang while there was none who either disagreed or strongly disagreed to the same statement. However, on deeper analysis, higher education level of secondary and higher secondary fully agreed with 100% on the economic benefits by the Lhakhang (Table 5). There was no one with graduate qualification and thus it showed a zero percent on any statement. This implicitly supports the theory that those with higher educational level tend to borrow and invest in economic activities.

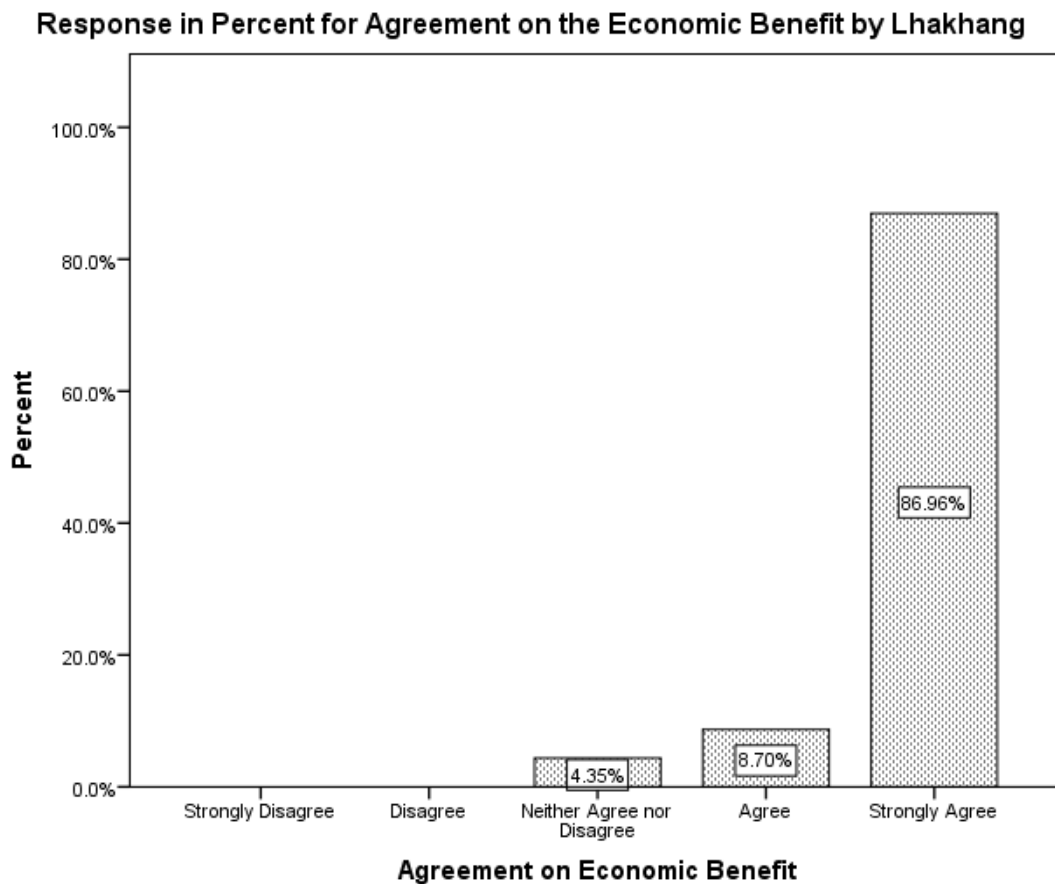


Figure 3: Response to Statement on whether there is Economic Benefits by Lhakhang

Most of the respondents had studied non formal education (56%) followed by secondary (21%) and there were no graduates. For further analysis we had a regression analysis to determine the impact of education level on amount borrowings.

A multiple linear regression method is used to find the functional relationships between the dependent variable, total amount of money borrowed (MB) and the independent variables viz. age (Ag), household size (HhS) and actual class studied (AC). The model will test the null hypothesis: $H_0: \beta_1 = \beta_2 = \beta_3 = 0$ and an alternative hypothesis: H_a : at least one $\beta_i \neq 0$ at 0.05 significance level. Thus, H_a will test at least one of independent variables viz. Ag, HhS and AC is not equal to zero. The functional relationship of model is as follows:

$$MB = \beta_0 + \beta_1 Ag + \beta_2 HhS + \beta_3 AC + \varepsilon$$

The significance value is 0.344 at 95% confidence interval (CI) which is greater than 0.05 therefore we can say that any of the predictors is not able to predict the dependent variable MB. Even at 90% CI the predictors are not able to predict. However, this could be due to the small population size itself despite complete enumeration being carried out.

Discussion

Similar study was carried out in Uganda, Africa by Morris and Barnes (n.d), their findings says that their respondents are farmers and in our research our respondents were all farmers. Their sample size was large due to large population but our sample was small due to small population size of 37 household. In Uganda farmers spend around 2653 Shilling on average on agricultural inputs similarly in our research farmers of Chapcha spends around Nu.6000 on buying agricultural inputs such as fertilizer and tools. In Uganda their source of income is through agricultural activities and micro enterprise where as in Chapcha their main source of income from Agriculture. These are some of the similar findings from two different researches in different country and for further analysis there is need of further research in the country.

Conclusion

The villagers of Chapcha are satisfied with the informal MFI in their community. As of today they had been using the MFI as a bank for their convenience and social welfare. They MIF had been successful over past few years and they aim to accumulate their capital up to 60 lhaks. The MFI

has certain default problems but it was not a major challenge. The benefit derived from the MIF is strongly agreed by all the respondents and they hope to shift from informal to formal MFI in future. Though they do not behave like micro finance institution it helped the villagers in financing. This particular research could not provide answer to certain questions therefore, further research has to be carried out for detailed information.

Acknowledgement

The team would like to thank Mr. Khandu the president of the MFI for sharing information about the MFI and helping us in our sample framing. We would like to thank the villagers of Chapcha for kindly cooperating with us for the survey and offering us with tea and biscuits. Lastly we would like to thank Professor Sanjeev Mehta for providing us to do this research.

Table 1: Descriptive Statistics of Amount Borrowed and its Expenses

Indicators	N	Minimum	Maximum	Sum	Mean	Std. Deviation	Skewness	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error
Total amount saved	6	40000.00	200000.00	782000.00	130333.33	78285.80	-.186	.845
Total amount borrowed	17	10000.00	200000.00	983140.00	57831.76	57668.95	1.528	.550
Amount borrowed for each Investment purpose	16	1350	200000	492140	30758.75	56066.87	2.508	.564
Amount spent on each Consumption	16	2000.00	70000.00	491000.00	30687.5000	20754.81	.459	.564

Table 2: Statistics of Amount on Various Investments

Type of Investment made from borrowing	Amount borrowed for each Investment purpose					
	Mean	Standard Deviation	Layer Column Valid N %	Sum	Minimum	Maximum
Fencing	.	.	0.0%	.	.	.
Buying Fertilizer	6158	4811	31.3%	30790	1790	13000
Tools	1675	460	12.5%	3350	1350	2000
Seeds	.	.	0.0%	.	.	.
Children's Education	35857	46463	43.8%	251000	8000	135000
Others	103500	136472	12.5%	207000	7000	200000

Table 3: Statistics of amount on various consumption

Type of Consumption made from borrowing	Amount borrowed for each Investment purpose					
	Mean	Standard Deviation	Layer Column Valid N %	Sum	Minimum	Maximum
Annual Puja	7395	7927	25.0%	14790	1790	13000
Purchase of Food item	45500	60523	50.0%	182000	8000	135000
Buy Compound Bow	.	.	0.0%	.	.	.
Buy vehicles	10000	.	12.5%	10000	10000	10000
Others	5000	.	12.5%	5000	5000	5000

Table 4: Regression output

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	85413.204	92944.956		.919	.375
Hhsize	-10410.837	8103.541	-.329	-1.285	.221
Actual class studied	-3066.627	4871.882	-.189	-.629	.540
Age	850.242	1427.341	.180	.596	.562

a. Dependent Variable: Total amount borrowed

ANOVA^a

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	15269456993.49	3	5089818997.83	1.213	.344 ^b
Residual	54568822630.03	13	4197601740.77		
Total	69838279623.52	16			

a. Dependent Variable: Total amount borrowed

b. Predictors: (Constant), Age, Household size, Actual class studied

Table 5: Percent on Agreement to the Benefit level by Lhakhang

Agreement on economic benefit by the Lhakhang	Level of Education				
	No Formal	Primary	Secondary	Higher	Graduate
Strongly Disagree	0%	0%	0%	0%	0%
Disagree	0%	0%	0%	0%	0%
Neither Agree nor Disagree	8%	0%	0%	0%	0%
Agree	8%	25%	0%	0%	0%
Strongly Agree	85%	75%	100%	100%	0%

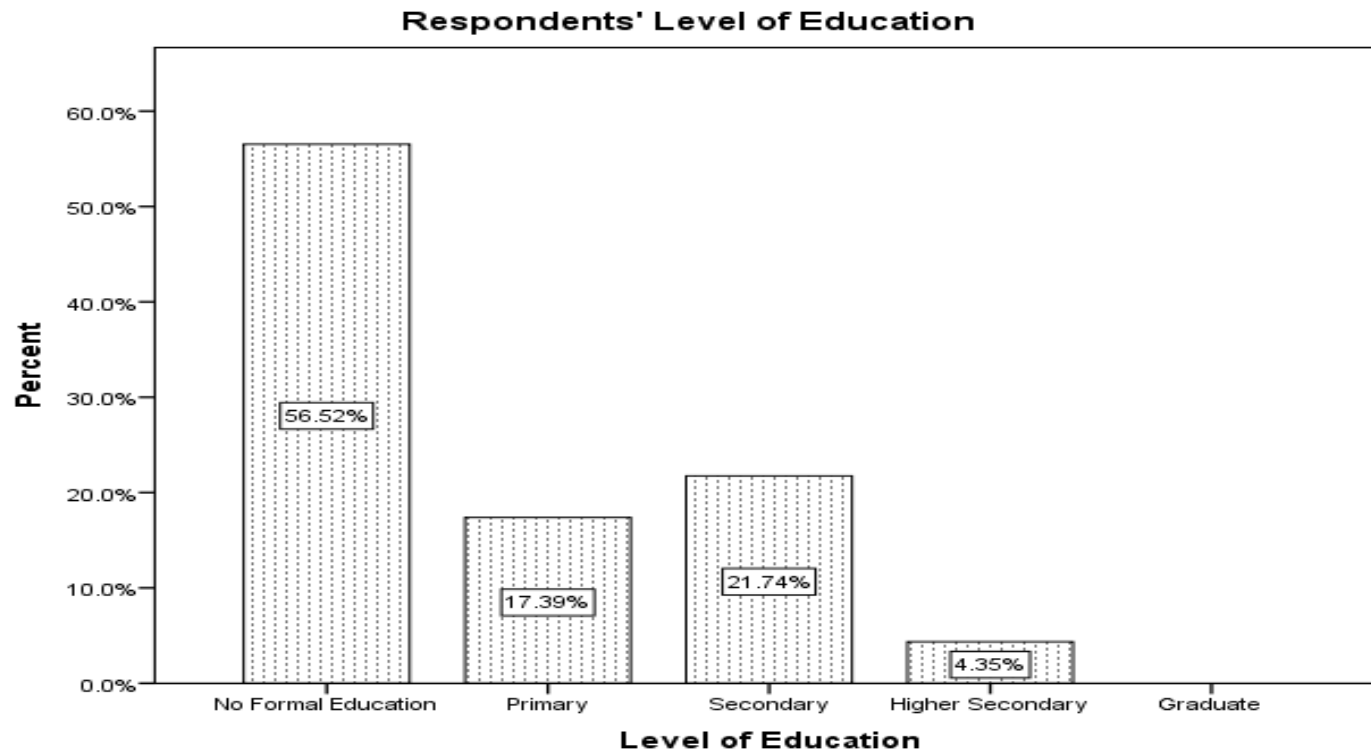


Figure 4: Response to statement on whether there is economic benefits by Lhakhang

Reference:

Morris, G. & Barnes, C. (n.d). *An assessment of the impact of microfinance: A case study from Uganda*.
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Globalization and its Impact on Bhutan

Namgay Choden , First Year

Bhutan, the country that remained isolated from the rest of the world for centuries is considered among the fastest growing economies in the world. The advancement in technology and mass media has brought several changes to the lives of the Bhutanese people. People have started buying excessive luxury goods and this has made the lives of Bhutanese people comfortable, however major traditional values and customs have been lost in terms of social values, cultural values and religious practices.

Bhutanese people have access to varieties of luxury goods and due to this, major traditional values and customs have been lost in terms of social values of the country. As Bhutan metamorphosed from conventional agrarian to a contemporary nation, the lifestyles of families are changing (Collins, 2012). Today people are busy earning extra money to maintain their standard of living and this motive to earn extra money has weakened the family bonds between parents and children. Wangyal (2001) points out that while the parents are busy working hard to earn, the children are left at home with the baby-sitters or in front of the television and this has limited children's exposure to cultural and social values which are of utmost importance at that age. The age old tradition of social life among the families and neighbours are gradually fading with time. Prior to the introduction of television, family members sit and talk or share stories after meals but at present parents do not have time to talk to their children and neglect family matters so that they do not miss on their soaps and serials (Rabten, n.d). During the time of the grand parents, friends and families help each other to complete work and were connected to each other (Collins, 2012). Nowadays people spend their free time in front of the computers and television and do not have enough time to spend with families and relatives. Nowadays the Bhutanese people living in urban centres seldom visit their families and relatives in the villages because they have to take gifts, instead they spend their savings to buy goods to make their life comfortable (Wangyal, 2001).

The advancement in technology and mass media has made the lives of Bhutanese people comfortable, however it has posed threat to the cultural values and traditions of the nation. With the onset of new technologies such as television, radio and the internet, the oral traditions of ancient times are losing their values (Cline, 2011). Significantly the age-old traditions of “folklore” and

“mythology” are not being taught to the youths, who spend a major part of their time on television or playing online games instead of talking to their grandparents or hearing folktales (Cline, 2011). Due to access to variety of television channels for 24 hours, people are propelled to get influenced by foreign cultures (Rabten, n.d). This can have negative impact in sustaining traditional and cultural values of the home country. Native cultures and practices are deteriorating due to exposure to different cultures of the world and people are increasingly getting influenced by the social media (Rabten, n.d). “The more we learn about the world, the more we are loosing of our own culture.” (Peck.(n.d). as cited in Freeman and Jackson, 2012). The inflow of foreign made goods has caused negative impacts on the Bhutanese cultures and traditions in terms of the attires and entertainments. The younger generations of Bhutan are inclined towards western attires and rather discard their national dress (Cline, 2011).

Access to the global market has brought significant changes to the lives of the Bhutanese people and this has negatively impacted the culture and tradition of the nation in terms of religious practices. As people are becoming egocentric and money-oriented, traditional values and religious practices are compromised (Wangyal, 2001). In the past, Bhutanese people frequently dedicated their time for religious practices but since the introduction of television in 1999, people have started compromising their time for religious activities to living a luxurious lifestyle. Collins (2012) in her interview with three generations of woman found out that the time spent on religious activities declines from the grandmother’s generation to the mother’s and further to the daughter’s generation, the daughter’s generation considers it “boring” and “traditional” and they prefer doing “cooler things” such as playing “video games”. People are increasingly becoming lavish and full of material comforts rather than focusing on simplicity. Wangyal (2001) points out that Contrary to conventional societies where people had incredible admiration for the religious and cultural beliefs, today scientific evidences and coherence has taken preeminence depending on commercialism. Consumerism increases people’s cravings for goods and this has resulted in declining of religious values. Wangyal (2001) mentioned that as a result of discontentment of material possessions, people desecrate sacred stupas and monasteries to earn money by selling the ancient relics.

Development began a few decades ago and since then Bhutan has transitioned from an agrarian nation to a consumer culture. Improved technology has assisted Bhutan to educate the people

(Freeman and Jackson, 2012) and access to global markets helped its people to live a complacent life, however excessive consumerism could destroy the cultures and traditions of the nation and could have severe impact on the social values and religious practices. Bhutanese youth constitute more than half of the total population and this indicate that majority of the Bhutanese population are vulnerable to get influenced by the materialistic world.

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Theoretic contribution by Thomas Robert Malthus in an economy

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Thomas Robert Malthus (1766-1834) was a British scholar, influential in political economy and demography. He was born near Guildford, Surrey in February. He was educated from Jesus College, Cambridge in 1784 where he achieved high marks in his mathematical studies. Malthus went to Cambridge University, earning a master's degree in 1791. In 1793, he was made a fellow of Jesus College, Cambridge. He was officially made as an Anglican cleric in 1797. He became curate of the parish of Albury in Surrey in 1798. In 1805, Malthus became professor of history and political economy at the East India Company's college (Haileybury) in Hertfordshire.

Malthus was well known for his work 'An Essay on the Principle of Population' which was published in 1798. He was the author of many pamphlets including 'An Inquiry into the Nature and Progress of Rent' (1815) and 'Principles of Political Economy' (1820). Malthus has become widely known for his theories on population and its increases or decreases in response to various factors. Malthus believed that the world's population tends to increase at a faster rate than its food supply. He believed that only bad could come from population growth.

Thomas Robert started from two basic postulates:

- 1) Sexual passion is an essential part of human life.
- 2) Food is necessary for the existence of man.

Based on these two points, Malthus made two important propositions:

- 1) Food supply increases in an arithmetic progression (1, 2, 3, 4, 5....)
- 2) Population increases in a geometric progression (1, 2, 4, 8, 16, 32....)

From these two propositions, follows the important result:

The power of population to increase is greater than the power of food supply to increase that is population will outgrow the food supply. This will create disequilibrium between number of

population and quantity of food supply. In the other words, there will be an acute shortage of food sooner or later. He termed this situation as over population or excessive population.

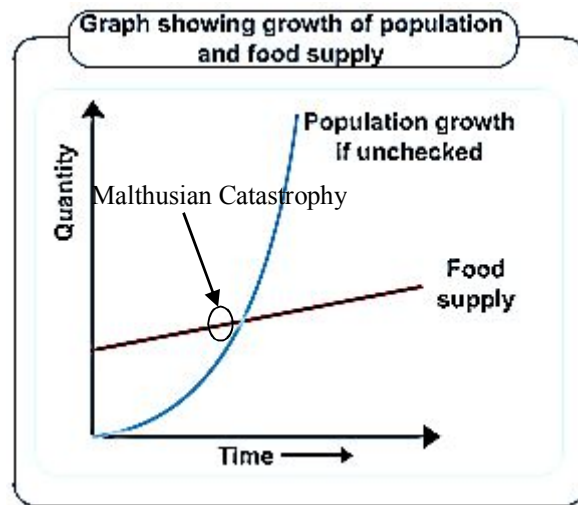


Figure 1: Growth of Population and Food Supply

Malthusian Catastrophy is a situation where population exceeds available resources and is forced to return to a subsistence level of existence.

The equilibrium between population and food supply can be maintained through two checks:

- 1) Preventive checks: Involves human made checks such as celibacy, late marriage, prostitution and abortion.
- 2) Positive checks: Involves various forms of natural calamities such as famine, epidemics, flood and wars.

The preventive check consists of voluntarily limitation of population growth. Before getting married, people make rational decision based on the income they earn and quality of life they expect to have.

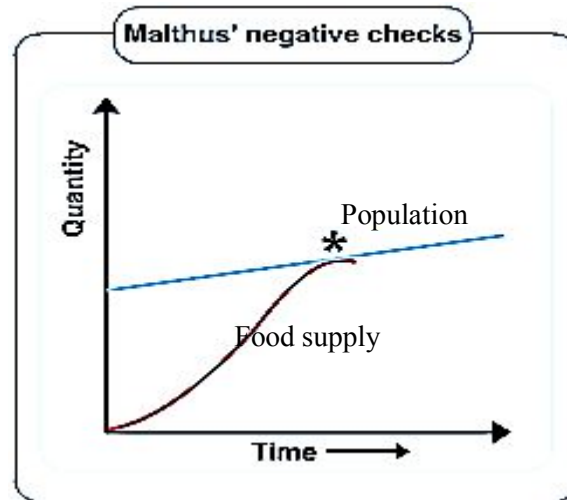


Figure 2: Representation of Malthusian Check

According to Malthus, at point (*) as population starts to approach the limits of the food supply, growth slows. Malthus said that this slowing is caused by preventive checks. When there is shortage of food supply, he says that people will realise the fact of preventive check and ultimately growth of population will decrease.

Criticism:

Ester Boserup (1910–1999), was a Danish economist who opposed his view on population growth and food supply. She studied economic and agricultural development. She wrote book ‘Necessity is the mother of invention’ which means if someone is in need of something, someone will invent it. Therefore human will always find a way to solve problem.

Boserup, on the other hand, said that food supply would increase to cope up population growth. She said that as people approaches food shortages they would identify ways of increasing supply through new technology, better seeds and modern farming methods. In the graph below we can see that food supply will increase with increase in population.

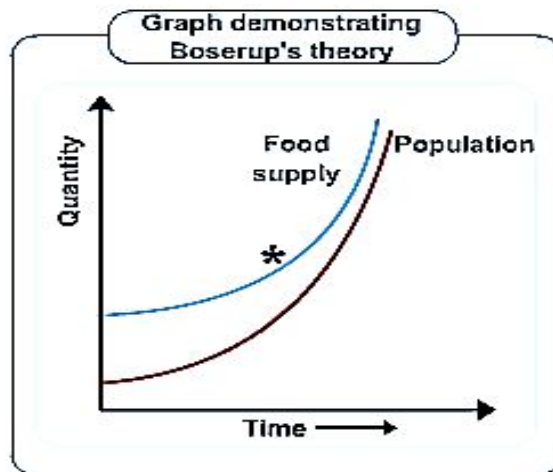


Figure 3: Representation of Boserup's Theory

Boserup argues that as the population approaches the limits of the food supply (*), food supply increases due to improvement and innovation of technologies. According to her, greater population means more geniuses with intelligence to create new resources find new materials and discover new ways to do things.

Malthus did not foresee the effects of agrarian revolution and technological changes which has now brought about larger increase in supply of food. It disproved the Malthus proposition that food supply increase in arithmetic progression.

There is no example in any country that population has increased in geometric progression.

Malthus failed to see that a consumer is also a producer and with every mouth God sends a pair of hands as well. Increased population not only raises the demand for food grains, but also the supply of labor.

He failed to see that maintaining standard of living will lead to small size families and economic development will bring down the birth rate through education and family planning.

According to optimistic viewers, resources are infinite. There is sufficient land and resources for unlimited time. The keys factor which contributes to food surplus is capital, technology and educated people. Technologies and knowledge lead to increase in production of food without having to limit population. They believe that human will rise above and technology solves almost

all problems. If technology causes a problem, it can also solve it. For example, new eco-friendly technologies being developed that can reduce pollution. The current problems such as poverty, malnutrition and unemployment are caused by poor investment and unequal distribution of resources but there is no limit on production of food. Their view on Green Revolution also helps in increasing production of food with high yielding varieties of grains, improved seeds (Genetically modified seeds), fertilizers and pesticides, water control and mechanization.

The positive check to population is the consequences of the lack of a preventive check. When a society does not voluntarily reduce population size, diseases, famine and wars come into action to reduce population growth and establish necessary balance with available resources.

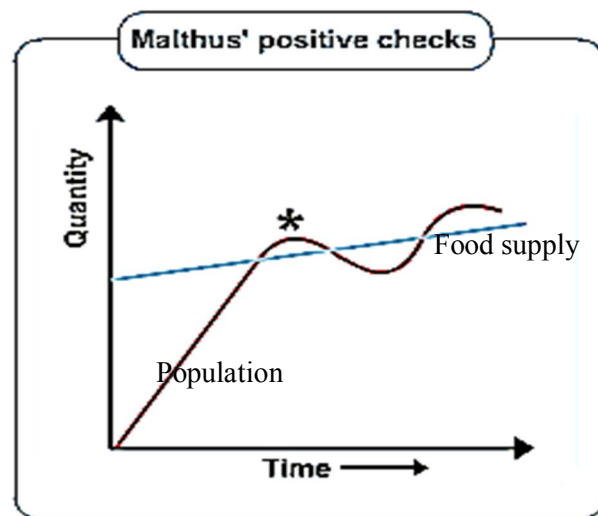


Figure 4: Representation of Malthusian Positive Check

Malthus pointed out that as population exceeds food supply, it is checked by war, famine, or disease. It then drops below the food supply. As the population recovers, again it goes under positive check and continuous.

According to Malthus, the technologies that contribute to increase in production of agricultural yields may help people in the short run but in the long run, increase in population would cause cancellation of temporary utility. He believes that resources are finite and used resources cannot be replenished. Resources may run out as soon as fifty years. Technology only adds to the problem by depleting resources. He was against monetary transfer from rich to poor people. As per him, giving money to the poor people will encourage them to think that they can support a bigger family,

which would generate higher population growth. Moreover, after such activity people can afford to buy more food leading to increase in price and decrease in real income which would hurt poor individuals whose income comes from labor. Rich get richer and poor get poorer.

Two hundred years have now passed since Malthus set his proposition that population would grow to a point where resources would not be enough to support. So far there is no such problem occurring in any country and we are yet okay with what we have. Population has grown slowly until the industrial revolution and improvement in technology and food distribution brought declining death rates. Therefore Malthus was criticized by economists, Edwin Carr, Julian Simon, Esther Boserup and many other economists for his view on population. However we always cannot say that Malthus was wrong because to some extent since he talked about decreasing the population which could lead to negative effect in a society. In the late 1970s, the Chinese government introduced a number of measures to reduce the country's birth rate and slow the population growth rate. Chinese adopted one-child policy where a couple were to have only one child. This indicates that the world is realising negative impact of over population. Result of Malthusian theory is yet to see because future is yet to come.

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