AN ORDERED PROBIT MODEL ON QUITTING DECISION OF SECONDARY PUBLIC SCHOOL TEACHERS IN BHUTAN

Kuenga Choden

A Thesis Submitted in Partial
Fulfillment of the Requirements for the Degree of
Master of Economics
School of Development Economics
National Institute of Development Administration
2018

AN ORDERED PROBIT MODEL ON QUITTING DECISION OF SECONDARY PUBLIC SCHOOL TEACHERS IN BHUTAN

Kuenga Choden
School of Development Economics

..... Major Advisor
(Assistant Professor Anan Wattanakuljarus, Ph.D.)

The Examining Committee Approved This Thesis Submitted in Partial Fulfillment of the Requirements for the Degree of Master of Economics.

..... Committee Chairperson
(Instructor Peera Tangtammaruk, Ph.D.)

..... Committee
(Associate Professor Udomsak Seenprachawong, Ph.D.)

..... Committee
(Assistant Professor Anan Wattanakuljarus, Ph.D.)

..... Dean
(Assistant Professor Nada Chunsom, D.B.A.)

_____/_____/_____

ABSTRACT

Title of Thesis AN ORDERED PROBIT MODEL ON QUITTING DECISION OF SECONDARY PUBLIC SCHOOL TEACHERS IN BHUTAN

Author Kuenga Choden

Degree Master of Economics

Year 2018

Retaining trained teachers is an issue for almost every country despite its socioeconomic differences. A small developing country, Bhutan is facing the problem of retaining its trained and experienced teachers. Teachers leaving the profession on a voluntary basis have been increasing year by year. It became more serious in 2017 where the Ministry of Education had to train and employ 360 fresh graduates as contact teachers to overcome the problem of teacher shortage. Cross-sectional data were collected through a questionnaire distributed randomly among 596 teachers in secondary public schools in Bhutan because they comprise about 70.73% of total public school teachers.This study focuses on the factors that can lead to quitting decision by the teachers within two years. Based on descriptive analysis of raw data, an index data and ordered probit model, the result revealed that factors such as gender, qualification, monetary rewards, and support from the administration affected the teachers' quitting decision within two years more than the work satisfaction, working environment and interpersonal relationship. The findings showed that one unit increase in the incentive/income of a teacher can reduce the decision to quit within two years by almost 15%. There is a strong and significant negative relationship between incentives/income and teachers' decision to quit.Also, the actual rate of the teachers who were planning to leave within two years was yielded and some of the suggestions from the participants to the Ministry of Education in order to retain the experienced ones in the system, which can be helpful even for the policy makers of public and private schools, are given. The findings of this research will be helpful to the future researchers as their reference.

KEYWORDS: Quit decision, Ordered probit model, Contract teachers.

ACKNOWLEDGEMENTS

The tribute for the successful completion of my thesis goes to my major adviser Professor Dr. Anan Wattanakuljarus, who has guided me with his sincere and continuous support, time, and comments besides his very busy schedules. He has encouraged and taught me lots more than I expected. I shall remain grateful throughout my life.

I am very thankful to my committee members Associate Professor Dr. Udomsak Seenprachawong and Assistant Prof. Dr. Niramol Ariyaarpakamol for their support, guidance, time, and feed backs.

I am equally indebted to Professor Dr. Peera Tangtammaruk, my external committee member and the chairperson for the thesis defence for taking out time in going through my paper and providing me with helpful comments and feed backs.

I would like to extend my gratitude to those teachers who took time in answering the survey questionnaires and my friends who helped me to collect the data within given time period.

I must not forget to extend my heartfelt thank you to the officers and staff members of the Graduate School of Development Economics for always rendering their helping hand, informing and reminding regarding the process that I have to follow.

My sincere thanks goes to my friends and colleagues for their words of encouragement and support in times of need.

I sincerely thank Ministry of Education and Royal Civil Service Commission, Bhutan for nominating and selecting me for this program and Thailand International Cooperation Agency (TICA) for the wonderful support and scholarship.

Lastly I would like to thank my parents and family for their love and support. I extend my gratitude to my family (husband and kids) for their love, support and words of encouragement.

Kuenga Choden

August 2018

TABLE OF CONTENTS

Page

LIST OF TABLES

Table **Page**

CHAPTER 1

INTRODUCTION

1.1 Background of Education in Bhutan

The consolidation of Bhutan occurred in 1616 after the arrival of Zhabdrung Ngawang Namgyel, a Lama from western Tibet defeating multiple Tibetan invasions. However, after his death infighting and civil war eroded the country for next 200 years or so. There was continuous unrest and internal fighting in the country unless Ugyen Wangchuck was able to consolidate power in 1885 and began cultivating closer ties with the British in the Indian subcontinent. In the year 1907, the people, monastic bodies, local leaders, and chieftains elected Ugyen Wangchuckas the first hereditary monarch and installed as the head of state, The Druk Gyalpo (Dragon King). As a result of prolonged unification of the nation, formal modern education started very late in the nation. The First King opened the first school for students in 1914. Prior to it monastic education was the only form of education existed in Bhutan. Even after establishing formal education the students were sent to schools in the neighboring country India for further studies in their young age owing to lack of higher institution, which also contributed in children discontinuing their studies.

In 1962, the government introduced the western education system and adopted English as a medium of instruction in all the schools. Since then the Bhutanese education system surged in every aspects and was a story of flourish and success until this modern period.

To meet the requirement of the teachers in the country, Paro College of Education was established in 1975 as a Pre-school Care Training Centre with eight female trainees. In 1968, Samtse College of Education was established as first Teacher Training Institute. At present, there are 1,464 trainees in Paro College of Education and 966 teacher trainee in Samtse College of Education (Ministry of Education, 2017). From the very beginning after setting up of the teacher training

centers, there was lack of interest shown by the graduates even when the requirement was with the minimum qualification. Few were there who with enthusiasm opted to join this noble profession but the majority of the teacher candidates joined due to certain circumstances. The Ministry required more teacher than the applied numbers, so the teacher shortage has long been an issue in the education system in Bhutan (Quality of Education in Bhutan, 2009).

Currently, the country has 296 Primary schools, 71 Lower Secondary Schools, 70 Middle Secondary Schools and 42 Higher Secondary Schools, a total of 479 Government schools with 1,56,154 students and 8,644 teachers. Out of 156,154 students, 117356 are in secondary schools. Out of 8644 teachers, 6118 are teaching in government secondary schools from which 3730 are in urban and 2888 are in rural (Ministry of Education, 2017).

1.2 Background of the Study

Teachers are the role model who helps in shaping the future of the children and help them learn the basic skills in life. Teachers play important role in conveying wholesome education to the students. They must have tolerance and be able to create conducive learning environment; they have to be vigilant and active so that the students' learning takes place as well as teachers play a crucial role for the betterment of students' success (Karbownik, 2014).

Teacher takes up various roles and responsibilities in the school besides teaching, but the most important role that they play in the life of the student is that of a mentor who guides and educates the young minds with the help of various strategies and skills. They play the role of a parent, who cares about providing emotional and physical assistance. Their character influences the students and the impact of the role played by the teacher in the life of the student remains for a longer period. Borman & Dowling, (2008) mentioned that the nature of a teacher has more effect on the change in the students' performance compared to other school facilities. Teachers have lasting and growing impact on the students, as per the study by Borman & Dowling (2008) and Loeb, Darling-Hammond, & Luczak (2005) exhibited that the outcome of the students at present was influenced by their teachers who taught them in previous years.

However, the roles played by teachers are very important in the society, yet their profession received lesser recognition they deserve, consequently they are less motivated and satisfied with their profession. The issue of teachers being less satisfied with teaching and looking for an opportunity to switch or to quit this profession has been there for a long time in most of the countries. The highly qualified teachers resigning and leaving their profession before the retirement is a major problem in many countries including the US even when the education policies and the system is not the same (Skaalvik & Skaalvik, 2011).

Since achievement of 100% literacy rate was one of the MDG (Millennium Development Goal), Government implemented a policy of compulsory primary education, to achieve this goal trained and skilled teachers play the main role. Since the number of children enrolled in basic education has increased, experienced and qualified teachers are necessary for delivering quality education(Nutsuklo, 2015).

As the government realized the significance of teacher and the problem of teacher attrition, in 2009 there was pay revision for all the civil servants in the country and the teachers were entitled to teaching allowance as per the number of years they had served.

Since teacher's education qualification was recognized as an important investment for them to develop professionally so that it will help in improving the quality of education, the government has declared the year 2016 as 'Teacher Development Year'. The Ministry of Education trained all the teachers in the country on 21st Century Teaching Pedagogy in 2016-17 in order to improve classroom activities by making learning more fun and child-friendly. The Ministry also provides various Professional development programs by sending teachers for various workshops, in-service training both inside and outside the country. Those teachers who have qualification of primary teaching certificate (PTC) were given an opportunity to upgrade their qualification to Bachelors of Education through distance learning and in 2002 the Ministry started offering Masters of Education program (Ministry of Education, 2016). The Annual budget allocation is highest to the Ministry of Education, but when a teacher after all the expenses made by the government leaves their profession, it's a great loss and thus hampers the economy, where the returns are lower compared to the expenses incurred.

1.3 Statement of Problem

Teachers are the largest group within the civil servant society and it makes up about 30-35% of it in Bhutan. There are 8,644 teachers teaching in various public schools in the country in 2017.

At least one teacher leaves the job every day in Bhutan. Every year teachers leaving their profession on voluntary basis have been increasing despite the attempt made by the government to retain. This causes a severe problem of teacher shortage especially when they leave the job in the middle of the academic session. It is a loss to the Ministry and the country as a whole when an experienced teacher leaves as it affects the quality of education as well as the economy of the country. It takes long years to become the kind of teachers they are and hence the loss of experienced lot is attributing to the poor performance of children as well as the school and happiness of the family too.

Between 2012 and 2016, a total of 747 teachers resigned voluntarily, 188 were superannuated, 17 compulsorily retirement, 140 left upon contract expiration, and 100 separated from service due to unfortunate events (Ministry of Education, 2016). Annually on an average, around 3.6% of public school teachers leave this profession. 345 teachers left teaching between 2016 and 2017; out of it, 260 left intentionally, 56 superannuated, four compulsory retired and rest switched to other jobs while some had uncertain misfortunes. Teachers' attrition rates increased from 3.5% in 2016 to 4.2% in 2017 (Ministry of Education, 2017).

In 2016, 280 teachers left the teaching profession, 75.82% are from secondary school teachers. In 2017, 345 teachers left the teaching profession from which 73.89% are teachers from secondary schools. Therefore, it is an adverse indication to the ministry and the wealth of nation, since the government invested a lot on this group of teachers who are qualified and experienced. Therefore, they ultimately opting for leaving the profession are always a bad news for all the stakeholders and the nation.

The attrition rate of secondary school teachers in Bhutan is high than the primary school teachers. It was 4.08% for secondary school teachers while it is 3.63% of Primary teachers.

In 2016, 200 teachers had resigned voluntary and in 2017 within 5months, 120 teachers left the teaching profession looking for better opportunities. Due to increasing number in teacher leaving the profession as well as with the introduction of in-country masters' course for the teachers from mid of 2017, the Ministry has faced more number of teacher shortages from February until July compared to previous years.

Out of 316 teachers who have left the profession between February till July 2017- 95 are on study leave, 72 are on extraordinary leave and 85 of them resigned voluntarily, some of them have switched their profession in other department and some superannuated or died, to address this the Ministry of Education has recruited 316 fresh graduates as contract teacher (Pem, 2017).

Although the problem of teacher attrition and teacher shortage was there from long time ago and it has become a severe problem recently despite various measures taken by the Ministry of Education. Year 2017 has the highest rate of teacher attrition over the past four years (2013-2016). **Refer table 1 in appendix B for the number of public school teachers who left the system by level, year, and teacher attrition rate.*

This paper wants to explore the main reasons as to why teachers prefer to leave their profession and look for another job as well as what makes them to come up with the decision to quit this profession within two years. In Bhutan, there are few studies on the related topic, but what make this paper different from the rest are the variables that are used and the sample size for the survey questionnaire. It will cover teachers from various part of the country. Since the working conditions and facilities in the schools of different region will be dissimilar which will also play its part as reasons for teachers' intention of leaving their job and want to test the rate of quitting decision among the rural schoolteachers or urban schoolteachers.

1.4 Teachers Labor Market in Bhutan (Supply and Demand for Teachers)

Two College of Education provides the Pre-service teacher education. The teacher education in Bhutan follows a concurrent and a consecutive model. Trainees enrolled in the concurrent model are ones who hold the Bachelors in Education (B.Ed.) who joins the training after completing class XII and they have to undergo

training for four years. In the consecutive model, trainees are those who have completed their degree not in education and after being selected from civil service examination, they join the training for a year. Their professional qualification is Postgraduate Diploma in Education (PgDE) which was known as Postgraduate Certificate in Education (PgCE) before 2009. The training expenses are born by the Government and monthly stipend are granted to the trainees in both education colleges.

Once the training is completed, Royal Civil Service Commission (RCSC) selects the B.Ed. teachers through a civil service examination and the Ministry of Education will further place the teachers based on the requirement in each public school. Public schools in Bhutan do not have the right to employ its own teachers, unlike the private schools.

Regular teachers employed by RCSC are the regular civil servant, whereas national contract teachers who are not professional teachers hired by the Ministry of Education and teachers hired from other countries to meet the shortage, they are on a contract basis and are paid contract allowances.

Since Government is the only employer of teachers from the two colleges of education, the Ministry of Finance with minimal increment fixes the teacher salary and benefits every year, which is as per the years of experience rather than the qualification. Along with the basic salary, teachers get teaching allowances, which the first democratic government introduced in 2008, and later in 2013, with the new ruling party, there was an introduction to housing allowances to all civil servants too. However, teachers in Bhutan receive fewer benefits in terms of allowances and incentives.

With increasing number of students and schools in the country is associated with higher demand for trained teachers, but the problem is most of the trained teachers are always looking for a better opportunity elsewhere which causes an imbalance in the demand and supply of teachers in the labor market. There is a shortage of teacher supply mainly due to the higher rate of attrition as teachers' switch their profession to another one that provides better fringe benefits and most of them resign voluntarily.

1.5 Allowances for teacher and other profession

The Ministry of Finance as per the position level fixes the salaries for all the civil servants. The amount of allowances, incentives and fringe benefits in each profession makes difference in the salary/income. Profession such as doctors, teachers, nurses, civil aviation, etc. are given the professional allowances as per their position level and number of years they served but the amount is different for different profession even when the number of experiences are same. Those working in the Health Sectors, Agriculture, and Forestry Sectors usually get certain amount as their daily allowances/travel allowances and those who are working in the Financial Sectors, Information and Communication Sectors receives bonus at the end of every closing.

Though the basic salaries for all civil servants are as per their position level, teachers are underprivileged of many other benefits as compared to other professions. In other profession, if they work more than the working hours or if they work on holidays than they get the over-time allowances, which is not there in the teaching profession. In other professions, since they do not get holidays like teacher so they get the leave encashment, but teachers do not get it due to the vacation they get when the schools are closed. Professions where they have to wear a uniform, get uniform allowances. * *Refer table 2 for the pay scale of the civil servants in Bhutan in appendix B.*

Table 1.1 lump sum Professional Allowances in Bhutan

	General doctors (MBBS)			Nurses degree/Diploma			Teachers(Bachelors/Post graduate)		
	1-5 years	6-10 years	10 and above	1-5 years	6-10 years	10 and above	1-5 years	6-10 years	10 and above
EX/ES-1	10,915	13,645	16,375	5,460	8,185	10,915	5,460	8,185	10,915
EX/ES-2	9,157	11,445	13,735	4,580	6,870	9,155	4,580	6,870	9,155
EX/ES-3	7,740	9,675	11,610	3,870	5,805	7,740	3,870	5,805	7,740
P1	6,198	7,750	9,295	3,100	4,650	6,200	3,100	4,650	6,200
P2	5,474	6,845	8,210	2,735	4,105	5,475	2,735	4,105	5,475

	General doctors (MBBS)			Nurses degree/Diploma			Teachers(Bachelors/Post graduate)		
	1-5 years	6-10 years	10 and above	1-5 years	6-10 years	10 and above	1-5 years	6-10 years	10 and above
P3	4,799	6,000	7,200	2,400	3,600	4,800	2,400	3,600	4,800
P4	4,274	5,345	6,410	2,135	3,205	4,275	2,135	3,205	4,275
P5	3,499	4,375	5,250	1,750	2,625	3,500	1,750	2,625	3,500

Source: Ministry of Finance, Revision of allowances and benefits, 2014. *Figures are given in terms of Bhutanese currency, ngultrum. (1US$= Nu.67.75 as of 28 July 2018, Bank of Bhutan).*

In the above table, the allowances are for those with the bachelor's qualification in their own field and for teachers it includes those with bachelors in education and post-graduate in education because for those teachers with masters are provided with 10% higher in allowance as compared to rest. The allowances for nurses and teachers are same based on years of experience but the actual income that most of the nurses earn in a month is higher than that of teachers due to other benefits such as uniform allowances, leave encashment, daily allowances and travel allowances, and the over-time allowances. The teachers and the nurses' income is been compare because most of them are serving in different regions, especially in Basic Health Units (BHU) as Health Assistants (HA) mostly near to the secondary schools.

The take away income is less for the teaching profession even though the basic is same. The difference in the allowances and the other fringe benefits makes the differences. On an average, the amount that the teachers receive as take away income in a month will be between Nu 15,000-25,000 based on the position level. For the doctors and engineers, on an average their take away income in a month will be 15-30% more than that of teachers, while for the nurses on an average their income in a month will be 10-15% more than that of teachers. For the cooperate employees, the entry level pay after their bachelors on an average is Nu 25,000-30,000 in a month for a year and then it increases the following year as per the amount of increment and after two years is their promotion based on their performance evaluation.

For general Doctors, although they have completed their bachelor's degree in medical field, they get higher allowances than the teachers do with same qualifications mainly due to the scarcity of such professionals.

1.6 The significance of the Study

There have been a higher number of turnovers in teaching profession compared to any other profession even though annually government plans and budget allocation had been the highest in the Ministry of Education. This study is of more importance to the Government and policymakers. Withholding trained and experienced teachers is important for the education system of the country, having insight of who is leaving and reason why they leave can be helpful for the policymakers to frame new policies targeting the improvement of the areas that had led to teachers' choice to depart from the profession (Struyven & Vanthournout, 2014).

In Bhutan very few studies on this issue has been carried out and still not much had improved regarding the issue. The policymakers should know that different level of schools in the different region located in a various area requires different policy, one policy may not be appropriate to all the schools and teachers in the country. This study will help in further framing of new policies and implement it to reduce the quitting decision of the teachers and attract qualified and skilled young energetic people in the field. It will further help the new researchers as their reference.

1.6.1 My research questions are:

i. "What are the main determinants of teacher's decision to quit their profession in Bhutan"
ii. "How does satisfaction affect the teacher quitting decision in Bhutan"

1.6.2 Objective of my research is to:

i. "Examine empirically the main determinants associated with the teachers' decision to quit their job within two years in Bhutan".

1.7 Important Definitions

Autonomous School

Is a school where the decision-making and budget allocation is fully in the hands of the school management team. The concept of autonomous school in Bhutan was implemented from the starting of the academic session in 2014. It is to decentralize the decision making of the school and budget allocation. By 2015, all autonomous schools were granted the authority over the human resource management but they have to follow certain norms set by the government. There are 82 autonomous schools in Bhutan including 60 Central schools.

Central School

In Bhutan, the concept of Central school was started towards the end of 2014. The main idea of starting a central school was to improve the quality of education as well as to help the students in rural areas who have to walk for hours to school. Central schools are the schools with classes starting from Pre-primary till middle secondary and higher secondary with boarding facilities but it's different from other normal boarding schools because, besides free boarding facilities and meals, it also provides free beddings uniforms, and stationaries to boarding students and for the day scholars they are provided with mid-day meal, uniforms, and stationaries. Small kids will be taken care by caregivers and washers. By the virtue of being the Central school, it is also an Autonomous school, all central schools were granted autonomy by the financial year July 2015 – June 2016. There are 60 central schools as of now and again the Government is planning to start another 60 schools in the 12^{th} Five Year Plan. With the implementation of central schools, the ministry's another motive was to reduce the work-load of the teachers by recruiting 202 wardens and matrons to cater to the needs of the students residing as a boarder besides helping the rural parents and students, as said by the Minister of Education that with the introduction of central schools it will improve the quality of education as well as equity in the society. There are a total of 46,081 students studying in central schools with 1,939 teachers (Annual Education Statistics, 2016).

Urban

The urban area is where there are a high number of populations with more infrastructures and facilities. It is formed through urbanization and is mainly characterized as major towns and cities. These areas are on the way to the cities and town. In Bhutan urban is further sub-divided as semi-urban which is between urban and rural. It is usually referred to the places that are near to the town and city areas.

Rural

It is the areas that are situated away from the towns and cities, sparsely populated where most of them are engaged in agriculture and farm works, having minimal access to infrastructures and modern facilities. To reach some places in rural area people have to walk for hours and to some places for days from the main road.

CHAPTER 2

LITERATURE REVIEW

Increasing number of teacher quitting the teaching profession is the main reason why the nation suffers from teacher shortage every year affecting the academic performance of the students and consequently the country's income.

This part of the paper discusses about the review of related literature based on six important factors that may be the main cause for many qualified teachers leaving the job.

2.1 Review of related literature

2.1.1 Gender

In Bhutan the possibility of males quitting the job may be higher than the females due to their difference in job satisfaction and this statement is evidently supported by Heywood (2006) study conducted in USA using Ordered Probit Model found that females in general samples in USA and UK showed greater job satisfaction than male, similar findings in the study by Clark (1997) using Probit Model with data from British Household Panel Survey 1991, wherein general female workers are more satisfied with the work. Likewise according to the findings by Ma & MacMillan (1999) using 2,202 teacher samples from the New Brunswick Elementary School, with a help of multi-regression approach, found that there was a significant difference in job satisfaction between male and female, as female teachers were found to be more satisfied than male teachers.

However the difference in job satisfaction between male teachers and female teachers may be related to the intrinsic and extrinsic factors which according to study conducted by Rosenblatt, Talmud, & Ruvio (1999) for secondary school teachers in Israel found that male teachers felt more insecure with the job security as they were concerned about the monetary rewards while lady teachers were more concerned with the workload and working environment. Similarly in the study by Steven & Ramsey (2008) carried out for teachers in the USA using Multilevel Analysis found that when

it comes to working condition and workload in teaching, female teachers seem to be less satisfied than the male teachers and also that they have higher stress related to work-load.

On the contrary, some studies have found out that females encounter lower satisfaction than male and have higher attrition rate. In the study by Kukla-Acevedo (2009) using data from 1999-2000SASS and 2000-2001 TFS incorporating Binomial and Multinomial Logistic Model found that women have higher rates of turnover than men in order to devote their time to their children and family, similar findings were mentioned in the study by Murane and Oslen (1989) on public school teachers in Michigan using the Generalized Least Square estimation.

2.1.2 Job Satisfaction

Job satisfaction in any profession can be one of the major causes which determine the attrition and retention of employees. It is likely to have a negative relationship with the quitting decision. The less satisfied individuals have a higher possibility of leaving the job. Levy-Garboua, Montmarquette, & Simonnet (2005) carried out a study using German Socioeconomic Panel Data from 1985-2003 to find the relationship between job satisfaction and quits. In their study they have used Wealth maximization Theory and Probit Model and found that workers who are more satisfied with what they are doing, they are more likely to stay in the profession, similar was the findings from the study by(Clark, 1997) using Hedonic measurement on British Household Panel Survey 1991. Although the findings are for the general profession, it can be applied to the teaching profession too.

The economist recently has been interested in the study of individual well-being factors and job satisfaction is one of them. According to Clark and Oswald (1996) stated that job satisfaction as a type of sub-utility function of the overall utility function, $v = v(u, \mu)$, where μ is the utility from other areas of life while u is the utility from work and usually the utility from work is considered as $u = u(y, h, i, j)$, where y is the income, h is the working hours, i is the individual and j is the set of job specific characters, and this utility function can be applicable to teacher job satisfaction because job satisfaction is related to various other components. Correspondingly, a study on Secondary school teachers conducted in Guangzhou province, China by

Weiqi (2008) found that the secondary teachers were generally not satisfied with their job mainly due to dissatisfaction with the income, relation with leader, administration system, working conditions, and workload, overall they were dissatisfied with teaching profession, similar findings were mentioned in work of Dinham (2016) conducted in public school teachers of Western Sydney.

2.1.3 Incentives

Incentives include salary, allowances and fringe benefits. In economics, the incentive is a reward for the services provided. It is likely that teachers who are more efficient and effective, they expect the same compensation in form of monetary reward and failure to do so might lead to increase in turnover rate. In a study by Liu & Meyer (2005) a Multilevel Analysis of Teacher Follow-up Survey for 1994-95, US, found that the main reason for teachers leaving their job besides student behavior is the salary which shows the robust relationship between salary and quitting decision. Similarly in the study of teachers who already left teaching in Florida by Kersaint, Lewis, Potter, & Meisels (2007) found that teachers have less financial benefit as compared to any other profession and it may be the main cause of teacher turnover, as well as in the study by Boyd et al. (2013) conducted in U.S. using a game-theoretic and two-sided matching model and found that teachers of both private and public schools identified pay as the core motive of leaving the job, as well as it's highly associated with the decision to remain in teaching and it was reported that teacher working in areas where salary is low have higher rate of quits.

Correspondently in a study by Imazeki (2005) on public school teachers of Wisconsin state in the US using Hazard model found that a slight rise in the teacher's pay will lead to higher rate of retention with low decision to quit. In the study by Hendricks (2012) using a panel data 1996-2012, from Texas. With the help of diff-in-diff estimator, the findings showed that increase in teachers' salary will not only reduce the attrition rate but it will also be helpful in improving students' performance, similar findings from a study by Borman & Dowling (2008) using Meta-analysis in U.S. and in a study by Wheatley, Michael, & Price (2004) on teachers in England and Wales using Fit Single and Competing Risks Duration Models, found that increase in teacher's salary will not only reduce the teacher attrition rate, it will also encourage

young graduates to join the profession thereby solving the problem of teacher shortage. Hanushek, Kain, & Rivkin (1999) using Texas Panel Data sets on students and teachers 1993-1996, found that 10% increase in teacher remunerations reduces the probability of teacher leaving the job by 2% in those with 0-2 years of teaching experience and 1% in those with 3-5 years of experience.

Although there are numerous studies carried on regarding the negative relation between salary and teacher job satisfaction, in the study by Zembylas & Papanastasiou (2004) found that majority of teachers in Cyprus choose this career because of the salary, the working hours, and the holidays in this profession.

2.1.4 Working condition

Nutsuklo (2015) studied job satisfaction of some high school teachers in Accra, Ghana stated that the working condition includes both the psychological situation and physical arrangement of the work, where failure to provide the facilities and meet the requirements of the worker makes it difficult for them to carry out their work properly leading to dissatisfaction and decision to quit. In the study by Tamang (2013) using Logistic Model conducted for 496 teachers in Bhutan found that the teachers' leaving the job will fall by 7.8% if the working condition in the schools improves.

The working conditions of the schools are different in a different locality. It is different in terms of facilities, geographical character, student behavior, job competition and also how the local community respect teaching profession. Like wiser in the study by Struyven & Vanthournout (2014) conducted in Flanders using Multivariate general linear model found that facilities, infrastructures and other factors in the school also lead to dissatisfaction and decision to quit among the teachers. Similarly in a study on African-American teachers by Grant (2011) found that the most important factor in order to reduce the number of teachers leaving the job is to improve the school infrastructure and facilities. A similar result was found in the analysis by Darling-Hammond (2003). In a research by Steinke & Putnam (2008) using a survey method with the sample of technology education teachers and administrators, the findings were the main factor influencing the technology education teachers to teach was the resources available for the classrooms as well as in the

laboratories and also for professional development. Although the study was carried out for the technology education teachers, the findings can be applicable to the general teachers too as the working patterns are similar.

2.1.5 Inter-Personal Relationship

Struyven & Vanthournout (2014) carried out a research on "teachers' exit decision" using 154 teachers with teaching experience and 81 samples from those who never taught after the teacher-training program in Flanders, Belgium, they used multivariate general linear model to study the relation and stated that the outcome of the teachers depend upon the support by colleagues and the administrator. Similar results were found in the work of Wahlstrom & Louis (2008) conducted in suburban schools in Minnesota, found that Schools with high-trust among the teachers and principal resulted in more cooperative decision making, improved plans, and increased student learning, as well as teachers prefer to stay longer at a school where they have good relationships with their working mates was the findings from a study by Boyd et al. (2011) conducted on teachers in New York using Multinomial Logistic Regression Model. Correspondently, the study by Zembylas & Papanastasiou (2004) regarding teachers in Cyprus states that there is a high rate of teacher turn over from those schools where the colleagues and principals lack support, encouragement, and reward.

2.1.6 Administrative Support

Boyd et al. (2011) did a research on the influence of school administrators on teacher retention decisions in New York City and have found that the teachers' view of the school administration has greater influence on their retention decisions, when the supervisor encourages and supports the teachers, they get motivated and dedicated which results in improvement of overall performance of the school. Similarly in the research by Price (2012) with data from Schools and Staffing Survey, 2003-04, employing structural equation modeling (SEM) techniques and Fixed Effects Regression Models found that a positive relationship between supervisors and teachers can promote an effective working environment and such spill over can benefit the organization as a whole. In the study by Ladd (2011) on teachers from North Carolina, attained that the characteristics of school supervisor are the most

prominent factor which affects the teachers' decision to leave the profession. Similar findings were from the study on teachers in Cyprus by Zembylas & Papanastasiou (2004). Likewise, Certo and Fox (2002), in their study on teachers in Virginia, found that the teachers' decision to quit not only depends upon the lack of facilities and teaching materials in the school but also due to the lack of support from the school administrators.

CHAPTER 3

RESEARCH METHODOLOGY

This study aims at finding the main factors that affect the quitting decision of the secondary public school teachers in Bhutan. This chapter explains about the statement of hypothesis, the definitions of the variables that determine the decision to quit within two years, the data source and sampling for gathering relevant data for this study and the econometric model adopted in analyzing the data.

3.1 Statement of Hypotheses

In this study, using an ordered probit model will test the following hypotheses.

1. Gender: In general, teaching profession seems to be feminine work, and there seems to be an increasing number of female teachers every year. The decision to quit will be high in the male teachers.

2. Work Satisfaction: If the teacher is satisfied with the work, then the quitting decision within two years will be less.

3. Incentive/Income: If the teachers are satisfied with the incentive/income that they earn then the quitting decision will be low.

4. Working environment: If working condition is better and with favorable school environment could motivate and permeate the sense of satisfaction and belongingness within the teachers, then there will be lesser quitting decision.

5. Interpersonal relationship: A school with understanding and mutual respect amongst managers, teachers and staff through empathy and cooperation will face a lesser number of teachers leaving the job. If there is good interpersonal relationship with the colleagues and staffs, then there will be lower decision to quit within two years.

6. Administrative Support: Fewer teachers who would quit if the hard works get timely acknowledged and rewarded. Therefore, the support and assistance furnished by the supervisor and administration plays a role in the decision made by teachers to quit.

3.2 Definitions of the Determinants of quitting decision

This study uses the following six factors that affect the decision of teachers to quit their job in Bhutan. It includes the demographic factors and socio-economic factors. The socio-economic factors are measured on five Likert's scale where the lowest scale represents strongly disagree / dissatisfied and highest scale represents strongly agree/ satisfied.

Gender

Gender in this paper refers to whether the respondent is a male or female. A dummy variable is created, if the respondent is a male teacher than it is coded as 1 and if female, it's coded as 0.

Work Satisfaction

Work satisfaction here means the satisfaction of the work itself and it is measured based on the workload, working hours, the professional development of the individual teacher, the achievement of their students and how much time they can spend with their family.

Incentives

An incentive in this paper is the monetary rewards that the teachers receive for their work that includes their basic salary, incentives, and allowances. It is measured based on six components whether the basic salary they receive is sufficient to meet the requirements or not. Whether they are paid as per the workload and as per their qualification? Whether they are happy with what they are paid. Are there other incentives besides salary, and whether they are satisfied with the amount of allowances they receive?

Working Condition

Working condition in this paper means the facilities and infrastructures in the schools, appropriate teaching-learning materials available to the teachers, use of technologies in classroom teaching and the status of the teachers in the locality. It is measured based on these six categories.

Interpersonal Relationship

Interpersonal relation refers to the relation between the co-works and the superiors. It is measured based on how friendly and helpful the colleagues are, whether they are supported and encouraged by their colleagues. Do they share the knowledge and information with each other? Whether there are cooperation and understanding among the colleagues.

Administrative Support

Administrative support here refers to the support provided by the supervisors. Supervisor here includes the school supervisors, i.e. the principal, vice-principals and academic heads and the other education sector heads, i.e. District Education officers and other officers who work along with him. It is measured based on the six questions which cover the transparency and accountability of any school-related works, timely feedback and recognition to the teachers for their effort, support and encouragement to the teachers, their relation with the teachers and other school staffs.

3.3 Data Source and Sampling

Since Bhutan does not have much data available and even the available data has some of the data are missing, so primary data was collected through survey questionnaires, which were sent to the teachers in a different region of the country serving in secondary schools in urban as well as in rural areas. Data collected is a cross-sectional data.

Questionnaires were sent to 596 teachers teaching in various Secondary schools in the country. The sample collected from a different region represents the decision of other remaining teachers from that region. Based on random selection of the sample between male and female, as well as based on the age group the questionnaires were distributed.

The sample size for each region is based on the total number of secondary school teachers, more samples are collected from the region with higher number of teachers. As the Western region has more numbers of teachers, there are more samples collected from there, while in the Northern and Central region we have only a

few districts and the number of teachers is very less, it's clubbed together in the sample.

Majority of sample responses were collected through hard copy, where the researcher went in person to distribute the questions and explained the reasons behind conducting the survey and collected the questionnaires after a day and some was sent through mail and collected the sample in soft copy.

The main survey question is regarding the probability of having a decision to quit the teaching profession within next two years. The time is fixed as two years because it is measurable, precise, and helpful for the policy makers since the policy is discussed and framed every year. If the turnover rate is predicted for a short duration than the policy-makers can take up measures to reduce the attrition rate within shorter period.

The focus is given to secondary teachers because they are majority in number, 70% of teachers are teaching in secondary schools (6118), as well as it covers teachers teaching in lower classes till the higher classes. In Bhutan Secondary schools are sub-divided into three categories such as Lower Secondary Schools (LSS) where there are classes from pre-primary until eighth standard, Middle Secondary Schools (MSS) with classes from pre-primary until 10^{th} standard and Higher Secondary Schools (HSS) with students of class 9 till 12^{th} grade, in broad terms they are known as Secondary schools. It has the highest number of students and teachers involved as compared to Primary schools where we have students of pre-primary until class 4 or majority until class 6. **Refer table 3 in appendix B for the sample size and distribution of the questionnaire.*

Out of 6118 secondary teachers, 3509 are male while only 2609 are female teachers, 3225 (53%) are in urban schools while only 2893 (47%) are in rural areas. These 596 samples will represent the decision of 6118 teachers of public secondary schools in the country.

The questionnaire is divided into three categories; part 1 includes the personal details, part 2 includes the work-related questions and job satisfaction, which are measured on a five-point Likert scale. The final part is about the quitting decision of the participant that has three outcomes (*Refer to appendix A for the sample of questionnaire)*

3.4 Data Analysis

The data collected through survey questionnaire has been examined on three phases. The first phase includes the descriptive analysis and comparative analysis of the raw data that explains the mean, minimum, maximum, and standard deviation. The second phase includes the descriptive analysis of the index data. Since the data collected was a categorical variable, an index for each variable is created. The final phase is to run the econometric regression using the Ordered Probit Model and estimate the marginal effects followed by the predicted probability and hypotheses testing.

3.5 The Proportional Odds Assumptions

The dependent variable is an ordinal outcome which is ranked from low to high category (less likely, moderately likely and more likely) with code 1, 2, and 3. The model that I want to choose for the data analysis is the ordered probit model and for that, I have to first test for its appropriateness based on the proportional odds assumption.

Proportional odds assumptions are that for each term included in the model, the 'slope' estimate between each pair of outcomes across two response levels are assumed the same or the relationship between each pair of outcome group is the same. This is also called the parallel regression assumption. This is one of the assumptions underlying ordered logistic and ordered probit regression, where the relationship between the lowest versus all higher categories of the response variable are the same as those that describes the relationship between the next lowest category and all higher categories. Since the relationship between all pairs of group is the same, there is only one set of coefficients, if not then we need different model.

We need to test the proportional odds assumption. There are several tests such as Wolfe Gould, Brant, Score, Likelihood ratio and Wald tests. The assumption here is that the relationship between each outcome is proportional; that is, parallel. Although we can run most of these tests only using ordered logit model, but still the result of the test can be applied for the ordered probit model as well, since the methods are very similar to running an ordered logistic regression, the only difference

is the interpretation of the coefficients while signs of coefficients and the significance level are similar.

Table 3.1 Likelihood Ratio Test of Ordered Probit Model

Iteration 0: log likelihood = -618.38592

Iteration 1: log likelihood = -567.65096

Iteration 2: log likelihood = -567.49517

Iteration 3: log likelihood = -567.49515

Ordered probit estimates — Number of obs = 596

LR chi2 (14) = 101.78

Prob > chi2 = 0.0000

Log likelihood = -567.49515 — Pseudo R2 = 0.0823

Variables	Coef.	Std.Err.	95%Conf.	Interval
Gender(male=1,rest=0)	.30405 01***	.102886	.1023973	.5057029
Age	.0005974	.0091255	-.0172882	.018483
Marital status(Married=1, rest=0)	-.0240339	.1237007	-.2664829	.2184151
PgDE/PgCE (Pgde/Pgce=1, rest=0)	1564788	.1091896	-.0575289	.3704865
Masters (if masters=1, rest =0)	.2474815*	.1494506	-.0454364	.5403993
East (if east=1, rest =0)	-.3293056**	.163643	-.65004	-.0085712
West (if west=1, rest =0)	-.2278849	.1583794	-.5383029	.0825331
South (if South=1, rest =0)	-.3460606**	.155966	-.6517483	-.0403729
Location (Urban=1, Rural=0)	.2125382	.1341456	-.0503824	.4754588
Work satisfaction	-.1772018	.1091301	-.3910929	.0366893
Incentives/Income	-.4091426 ***	.0715362	-.549351	-.2689342
Working condition	.0156319	.0710629	-.1236488	.1549127
Interpersonal relationship	.0139472	.07415	-.131384	.1592785
Administrative support	-.1386331**	.0637294	-.2635405	-.0137256
_cut1 |	-2.726643	.4307955		
_cut2 |	-1.301316	.4225191		

Approximate likelihood-ratio test of equality of coefficients across response categories:

chi2 (14) = 35.74

Prob > chi2 = 0.0011

The table above shows the likelihood ratio test and it was tested using ordered probit regression with the explanatory variables including both demographic and socio-economic factors that are used as the variables to determine the decision to quit the teaching job in this paper. Based on the likelihood ratio test for the proportional odds assumption that the relationship between each outcome is proportional or parallel, the result is significant, which is the evidence to reject the null hypothesis.

Table 3.2 Test for the Parallel Regression Assumption

	Chi2	df	P>Chi2
Wolfe Gould	38.56	14	0.000
Brant	38.29	14	0.000
Score	39.75	14	0.000
Likelihood ratio	39.6	14	0.000
Wald	43.9	14	0.000

Based on the entire test for the proportional odds assumption, the results are all significant so we reject the hypothesis and it shows that using ordered probit regression as a model for the data is appropriate.

3.6 Econometric Model

Since the dependent variable (quitting decision) is an ordered outcome (1= less likely, 2= moderately likely and 3= more likely), which is different from numerical because for the ordinal responses there is no natural unit of measurement especially when survey questions are framed based on the attitude of the respondents. Use of Linear Regression techniques is likely to be unsuitable because the dependent variable is usually coded as 0,1,2,3 and so on which is nothing but just a rank or order where the difference between the first and second outcome may not be the same between the second and third outcome and so on.

Ordinal response data are usually analyzed using a statistical technique called as "Ordered Probit" (Daykin, 2002). Unlike the probit and logit models, the ordered probit model contains a qualitative dependent variable which has natural order or ranking of the categories (Becker & Kennedy, 1992).

The method used in this study is the Ordered Probit Model since the dependent variable is an ordinal variable with three outcomes.

Let i be the respondent teacher i, $i=1,\ldots,n$, where n is the number of respondents. Let Q_i be individual teacher i's response to the survey question which can take one of the index value $1,2,\ldots,J$. Let Q_i^* $(-\infty < Q_i^* < +\infty)$ be the unobserved single latent variable which denotes teacher i's quitting decision within two years. Let $X_i\beta$ and $Z_i\beta$ be the explanatory variables and u_i is the error term.

X_i is the satisfaction category (socio-economic factors), i.e. work satisfaction, income satisfaction, satisfaction from the relation with colleagues, location satisfaction, and satisfaction from the support system. While Z_i is the other controlled variables (demographic factors) such as gender, age, education, region etc. that can affect the quitting decision of teacher i. β is a vector of parameters not containing an intercept, but these parameters will be explainable in the similar manner as slope parameters in linear regression. The Ordered Probit Model is based on the assumption that Q_i^* depends linearly on X_iZ_i according to:

$$Q_i^* = Z_i\beta + u_i. \quad (1)$$

$$Q_i^* = X_i\beta + u_i. \quad (2)$$

$$Q_i^* = X_i\beta + Z_i\beta + u_i. \quad i = 1,\ldots,n \quad (3)$$

$u_i \sim N(0,1)$

Since Q_i^* is unobserved, the relation between unobserved latent variable Q_i^* and observed random variable Q_i is:

$Q_i = 1$ if $-\infty < Q_i^* < k_1$ (Less likely)

$Q_i = 2$ if $k_1 < Q_i^* < k_2$ (Moderately likely)

$Q_i = 3$ if $k_2 < Q_i^* < k_3$ (More likely)

:

$$Q_i = J \text{ if } k_{j-1} < Q_i^* < \infty \quad (4)$$

The parameters k_j, $j=1, J-1$, are the threshold parameters or cutoffs which define the limits of the various categories. K_0 is taken as $-\infty$, and k_j is taken as ∞.

The model cannot be estimated using Ordinary Least Square, its estimated using Maximum likelihood. The log-likelihood function will be constructed based on the probability function. Let $P_i\ (Q_i = J)$ be the probability that the respondent *i's* response is *J*. As we observe Q_i as an ordinal variable measured on a scale of *1,2,..,J,* the probabilities associated with the observed outcomes are:

$$P_i\ (\text{outcome } Q_i = J) = Pr(k_{j-1} < Q_i^* \leq k_j) = F(k_j - X_i\beta) - F(k_{j-1} - X_i\beta) \quad (5)$$

$$P_i\ (\text{outcome } Q_i = J) = Pr(k_{j-1} < Q_i^* \leq k_j) = F(k_j - Z_i\beta) - F(k_{j-1} - Z_i\beta) \quad (6)$$

$$P_i\ (\text{outcome } Q_i = J) = Pr(k_{j-1} < Q_i^* \leq k_j) = F(k_j - X_i\beta) - F(k_{j-1} - X_i\beta) + F(k_j - Z_i\beta) - F(k_{j-1} - Z_i\beta) \quad (7)$$

where *F* is the standard normal cumulative distribution function. *J* is the number of possible outcomes and ks are the cutoffs or threshold. The model defines the probabilities of outcomes; it does not directly explain the relationship between observed random variable (Q_i) and the regressors (X_i, Zi).

The likelihood function for the estimation of the model parameters is based on the probability function. Based on the sample $(Q_i, X_i, i=1,\ldots,n)$, the log-likelihood function is:

$$LogL = \sum_{i=1}^{n} ln[\, P_i(Q_i)] = \sum_{i=1}^{n} ln[\, F(k_j - X_i\beta) - F(k_{j-1} - X_i\beta)] \quad (8)$$

$$LogL = \sum_{i=1}^{n} ln[\, P_i(Q_i)] = \sum_{i=1}^{n} ln[\, F(k_j - Z_i\beta) - F(k_{j-1} - Z_i\beta)] \quad (9)$$

$$LogL = \sum_{i=1}^{n} ln[\, P_i(Q_i)] = \sum_{i=1}^{n} ln[\, F(k_j - X_i\beta) - F(k_{j-1} - X_i\beta)] + \sum_{i=1}^{n} ln[\, F(k_j - Z_i\beta) - F(k_{j-1} - Z_i\beta)] \quad (10)$$

The log-likelihood is maximized with respect to the element of β along with the thresholds to give MLEs (maximum likelihood estimations) of sets of parameters.

The Ordered Probit Model with *J* alternatives has one set of coefficients with (j-1) intercepts. In this paper since the dependent variable has three alternatives, the model has two intercepts (3-1) and one set of coefficients. The sign of the coefficients of each regressor shows whether the dependent variable increases/decreases with the independent variable. While explaining the coefficients we do not interpret the values of the coefficients as they differ by scale factor like the binary probit and logit models, rather we explain by saying either more likely or less likely. Since this model

has more than two outcomes, we can interpret by saying more likely to be in one category and less likely to be in other categories.

The marginal effect of an increase in a regressor on the probability of selecting alternative *J* is:

$$\partial p_{ij} / \partial x_i = \{F'(k_j - X_i\beta) - F'(k_{j-1} - X_i\beta)\}\beta_r \quad (11)$$

$$\partial p_{ij} / \partial x_i = \{F'(k_j - Z_i\beta) - F'(k_{j-1} - Z_i\beta)\}\beta_r \quad (12)$$

$$\partial p_{ij} / \partial x_i = \{F'(k_j - X_i\beta) - F'(k_{j-1} - X_i\beta)\}\beta_r + \{F'(k_j - Z_i\beta) - F'(k_{j-1} - Z_i\beta)\}\beta_r \quad (13)$$

The marginal effects of each variable on the different alternatives sum up to zero because each unit increase in the independent variable increase or decreases the probability of selecting the alternative *J*, if one is more likely to be in one category than its less likely to be in other categories. For this paper, there are three alternatives: less likely, moderately likely and more likely, so there will be three sets of marginal effects, one for each alternative.

CHAPTER 4

RESULTS and DISCUSSION

This chapter includes the analysis of the data collected. The main software used for the analysis and regression is the Stata SE-64/12 (Statistics and data analysis) created in 1985 by StataCorp. The analysis includes the descriptive analysis of raw data as well as the index data. It includes the statistical relations between the dependent variable and independent variables, the regression results, and the hypothesis testing. The survey includes 596 secondary public school teachers who were randomly selected from every region of the country. The name of the schools and participants are not revealed to protect their identity.

4.1 Descriptive Analysis

From 596 samples, 57.89% are male teachers and 42.11% are female teachers with a standard deviation of 0.49 and mean 0.58, from various age groups with minimum age 22 years old and maximum age of 57 years old and standard deviation of 5.77. The average age of male is 32.04 and female is 32.76 and maximum working experience is 36 years while minimum is one year with an average year of 4.43 serving in the same school. The minimum professional qualifications of the respondents are primary teaching certificate and maximum is master's degree.

The sample includes secondary school teachers from every region of the country randomly distributed to rural schoolteachers and urban schoolteachers.

The basic salary for teachers in Bhutan is reflected in Bhutanese currency (Nu) but later converted the value in term of US$ as per the latest exchange rate, *(1US$= Nu.67.75 as of 28 July 2018, Bank of Bhutan)*. The survey data reflects that the minimum basic salary in a month that a teacher receives is between the range of US$ 256.70-309.96 (Nu. 18,001-21,000) and the maximum is US$531.37 and above (Nu. 36,000 and above) in a month. Out of 596 respondents, 202(33.89%) teachers are in with a basic salary of US$ 256.70-309.96 while four teachers (0.67%) are in maximum range.

From the total sample of 596 respondents, 207 secondary school teachers are more likely to quit the teaching profession within two years, from which majority are male teachers. From the survey sample, 277 respondents are not sure whether they will decide to leave the teaching profession within two years. This can indicate that if the overall situation in the teaching field becomes better than maybe most of them might choose to remain in the teaching profession and 112 of them are less likely to quit within two years. *(Note: refer table 4 in appendix B for the figure on quitting decision).*

4.1.1 Comparative analysis

A comparison among secondary school teachers based on gender, age, professional qualification, experience, marital status, region, location, is made with the decision to quit within two years.

Table 4.1 Cross-tabulation

	Quitting decision within two years						
	Less Likely	%	Moderate (Not sure)	%	More Likely	%	Total
Male	50	44.64	163	58.84	132	63.77	345
Female	62	55.36	114	41.16	75	36.23	251
22-26 years old	15	13.39	44	15.88	22	10.63	81
27-31 years old	34	30.36	115	41.52	73	35.27	222
32-36 years old	29	25.89	71	25.63	63	30.43	163
37-41 years old	20	17.86	40	14.44	30	14.49	90
42-46 years old	9	8.04	4	1.44	12	5.80	25
47-51 years old	3	2.68	3	1.08	5	2.42	11
52-57 years old	2	1.79	0	0	2	0.96	4
Single	21	18.75	53	19.13	33	15.94	107
Married	89	79.46	219	79.06	169	81.64	477
Divorcee	2	1.79	5	1.81	5	2.42	12
PTC	3(13.6)	2.68	13(59.1)	4.69	6(27.3)	2.90	22
B.Ed.	67(20.7)	59.82	153(47.4)	55.23	103(31.9)	49.76	323
PgDE/PgCE	28(16.4)	25.00	81(47.4)	29.24	62(36.3)	29.95	171
Masters	14(17.5)	12.50	30(37.5)	10.83	36(45)	17.39	80
1-5 yrs.(experience)	40	34.48	121	41.72	70	36.84	231
6-10 yrs.(experience)	39	33.62	107	36.90	80	42.12	226
11-15 yrs.(experience)	19	16.38	37	12.76	22	11.58	78

	Quitting decision within two years						
	Less Likely	%	Moderate (Not sure)	%	More Likely	%	Total
16-20 yrs.(experience)	11	9.48	20	6.90	7	3.68	38
21-25 yrs.(experience)	3	2.59	3	1.04	7	3.68	13
26-30 yrs.(experience)	3	2.59	1	0.34	2	1.05	6
31-36 yrs.(experience)	1	0.86	1	0.34	2	1.05	4
East	26	22.41	80	27.59	39	20.53	145
West	43	37.07	88	30.34	62	32.63	193
North/Central	10	8.62	38	13.10	33	17.37	81
South	37	31.90	84	28.97	56	29.47	177
Rural	23	19.32	53	18.27	31	16.31	107
Semi-rural	41	35.35	81	27.93	47	24.74	169
Semi-urban	33	28.45	107	36.90	68	35.79	208
Urban	19	16.38	49	28.90	44	23.16	112

Source: Author's Survey data. * *In parenthesis are the row percentages.*

From the comparative analysis above, one can estimate that on an average male teacher have higher decisions to quit as compared to female teachers in Bhutan. On average teachers between the ages of 22 years till 36 years have higher probability to leave the teaching job as compared to those who are in older age groups, since decision to quit are higher in younger and middle age, similarly there is a higher intention of leaving the teaching job among the young teachers with few years of experience as compared to teachers with more experience.

In Bhutan as per the sample collected, married teachers are more likely to have high intention to quit the job as compared to single and divorced. Teachers with higher qualification have higher decision to quit as compared to those teachers with lower academic qualification. Teachers with Bachelors in Education (B.Ed.) are less likely to quit within two years as compared to those with postgraduate and master's degree.

It shows that the decision to leave the profession within two years is higher in the teachers teaching in secondary schools in the western and southern region. Secondary school teachers teaching in semi-urban and urban schools in Bhutan are likely to have higher possibility to leave the teaching job as compared to those teaching in semi-rural and rural schools.

4.2 Perception of Secondary School Teachers

The thoughts of secondary teachers on each variable are given below in table 4.2. Since each component is measured on a scale of 1-5 and the range has been classified into 5 levels to the Best's criteria (1977) to measure the view of the participants as follows:

Higher score – Lower score / Number of levels (5-1/5 = 0.80). The average score from 1-1.80 is the lowest, 1.81-2.60 as low, 2.61-3.40 as moderate, 3.41-4.20 as high and 4.21-5.00 as the highest level of perception

Table 4.2 Approach of secondary school teachers toward the independent variables

Variables	Mean	Approach
1. Work Satisfaction	2.59	Low
2. Incentives	2.22	Low
3. Working Environment	2.77	Moderate
4. Interpersonal Relationship	3.65	High
5. Administrative Support	3.01	Moderate

Source: Author's Survey data

Table 4.2 shows that on an average, secondary school teachers in Bhutan have low perception towards the work satisfaction and incentives. They are not satisfied with the teaching job. Their approach towards incentives has the lowest mean score. This can represent that majority of secondary school teachers in Bhutan are not happy with the salary structure.

The mean score of 3.65 on the interpersonal relationship is the highest score among the five variables, this shows that the relationship among the working colleagues and other staff members are good in schools of Bhutan. The level of perception from the respondents for this factor is high.

The perception of the respondents towards the working condition and administrative support is moderate, which can reflect that the working conditions in the schools at present moment is not very conducive and the support from the school supervisors and administrators are not effective and efficient.

4.3 Statistical Relationship

Table 4.3 Correlation between Quitting decision and demographic variables

Variables	Quitting decision	gender	age	status	Edu Master	EduPgDE /PgCE	experi ence	Income
Quit decision	1.0000							
Gender(Male=1, female=0)	0.1285	1.0000						
Age	0.0096	0.0622	1.0000					
Status(Married=1, rest=0)	0.0346	0.0406	0.3454	1.0000				
Edu(Master=1, rest=0)	0.0786	-0.0347	0.0477	0.0379	1.0000			
Edu(PGDE/PGCE= 1, rest =0)	0.0281	-0.0685	-0.1090	-0.0126	-0.2482	1.0000		
Experience	-0.0161	-0.0045	0.9248	0.2982	-0.0123	-0.1788	1.0000	
Income	-0.0491	0.0003	0.8050	0.2580	0.0986	-0.1917	0.8586	1.00
Location(urban=1, rest=0)	0.0645	-0.2849	0.2515	0.1411	0.1629	0.1479	0.2698	0.2288

Source: Author's survey

It indicates that on an average, in Bhutan male teachers have higher decision to quit as compared to females. The relation between quitting decision and age is positive but the effect is weaker. On average married teachers have higher decision to leave the job as compared to the reference group (single teachers).

Teachers with higher qualification are associated with high rate of a decision to quit. Teachers with PgDE/PgCE have a higher quitting decision within two years as compared to the reference group and teachers with master's degree are more likely to quit within two years when compared with its reference group (B.Ed.)

The relation between years of experience and decision to quit is negative but weak. As the experience of a teacher increases, it's associated with lower decision to quit. With an increase in income of a teacher the decision to quit drops, the relation is negative and strong.

From the sample, it shows that the teachers teaching in urban schools are associated with higher probability of leaving the teaching job within two years as compared to the teachers in rural schools.

4.4 Chi-square analysis

There is a significant relationship between gender and quitting decision at 5%. There is a highly significant difference between male and female teachers who have the decision to leave, more males deciding to quit within two years at 1%.

The relation between professional qualifications and quitting decision is not significant, but when compared the significant differences among the professional qualifications and the responses to quitting decision, there are high significance differences between PTC, PgDE/PgCE and Masters for all the responses at 1% compared with all other qualifications, but there are no considerable differences between teachers with B.Ed. and other qualifications for all the responses.

The relation between quitting decision and years of experience are not significant. When the relation between each range of experience and responses of quitting decision is checked, it's found that there is a substantial difference between those teachers with 1-5, 11-15, 21-25, 26-30 and 31-36 years of experience with others for all the responses, significant at 5%. For the teachers with the experience of 16-20 years have no significant difference with others when there is no decision to quit within two years, but there is a significant difference with others for undecided and yes response at 5%.

The relationship between all the location with the quitting decision within two years are not significant, but when the significance level is tested between the locations with various responses of quitting decision, it shows highly significant difference regarding all the responses for quit decision at 1%.

4.5 Index Analyses

Since the collected primary data are categorical where variables have various category measured on a 5point Likert scale, to calculate the satisfaction of each teacher respondent for each independent variable, an index is created which is measured on a rank of 6 because each variable has six components under them. With the highest digit indicating that the component is more important and the lowest digit indicating that particular component is of lesser important in measuring the satisfaction level of each variable. The survey questions are set based on the

Minnesota Satisfaction Questionnaire (MSQ) and samples from previous studies. The ranking of each component is as per how much importance the earlier researchers who studied the similar problem have emphasized on that particular components repeatedly.

The value of each rank is then divided by the total sum of rank to get the weightage for each component, which sums up to 1. The scores are used to measure the job satisfaction of each individual teacher in the sample. The scale that the participants choose for each component is then being multiplied by the weight of that component.

Table 4.4 Teacher Satisfaction Index

Components	Rank (high to low)	Weightage
1	6	0.29 (6/21)
2	5	0.24 (5/21)
3	4	0.19 (4/21)
4	3	0.14 (3/21)
5	2	0.09 (2/21)
6	1	0.05 (1/21)
total	21	1

For table 4.4 its shows the ranking of each component, giving higher rank to the component that is considered more important and lower and lower to those which are of lesser importance. **Refer table 5 in appendix B for components of each variable as per the rank in table 4.4.*

Table 4.5. Teacher satisfaction index and rank for Interpersonal Relationship

Components	Ranking	Weightage
1. Cooperation	4	0.4
2. Support	3	0.3
3. Friendly/helpful	2	0.2
4. Share knowledge	1	0.1
Total	10	1

Table 4.5 shows the ranking of each component for the interpersonal relationship and their weightage that is slightly different from the other variables because there are only four components under this variable. The ranking of the components is based on their importance in determining the satisfaction level of the particular factor and its set as per the samples from previous related studies.

4.6 Satisfaction level of independent variable

After creating an index for each categorical independent variable, based on the weightage of each variable a category is made on the scale of five (1=Strongly dissatisfied, 2= Dissatisfied, 3= Moderate, 4= Satisfied and 5= Strongly satisfied)

Table 4.6 Socio-economic variables and the level of satisfaction

Satisfaction Level	Work Satisfaction	Incentive/ Income	Working condition	Interpersonal Relation	Administrative Support
1	7 (1.11)	250 (41.95)	101 (16.95)	40 (6.71)	124 (20.81)
2	274 (45.97)	233 (39.09)	219 (36.74)	153 (25.67)	147 (24.66)
3	293 (49.16)	101 (16.95)	222 (37.25)	247 (41.44)	217 (36.41)
4	22 (3.69)	12 (2.01)	53 (8.89)	156 (26.17)	94 (15.77)
5	-	-	1 (0.17)	-	14 (2.35)

Source: Author's survey

* *Given in parenthesis is the column percentage share. (Note: Refer to table 6 in appendix B for the figures on gender and satisfaction level).*

Based on table 4.6, it shows that on an average, the teacher respondents are between the levels of being dissatisfied to moderate regarding the job satisfaction and no one is strongly satisfied with the teaching job. There is not much difference between male and female teacher towards the work satisfaction although female teachers seem to be satisfied with the job.

Majority of the respondents fall in the level of strongly dissatisfied and dissatisfied with the incentive and income structure in teaching. From the sample, male teachers are not satisfied with the incentives as compared to the female teachers. When it comes to the working condition in the teaching job, respondents are in the level of dissatisfaction and moderate. The satisfaction level of working condition is

almost similar for both male and female teachers, with a slight dissatisfaction in male as compared to female.

For the interpersonal relationship, most are in the moderate category while almost same numbers of respondents are in the dissatisfied and satisfied category. The satisfaction level regarding the interpersonal relationship among the male and female teacher respondents are of not much difference.

There is some variance in the satisfaction level of the administrative support. There are some strongly dissatisfied, some are dissatisfied and some in the moderate category, while few are there who are satisfied and strongly satisfied with the administrative support in the school. There is not much difference between male and female teacher regarding the satisfaction level of administrative support but female teachers show a slightly higher level of satisfaction than male teachers.

This study shows that on an average, the majority of teachers in Bhutan are not satisfied with the monetary reward that they receive from the government. It is estimated that the satisfaction level in female teachers are high than male teachers although there is not much difference.

Table 4.7 Correlation between decision to quit and socio-economic factors

	Quitting decision	Work satisfaction	Incentive /income	Working condition	Interpersonal relation
Work satisfaction	-0.225	1.00			
Incentive/income	-0.340	0.437	1.00		
Working condition	-0.170	0.390	0.414	1.00	
Interpersonal relation	-0.127	0.250	0.247	0.437	1.00
Administrative Support	-0.211	0.388	0.333	0.469	0.578

Source: Author's Survey

There is a negative relationship between the factors and quitting decision with a strong relationship between quitting decision and incentives, but the weaker relation with the working condition and interpersonal relationship.

It shows that the decision of a teacher to quit is more affected by monetary rewards, work satisfaction, and administrative support. The effect of working

condition and interpersonal relation on the decision to quit within two years is although negative but the effect is very weak.

4.7 Perception of Secondary School Teachers

Table 4.8 Approach of the respondents regarding each variable of index data

Variables	Mean	Std. Dev.	Min	Max	Approach
Work satisfaction	3.01	.51	1.74	4.8	Moderate
Incentive/income	2.26	.78	1.01	4	Low
Working condition	2.89	.84	1.01	5	Moderate
Interpersonal relation	3.23	.80	1	4.6	Moderate
Administrative support	2.99	.98	1	5	Moderate

Source; Author's survey

Based on the Best's criteria (1977) the perception of the teacher respondents towards work satisfaction, working condition, interpersonal relation and administrative support are moderate while they have low perception towards incentive/income. This can show that on an average the secondary school teachers in Bhutan are not satisfied with the salary system in the country.

4.8 Econometric results

In this part of the paper, results from an ordered probit model will be studied followed by the marginal effects and predicted probability.

(1) Demographic factors as an explanatory variable, controlled for all other factors.

(2) Socio-economic factors as explanatory variables, controlled for all other factors.

(3) Includes demographic as well as socio-economic factors as explanatory variables.

Table 4.9 Ordered Probit Model estimation of quitting decision within two years

Iteration 0: log likelihood = -618.38592

Iteration 1: log likelihood = -606.0374

Iteration 2: log likelihood = -606.0328

Iteration 3: log likelihood = -606.0328

Ordered probit regression Number of obs = 596

LR chi2 (9) = 24.71

Prob > chi2 = 0.0033

Log likelihood = -606.0328 Pseudo R2 = 0.0200

Demographic Factors	Coefficients	Std. Err.
Gender (Male=1, female=0)	.3681187 ***	.1002401
Age	-.0059905	.0088789
Marital status(Married=1, rest=0)	.0090586	.1214396
PgDE/PgCE (if Pgde/Pgce=1, rest=0)	.1072235	.105779
Masters (if masters=1, rest =0)	.2675889*	.1464771
East (if east=1, rest =0)	-.3193834**	.159485
West (if west=1, rest =0)	-.2946046*	.1535215
South (if South=1, rest =0)	-.3419354 **	.1526331
Location (Urban=1, Rural=0)	.2686388 **	.1302541

Source: Author's Survey. Note: The symbols ***, **, * denotes the significance level at 1, 5 and 10 percent.

The likelihood ratio chi-square of 24.71 with p-value of 0.0033 shows that the model as a whole is statistically significant. In Table 4.9 all factors are statically significant except for age, marital status, and PgDE/PgCE. The sign of coefficients for age are negative, estimating that as the age of the teacher increases; they are less likely to leave the profession. From the above table, it reflects that age, marital status is not so important factor to determine the quitting decision of a teacher within two years in Bhutan.

On an average male teacher have, *ceteris paribus*, higher propensity to quit teaching within two years as compared to female and its relation with quitting decision is positive and highly significant. One can estimate that teachers teaching in urban schools are seen to have, *ceteris paribus*, higher probability to leave teaching within two years as compared to teachers in rural schools.

On average teachers teaching in East are less likely to quit within two years as compared to its reference group. Similar is the result with regard to teachers from West and South. They are less likely to have a decision to quit within two years as compared to their baseline the teachers from North/Central, *ceteris paribus*.

Table 4.10 Marginal Effects of the Ordered Probit Model

Variables	Less Likely	Moderate	More Likely
Gender (Male=1, female=0)	-.0996	-.0336	.1332
Age	.0016	.0006	-.0022
Marital status(Married=1, rest=0)	-.0024	-.0009	.0033
PgDE/PgCE (Pgde/Pgce=1, rest=0)	-.0277	-.0121	.0398
Masters (if masters=1, rest =0)	-.0642	-.0374	.1017
East (if east=1, rest =0)	.0905	.0223	-.1128
West (if west=1, rest =0)	.0812	.0245	-.1058
South (if South=1, rest =0)	.0957	.0258	-.1216
Location (Urban=1, Rural=0)	-.0655	-.0360	.1016

From the above table 4.10, one can conclude that as compared to the female teacher, male teachers are more likely to make a decision to quit within two years by 13.32%.

Higher the age of the teacher, it's more likely to fall in the category of not having any decision to quit within two years, whereas compared to single teachers, one-unit increase in married teachers will lead to 0.03% increase in the making the decision to quit within two years.

Higher the professional qualification is more likely to fall into the category of having a decision to quit within two years. Teachers with postgraduate diploma in education are more likely to quit within two years as compared to reference group who have bachelors in education, and teachers with masters are more likely to quit within two years as compared to the reference group.

Teaching in any of the regions in the country is less likely to make a decision to quit within two years. Compared to teachers from north/central region of the country, teachers from East will decrease the probability of falling into the category of more likely to quit within two years by 11.28%. The teachers teaching in southern region are more likely to fall in the category of less likely to quit within two years as compared to its reference group of teachers from North/Central region. Teachers teaching in secondary school in Western regions of the country are less likely to have a decision to quit within two years as compared with the reference group.

Teachers teaching in urban schools are more likely to make a decision to quit within two years compared to the rural schoolteachers and the probability to make a quitting decision will increase by 10.16%.

Table 4.11 Ordered Probit Model estimation of quitting decision within two years

Iteration 0: log likelihood = -618.38592

Iteration 1: log likelihood = -577.54409

Iteration 2: log likelihood = -577.46657

Iteration 3: log likelihood = -577.46657

Ordered probit regression — Number of obs = 596

LR chi2 (5) = 81.84

Prob > chi2 = 0.0000

Log likelihood = -577.46657 — Pseudo R2 = 0.0662

Socio-economic factors	coefficients	Std. Err.
Work satisfaction	-.1649447	.1075973
Incentives/income	-.4349501***	.0704289
Working condition	.0260339	.0688366
Interpersonal relationship	.0184398	.0733344
Administrative support	-.1327816**	.0629429

Source: Author's Survey. Note: The symbols ***, **, * denotes the significance level at 1, 5 and 10 percent.

The likelihood ratio chi-square of 81.84 with p-value of 0.0000 shows that the model as a whole is statistically significant. Table 4.11 shows a negative coefficient between the variables and the quitting decision within two years except for working condition and interpersonal relationship.

Incentives/income and administrative support are negatively and significantly associated with the quitting decision. With higher incentives/income for teachers, *ceteris paribus*, the propensity to quit will be low. Whereas for the work satisfaction, although it's not significant, the coefficient sign shows that teachers with better work satisfaction are less likely to make a decision to quit within two years.

For working condition and interpersonal relation, the influence on quitting decision is positive but the effect is very small and insignificant too, which indicates that these two factors are less likely to affect the decision to quit within two years.

From above table, we can conclude that the incentives are significantly affecting the rate of teacher attrition.

Table 4.12 Marginal Effects of the Ordered Probit Model

	Less Likely	Moderate	More Likely
Work satisfaction	.0414	.0185	-.0599
Incentives/income	.1092	.0488	-.1579
Working condition	-.0065	-.0029	.0095
Interpersonal relationship	-.0046	-.0021	.0067
Administrative support	.0333	.0149	-.0482

The marginal effect from the table 4.12 shows that one-unit increase in the work satisfaction will decrease the probability of making a decision to quit by 5.99%. One-unit increase in the incentive/income of a teacher will lead to decrease in the probability of having a decision to quit within two years by 15.79% and one-unit increase in the support system from the administrative, the probability to quit within two years will fall by 4.82%.

Table 4.13 Ordered Probit Model estimation of quitting decision within two years

Iteration 0: log likelihood = -618.38592
Iteration 1: log likelihood = -567.65096
Iteration 2: log likelihood = -567.49517
Iteration 3: log likelihood = -567.49515

Ordered probit regression Number of obs = 596
LR chi2 (14) = 101.78
Prob > chi2 = 0.0000
Log likelihood = -567.49515 Pseudo R2 = 0.0823

Variables	Coefficients	Std.Error
Gender (Male=1, female=0)	.3040501**	.102886
Age	.0005974	.0091255
Marital status(Married=1, rest=0)	-.0240339	.1237007
PgDE/PgCE (if Pgde/Pgce=1, rest=0)	.1564788	.1091896
Masters (if masters=1, rest =0)	.2474815*	.1494506

Variables	Coefficients	Std.Error
East (if east=1, rest =0)	-.3293056**	.163643
West (if west=1, rest =0)	-.2278849	.1583794
South (if South=1, rest =0)	-.3460606**	.155966
Location (Urban=1, Rural=0)	.2125382	.1341456
Work satisfaction	-.1772018	.1091301
Incentives/income	-.4091426***	.0715362
Working condition	.0156319	.0710629
Interpersonal relationship	.0139472	.07415
Administrative support	-.1386331**	.0637294

Source: Author's Survey. Note: The symbols ***, **, * denotes the significance level at 1, 5 and 10 percent.

From table 4.13 the likelihood ratio chi-square of 101.78 with p-value of 0.0000 shows that the model as a whole is statistically significant. There is a positive relationship between male teacher and the decision to quit within two years. Controlled for other variables, the effect of being a male teacher on the quitting decision is highly significant at 5% and they are seen to have higher rate of decision to quit as compared to female teachers. For respondents with masters' level of qualification has a positive relationship with the decision to quit within two years and is significant at 10% reflecting that the decisions to leave the teaching job are higher in those teachers with higher qualification as compared to its reference group, while for the respondents with PgDE/PgCE although its insignificant the sign of coefficient shows the positive relation with the decision to leave as compared to its reference group.

Respondents from urban secondary school have a higher rate of a decision to leave within two years as compared to those from rural school although the result is not significant.

Incentives/income and administrative support are associated with negative relationship with quitting decision within two years and are significant at 1% and 5%. Controlled for other variables, higher incentive is associated with lower probability to leave the teaching job. Teachers working in schools with better support from the school administration have, *ceteris paribus*, a lower probability to leave the teaching profession within two years. Whereas for the work satisfaction, though the relation is

negative, it seems to it has smaller effect on the decision of teachers to quit the teaching job in Bhutan, as the result is insignificant.

The effect of working condition and interpersonal relationship is also not significant; this shows that these two factors have minimal effect on the decisions to quit the teaching profession within two years in Bhutan.

Table 4.14 Marginal Effects of the Ordered Probit Model

Variables	Less Likely	Moderate	More Likely
Gender (Male=1, female=0)	-.0764	-.0321	.1086
Age	-.0001	-.0001	.00026
Marital status(Married=1, rest=0)	.0059	.0029	-.0088
PgDE/PgCE (Pgde/Pgce=1, rest=0)	-.0372	-.0202	.0574
Masters (if masters=1, rest =0)	-.0554	-.0373	.0927
East (if east=1, rest =0)	.0877	.0262	-.1139
West (if west=1, rest =0)	.0581	.0228	-.0809
South (if South=1, rest =0)	.0908	.0299	-.1207
Location (Urban=1, Rural=0)	-.0488	-.0301	.0789
Work satisfaction	.0435	.0206	-.0641
Incentives/income	.1005	.0476	-.1481
Working condition	-.0038	-.0018	.0057
Interpersonal relationship	-.0034	-.0016	.0050
Administrative support	.0341	.0161	-.0502

The result from Table 4.14 shows as compared to female teachers, male teachers are more likely to quit the job within two years; the probability to quit will increase by 10.86%. One-unit increase in the age of the teacher will increase the probability of making a decision to quit by 0.03%.

Married teachers are less likely to make a decision to quit as compared to single teachers. The probability to quit will fall by 0.88%. Teachers with postgraduate diploma in education are more likely to make a decision to quit as compared to the reference group of teachers with bachelors in education. As compared to teachers with B.Ed., teachers with masters are more likely to quit teaching within two years; it leads to increase in probability to quit by 9.3%.

Teachers teaching in the Eastern region are less likely to quit within two years as compared to the reference group the teachers teaching in secondary schools in north/Central region of the country as the probability to quit decreases by 11%. Teachers teaching in Western region are less likely to quit within next two years as compared to teachers from North/Central region. As compared to teachers from North/Central region, teachers teaching in Southern region are less likely to quit as the probability to falls by 12.1%.

One-unit increase in the work satisfaction is associated with 6.4% decrease in the rate of quitting within two years, whereas one-unit increase in the incentive/income is associated with 14.8% decrease in the quitting rate within two years, and one-unit increase in administrative support can lead to decrease in the quitting decision by 5%.

Table 4.15 Predicted Probabilities

Variable	Observation	Mean	Std.Dev.
Less likely	596	.1887	.1224
Moderate	596	.4646	.0628
More likely	596	.3467	.1602

Pr (Qi=1) is 18.87%, the probability that the respondents are less likely to make a decision to quit within two years. 112 respondents are less likely to quit the teaching job in next two years.

Pr (Qi=2) is 46.46%, the probability that the respondents have not decided whether they will leave the profession or not within two years. 277 respondents are not sure whether they will quit the teaching job or not within next two years.

Pr (Qi=3) is 34.67%, the probability that the respondents are more likely to decide to quit within two years. 207 respondents are more likely to quit teaching within next two years from 596 respondents. The result of the predicted probability of quitting decision of secondary public school teachers within two years is similar to the result generated in the descriptive analysis.

4.9 Hypotheses Testing

There is a negative relationship between work satisfaction and decision to quit but the effect is insignificant, which means that the decisions to leave teaching by the respondents are not affected by the work satisfaction. The signs of coefficients of interpersonal relationships and working conditions are positive and the effect is very small. Since significance levels are insignificant for work satisfaction, working condition and interpersonal relationship, one can estimate that these factors do not affect the decision to quit the teaching profession within two years so the null hypotheses are being accepted. The statement of hypotheses is consistent with respect to the results on gender, incentives/income, and administrative support, which are significant indicating that these are the main variables which determine the quitting decision of secondary school teachers in Bhutan within two years, the null hypotheses is rejected.

Table 4.16 Summary of the research result

Hypotheses	Significance level	Result
If the respondent is a male teacher then the decision to quit will be high.	Significant	Reject
If there is work satisfaction then there will be lower decision to quit.	Insignificant	Accept
If the incentive/income is high then the decision to quit will be less.	Significant	Reject
If the working condition is better, then the quitting decision will be lower.	Insignificant	Accept
If there is good interpersonal relationship then there will be lesser decision to quit.	Insignificant	Accept
If the administration support system is strong than there will be lower decision to quit.	Significant	Reject

4.10 Discussion

In this paper, I intended to contribute to the literature that models the effects of gender, work satisfaction, incentives/income, working condition, interpersonal relationship and administrative support on the secondary school teachers' quitting decision within two years.

The empirical results for the gender, incentives and administrative support in this paper are consistent with the former researchers. The analyses in this study showed that male teachers are more likely to quit as compared to female teachers which are in contrast to the findings by Murnane, & Olsen (1989) conducted on 7800 Michigan public school teachers and by (Kukla-Acevedo,2009) using survey data from 1999-2000 SASS and the 2000-2001 TFS.

Female teachers are usually satisfied with teaching job than male teachers because female teachers look for the satisfaction with intrinsic factors such as working hours and work load so that they can spend more time with the family and more over teaching job is to deal with the children which becomes easier for the female to adjust, while male teachers are more interested with the extrinsic factors which are usually the financial reward (Rosenblatt, Talmud, & Ruvio, 1999). The findings from this paper related to males have higher decision to quit teaching job than female is similar to the findings by Ma & MacMillan (1999) using 2,202 teacher samples from the New Brunswick Elementary School.

Teachers with masters' qualification are more likely to quit the teaching profession within two years since they have high qualification that becomes easier to get employed in new job as compared to those with B.Ed. as those with Bachelor's in Education are professionally trained to be a teacher. In a study by Dolton and Klaauw (1995) using a data from UK survey of 1987 and with help of econometric analysis they found that teachers with B.Ed. are less likely to quit compared with teachers with higher degrees which are in higher demand in the job market. Similar findings in a study on high school teachers in Accra, Ghana by Nutsuklo (2015) where the result showed that the reason for higher attrition rate among teachers with high qualification is that they have more opportunity for another job which may be attractive than

teaching, so they will be dissatisfied with teaching and are more likely to leave this profession.

Significant result of teachers teaching in urban schools having high probability of making a decision to quit as compared to teachers teaching in rural secondary school are similar to the findings in the study by (Hanushek, Kain, & Rivkin, 2004), in which they have stated that the schools are urban are usually overcrowded with students from various background and it becomes difficult for the teachers with deal with as well as urban areas have more opportunity than the rural areas.

Among all the independent variables that were used in this study, incentive/income has a very important effect on the teachers' decision to quit. It is highly significant and has a negative relationship with the quitting decision. It is found that one-unit increase in the incentive/income of a teacher will decrease the probability to quit by 15%. The result is consistent with the findings by Liu & Meyer (2005) Teacher Follow-up Survey for 1994-95, US., and by Wheatley, Michael, & Price (2004) on teachers in England and Wales. Whereas the findings from this study are in contrast to the study by Zembylas & Papanastasiou (2004) using a survey data of 461 teachers in Cyprus.

Results for administrative support and quitting decision within two years were significant and it has a negative relationship with the quitting decision. When the support systems from the school administrators are strong and encouraging than the working environment becomes conducive and teachers and staffs feel secured and safe to work. This is similar to the findings from Certo and Fox (2002), in their study on teachers in Virginia.

The new finding from this result is that factors such as age, status, and experience are insignificant and their effects on the quitting decision within two years are very small. One interesting finding from this study is that the result of the work satisfaction, interpersonal relationship and working conditions are not significant and the relationship with the quitting decision for working condition and interpersonal relationship is positive although the effect is weak. These findings for working condition are not consistent with the findings by Tamang (2013) a study conducted on 496 teachers in Bhutan and by Struyven & Vanthournout (2014) conducted in Flanders.

CHAPTER 5

CONCLUSION

5.1 Summary

The main aim of this paper was to find out the quitting decision of secondary public school teachers within two years in Bhutan. The survey questionnaire was distributed randomly among 596 teachers in secondary school from various region and location with 58% male teacher respondents.

The outlook of teachers towards Incentives/income is low, and many are highly unsatisfied with the current monetary reward, while for the work satisfaction, working condition and administrative support are moderate and the outlook towards the interpersonal relationship is high with low variance.

Since the decision to quit the teaching profession within two years is an ordered outcome dependent variable, ordered probit model is applied to estimate the probability of quitting the job within two years.

From the demographic independent variables, age and marital status and EduPgDE/PgCE are insignificant with weak correlation with the decision to quit while gender, EduMasters, region from east, west and south and the location is significant.

From the socio-economic variables, work satisfaction, the working condition and interpersonal relation was insignificant showing that these variables do affect the quitting decision but the effect is very small. For the interpersonal relation, the variance was small and the correlation was weak. Incentives/income of the secondary public school teachers and administrative support has significant relation with the quitting decision within two years. Both are statically significant and have negative relationship with the decision to leave teaching profession within two years.

Out of 596 respondents, the probability that the respondents do not want to quit within two years is 18.87%, while 46.46% of the respondents are not sure and the probability that the respondents are sure to quit within two years is 34.67%.

5.2 Policy Implication

Education is the main foundation for any socioeconomic progress at an individual level, country level and at the worldwide. To impart the quality education to the learners, the most important factor is to have a good teacher. Good teacher here means the one who is interested in his/her work, satisfied with what they are doing and happy with the system they are working with, so it is crucial for the policymakers while framing the policy regarding the education system in the country to look into the pros and cons of the system and be prudent in making any policy.

From this paper, the policy makers can roughly estimate the average attrition rate for the teachers within two years. From 596 secondary school teachers, 207 teachers fall in a category of having a decision to quit within two years, while 211 are not sure. If the policymakers can make some changes in teaching profession as per the result generated in this paper, then it is possible to reduce the teachers' attrition rate in the country.

From all the six explanatory variables used in this study, the most important factor that determines the teacher's decision to quit within two years are gender, incentives, and administrative support, from which the most significant one was the incentives/income, this reflects that majority of teachers are not happy with the salary structure in the country. Findings show that one-unit increase in the incentive /income of a teacher is associated with 14.69% fall in the decision to quit within two years.

The predicted turnover rate for the next two years for sample of 596 teachers teaching in secondary schools is 207(34.67%) of the respondents are more likely to quit within next two years. So based on this the turnover rate for the population of 6118 secondary school teachers is 2125. This shows that on an average 2125 secondary school teachers in Bhutan are more likely to leave the teaching profession within next two years if the incentive/income and administrative support does not improve.

The average expenditure that the Government spends on one teacher candidate during their training period is Nu (69,710+15,000) in a year. The average expenditure to complete the entire training period is Nu 338,840 for one teacher. If the

government does not do anything than the social cost will be high. Besides facing the loss of the total amount already spent on the training, they will have to incur the same amount of money as expenditure for training new candidates to replace the teachers who already left teaching, so an average the total social cost incurred due to resignation of one teacher will be the amount already spent on him plus the amount the government has to spent on the new trainee (Nu 677,680). Instead of recruiting new trainees to replace the vacant post left by the experienced teacher, it would be more profitable and beneficial if the government can revisit and revise the salary/incentive structure for the teachers. The findings from the study showed that one-unit increase in the incentive/income of a teacher would decrease the probability of quitting the job by 15%.

To help the policymakers at both public and private sectors, there is an open-ended question at the end of the survey, asking the participants to suggest one important measure that needs to be in place to retain the trained and experienced teachers. Majority of the respondents have mentioned about the revised incentives and allowances, better housing facilities, salaries, training opportunities, and revisiting the teacher workload while some have mentioned about the infrastructures, Professional Development programs, teacher support system, basic amenities, encouragement and support from the Ministry and stakeholders.

5.3 Limitations and Recommendation

The availability of reliable data was very limited and insufficient. The duration of the data collection was short, as I had to collect all the data within a short period.

5.3.1 Recommendations for the policy makers

1. Based on the results, the incentives/income is highly significant and negatively related to the decision to quit. This shows that on an average the teachers are not happy with the present incentive/income policy in the country, so the policy makers can revisit and revise the structure.
2. Create more, better, and equal training opportunities for the teachers.
3. Create a Board for teacher protection.

4. Government can look for various ways to improve the housing facilities especially in and around the school area.

5.3.2 Recommendations for the future researchers

1. This research is focus on the quitting decision of the secondary public school teachers; similar study on the primary school teachers can be conducted and compare the results with the secondary teachers.
2. They can collect data from those teachers who have already left the teaching profession as well as from the current teachers so they can have result that is reliable at the end.
3. A study on the decision to quit for the private school teachers and compare with the public school teachers can have an interesting finding.

BIBLIOGRAPHY

Becker, W. E., & Kennedy, P. E. (1992). A Graphical Exposition of the Ordered Probit. *Econometric Theory*, *8*(1), 127–131.

Borman, G. D., & Dowling, N. M. (2008). Teacher attrition and retention: A meta-analytic and narrative review of the research. *Review of Educational Research*, *78*(3), 367–409. https://doi.org/10.3102/0034654308321455

Boyd, D., Grossman, P., Ing, M., Lankford, H., Loeb, S., & Wyckoff, J. (2011). The Influence of School Administrators on Teacher Retention Decisions. *American Educational Research Journal*, *48*(2), 303–333.

Boyd, D., Lankford, H., Loeb, S., & Wyckoff, J. (2013). Analyzing the Determinants of the Matching of Public School Teachers to Jobs: Estimating Compensating Differentials in Imperfect Labor Markets. *Journal of Labor Economics*, *31*(1), 83–117. https://doi.org/10.3386/w9878

Certo, Janine l and Fox, J. E. (2002). Retaining Quality teachers.pdf. *The High School Journal*.

Clark, Andrew E. & Oswald, A. J. (1996). Satisfaction and comparison income. *Journal of Public Economics*, *61*, 359–381.

Clark, A. E. (1997). Job satisfaction and gender : Why are women so happy at work ? *Labour Economics*, *4*(4), 341–372.

Darling-Hammond, L. (2003). Keeping good teachers, why it matters and what leaders can do. *Journal of the Department of Supervision and Curriculum Development,60(8), 6-13.*

Daykin, A. R. (2002). Analysing Ordered Responses: A Review of the Ordered Probit Model. *Understanding Statistics*, 157–166.

Dinham, S. (2016). A three domain model of teacher and school executive career satisfaction. *Journal of Education Administration*, *36*(4), 362–378.

Dolton, P. J. and Van der Klaauw, W. (1995). 'Leaving teaching in the UK – A Duration Analysis'. *Economic Journal 105 (429), 431-444.*

Grant, W. (2011). Teacher Retention - Supply and Demand : What Needs To Happen and How Should It Be Done ? *Fielding Graduate University*.

Hanushek, E., Kain, J., & Rivkin, S. (1999). Do higher salaries buy better teachers? *Annual Meeting of the American Economic Association*, (March), 52.

Hanushek, E., Kain, J., & Rivkin, S. (2004).Why Public Schools Lose Teachers. *The Journal of human Resources,39(2), 326-354.*

Hendricks, M. D. (2012). Does it pay to pay teachers more? Evidence from Texas. *Journal of Public Economics*, *109*, 50–63.

Heywood, K. A. B. and J. S. (2006). job switiching and highly role of gender. *Scottish Journal of Political Economy*, *53*.

Imazeki, J. (2005). Teacher salaries and teacher attrition. *Economics of Education Review*, *24*(4), 431–449. https://doi.org/10.1016/j.econedurev.2004.07.014

Karbownik, K. (2014). Job mobility among high-skilled and low-skilled teachers. *The Institute for Evaluation of Labor Market and Education Policy*

Kersaint, G., Lewis, J., Potter, R., & Meisels, G. (2007). Why teachers leave: Factors that influence retention and resignation. *Teaching and Teacher Education*, *23*(6), 775–794. https://doi.org/10.1016/j.tate.2005.12.004

Kukla-Acevedo, S. (2009). Leavers, movers, and stayers: The role of workplace conditions in teacher mobility decisions. *Journal of Educational Research*, *102*(6), 443–452. https://doi.org/10.3200/JOER.102.6.443-452

Ladd, H. F. (2011). Teachers' Perceptions of Their Working Conditions: How Predictive of Planned and Actual Teacher Movement? *Educational Evaluation and Policy Analysis*, *33*(2), 235–261. https://doi.org/10.3102/0162373711398128

Levy-Garboua, Louis. Montmarquette, Claude., & Simonnet, V. (2005). Job satisfaction and quits. *Labour Economics*, *14*, 251–268.

Liu, X. S., & Meyer, J. P. (2005). Teachers' perceptions of their jobs: A multilevel analysis of the Teacher Follow-Up Survey for 1994-95. *Teachers College Record*, *107*(5), 985–1003. https://doi.org/10.1111/j.1467-9620.2005.00501.

Loeb, S., Darling-Hammond, L., & Luczak, J. (2005). How Teaching Conditions Predict Teacher Turnover in California Schools. *Peabody Journal of Education*, *80*(3), 44–70. https://doi.org/10.1207/s15327930pje8003

Ma, X., & MacMillan, R. B. (1999). Influences of workplace conditions on teachers' job satisfaction. *Journal of Educational Research*, *93*(1), 39–47.

Ministry of Education. (2016). *Annual Education Statistics*. Policy and Planning Division, Ministry of Education, Bhutan. http://www.education.gov.bt

Ministry of Education. (2017). *Annual Education Statistics*. Policy and Planning Division, Ministry of Education, Bhutan. http://www.education.gov.bt

Murane, R.J., & Oslen, R.J. (1989). The Effect of Salaries and Opportunity Costs on Duration in Teaching : Evidence from Michigan. *The Review of Economics and Statistics*, *71*(2), 347–352.

Nutsuklo, P. A. (2015). Factors Affecting Job Satisfaction among Teachers of some selected Senior High Schools in Accra. University of Ghana.

Pem, S. (2017,August 25). 316 teachers will be recruited to address shortage. *Kuensel*. Retrived from http://www.kuenselonline.com

Price, H. E. (2012). Principal–Teacher Interactions. *Educational Administration Quarterly*, *48*(1), 39–85. https://doi.org/10.1177/0013161X11417126

Quality of Education in Bhutan. (2009). *Quality of Education in Bhutan*, (June). http://www.pce.edu.bt/sites/default/files/Quality of Education II.pdf

Rosenblatt, Z., Talmud, I., & Ruvio, A. (1999). A Gender-based Framework of the Experience of Job Insecurity and Its Effects on Work Attitudes. *European Journal of Work and Organizational Psychology*, *8*(2), 197–217.

Skaalvik, E. M., & Skaalvik, S. (2011). Teacher job satisfaction and motivation to leave the teaching profession: Relations with school context, feeling of belonging, and emotional exhaustion. *Teaching and Teacher Education*.

Steinke, L. J., & Putnam, A. R. (2008). Influencing Technology Education Teachers to Accept Teaching Positions. *Journal of STEM Teacher Education*, *45*(2).

Steven, X., & Ramsey, J. (2008). Teachers ' job satisfaction : Analyses of the Teacher Follow-up Survey in the United States for 2000 – 2001. *Teaching and Teacher Education*, *24*, 1173–1184. https://doi.org/10.1016/j.tate.2006.11.010

Struyven, K., & Vanthournout, G. (2014). Teachers' exit decisions : An investigation into the reasons why newly qualified teachers fail to enter the teaching profession or why those who do enter do not continue teaching. *Teaching and Teacher Education*, *43*, 37–45. https://doi.org/10.1016/j.tate.2014.06.002

Tamang, K. T. (2013). An Economic Approach to teacher Retention in the Bhutanese Eductional System. *Faculty of Economics*,Thammasat University.

Wahlstrom, K. L., & Louis, K. S. (2008). How Teachers Experience Principal Leadership: The Roles of Professional Community, Trust, Efficacy, and Shared Responsibility. *Educational Administration Quarterly*, *44*(4), 458–495.

Weiqi, C. (2008). The Structure of Secondary School Teacher Job Satisfaction and Its Relationship with Attrition and Work Enthusiasm. *Chinese Education and Society*, *40*(5), 17–31. https://doi.org/10.2753/CED

Wheatley, S., Michael, A., & Price, S. W. (2004). To Teach or Not to Teach? Panel data Evidence on the Quitting Decision. *Institute of Labor Economics.*

Zembylas, M., & Papanastasiou, E. (2004). Job satisfaction among school teachers in Cyprus. *Journal of Educational Administration*, *42*(3), 357–374.

Appendix A: Survey Questionnaire

This survey questions are constructed to understand the teachers' intention of staying in the profession or have a decision to leave the job. They have to answer questions related to various factors such as their gender, work satisfaction, income, working condition, interpersonal relation and the administrative support system which might affect their decision of choosing whether to stay or quit.
The questionnaire consists of three sections with seven parts.

Section A. Personal Information

(Please tick the correct response)

1. Your gender:
   - Female
   - Male

2. **Your age: _____ years old**

3. Your marital status:

☐Single ☐Married ☐Divorced

4. Highest level of education that you have completed:

☐PTC ☐ B.Ed. ☐PgDE/PgCE ☐Masters ☐Ph.D.

5. **You been working as a teacher for _____ years**

6. You choose to be a Teacher because:

☐Parent's choice. ☐No other option. ☐Interest in teaching.

☐Salary was good. ☐More holiday.

7. The range of your monthly basic pay scale including all the allowances:

- Nu.15, 000-18,000 ☐Nu.18001-21,000 ☐Nu.21, 001, -24,000
- Nu.24, 001-27,000 ☐Nu. 27001-30,000 ☐Nu.30, 001- 33,000.
- Nu.33, 001-36,000 ☐Nu.36001 and above.

8. Region of your school is:

☐East ☐West ☐North/Central ☐South

9. Your school is located in:

☐Rural ☐Urban ☐Semi-rural ☐Semi-urban

10. The level of your school is:

☐Lower Secondary School ☐Middle Secondary School

☐Higher Secondary school.

11. The type of your school is;

☐ Day School ☐ Boarding but not Central School.

☐ Central School ☐Autonomous School

12. **How long have you served in the current school?**
_____ years.

Section B. Work related

Please read each statement carefully and put a tick on the number based on how true each statement is for you.

1	**2**	**3**	**4**	**5**
Strongly dissatisfied	Dissatisfied	Moderate	Satisfied	Strongly satisfied

a. *Work Satisfaction* (these statements are related to your job satisfaction, please read each statement and choose your rating)

Features	1	2	3	4	5
1. You are satisfied with the amount of work load.					
2. You get enough time for your family.					
3. You are satisfied with the amount of hours you have to work.					
4. You are satisfied with the achievement of your students.					
5. You are satisfied with the opportunities that you get for training and workshop to enhance your skills.					
6. You are satisfied with your professional growth.					

1	2	3	4	5
Strongly disagree	Disagree	Moderate	Agree	Strongly agree

b. *Income/ incentives* (following statements are regarding your salary, allowances and incentives, please read each statement and choose your rating).

Features	1	2	3	4	5
1. Your salary is sufficient to meet your basic needs					
2. Your salary matches your qualification					
3. You are paid as per how much you work					
4. You are content with what you are paid					
5. Besides salary there are other incentives for teachers					
6. You are happy with the allowances you receive					

c. *Location and working environment* (following statements are regarding location of your school and working environment, please read each statement and choose your rating).

Features	1	2	3	4	5
1. You are happy with your work place					
2. School has good infrastructures including road and electricity					
3. Teachers have access to instructional technologies and internet					
4. School has adequate teaching/learning materials					
5. There is enough and proper housing facilities					
6. Teachers are respected in the local community					

d. *Interpersonal Relationship* (this part is regarding the relationship among your working colleagues and other staff members, please read each statement and choose your rating).

Features	1	2	3	4	5
1. Colleagues are helpful and friendly.					
2. Teachers and staffs shares information and knowledge with each other.					
3. You are supported and encouraged by your colleagues and principal.					
4. There is cooperation and understanding among colleagues and staff members.					

e. *Administrative support* (this part includes the support system from the supervisors and school administration. Please read each statement and choose your rating).

Features	1	2	3	4	5
1. Teachers are recognized and encouraged for their efforts and accomplishments					
2. There is transparency and accountability in any matters handled by the school administration.					
3. The work done by the supervisors are fair and justice.					
4. Teachers get enough support from the supervisors.					
5. Principal and other supervisors maintain good relation with the teachers and staff members.					
6. Principal and other supervisors provide timely feedbacks to the teachers.					

Section C. Quit Decision

(This section is regarding your decision to leave the teaching profession for other job. Please read and tick the correct response)

1. What is your probability to quit teaching in next two years?

   Less likely. Moderately likely. More likely

2. What do you want to do after you quit?

   Switch to another profession. Start a business.
   Work in another country. Join private organization.

3. If you are given an opportunity to start over in a new career, would you still choose to be a teacher?
   Yes. Not sure. No.

4. Suggest **ONE** strong point that the Ministry should adopt or change to retain experienced and qualified teachers.

This is the end of the question. Thank you so much for your time and patience.

Appendix B

Table 1 Number of public school teachers who left the system by level and year and teacher attrition rate

Level	2013	2014	2015	2016	2017
Higher Secondary School	54 (20.69%)	47 (26.26%)	49 (30%)	81 (28.93%)	98 (28.41%)
Middle Secondary School	31 (11.88%)	34 (19%)	73 (32.7%)	81 (28.93%)	91 (26.38%)
Lower Secondary School	56 (21.46%)	47 (26.26%)	49 (30%)	51 (18.21%)	61 (17.68%)
Primary School	118 (45.2%)	48 (26.81%)	52 (23.3%)	64 (22.86%)	86 (24.93%)
Extended Classrooms	2 (0.7%)	3 (1.67%)		3 (1.07%)	9 (2.61%)
Total	261	179	223	280	345
Attrition rate	4%	2%	2.5%	3.5%	4.2%

(Source; Annual Education Statistics, 2017) **Given in parenthesis are the attrition rates in different years at different levels.*

Table 2 Civil service pay scale-2014

Position Level	Minimum (Nu)	Increment (yearly)	Maximum (Nu)
EX/ES-1	54,575	1,090	70,925
EX/ES-2	45,785	915	59,510
EX/ES-3	38,700	775	50,325
P1	30,990	620	40,290
P2	27,370	545	35,545
P3	23,995	480	31,195
P4	21,370	425	27,745
P5	17,495	350	22,745

(Source; Ministry of Finance) **Figures are given in term of Bhutanese currency (1US$= Nu.67.75 as of 28th July 2018, Bank of Bhutan)*

The position levels of EX/ES are the executive level officials and teachers fall in position level of P5-P1. Those who serve 1-5 years are in P5 and after every four years based on their performance evaluation they are promoted to next position level. The above-mentioned pay scale is the revised pay scale in 2014, which is followed at present too. This is the revised one from the year 2010.

Table 3 Sample Questionnaire Distribution in Different Region

Region	Urban			Rural			Sample size
	HSS	MSS	LSS	HSS	MSS	LSS	
East	29	21	3	9	37	46	145
West	70	56	15	10	24	18	193
North and Central	27	11	5	5	16	17	81
South	35	41	7	8	46	40	177
Total	*161*	*129*	*30*	*32*	*123*	*121*	596

Table 4 Quitting decision within two years

Quitting decision	Frequency	Percentage
Less likely	112	18.79
Moderate (not sure)	277	46.48
More likely	207	34.73
Total	596	100

Source: Author's survey

Out of 596 respondents, 207 secondary school teachers in Bhutan are more likely to quit the teaching profession within two years, while 277 of the respondents are not sure whether to quit or to stay in teaching whereas 112 of them are less likely to quit teaching within two years.

Table 5 Components of each independent variable for index data

Components	Work satisfaction	Incentives/income	Working condition	Administrative support
1	Workload	Sufficient pay	Workplace	Recognition
2	Working hours	Allowances	Facilities	Support
3	Opportunities	Incentives	Housing	Transparency
4	Family time	Pay as per qualification	Community	Fair and just
5	Professional Dev.	Pay as per work	Use of technology	Relation
6	Students' result	Happy with income	Teaching/learning materials	Feedback

Source: Author's survey.

Table 6 Gender and their level of satisfaction

1)Work Satisfaction	1	2	3	4	5
Male	4	162	162	17	-
Female	3	112	131	5	-
2) Incentive/Income					
Male	160	131	48	6	-
Female	90	102	53	6	-
3) Working condition					
Male	69	130	114	32	-
Female	32	89	108	28	1
4) Interpersonal relationship					
Male	25	91	142	87	-
Female	15	62	105	69	-
5) Administrative Support					
Male	80	91	108	57	9
Female	44	56	109	37	5

Source: Author's survey. * *Scale 1= strongly dissatisfied, 2= dissatisfied, 3= moderate, 4 = satisfied and 5= strongly satisfied.*

Table 6 shows that on an average there is not much difference regarding the teacher job satisfaction between male and female teacher. Both seem to be moderate with the job satisfaction. When it comes to incentive/income both are not satisfied with the structure and slightly more dissatisfaction in male teachers.

When it comes to working condition, female teachers are more likely to be satisfied as compared to male teachers. The satisfaction level for both male and female teachers for the interpersonal relationship is moderate and there are not many differences in their satisfaction level. For the administrative support, both seems to have almost the same level of satisfaction, where some of the respondents are strongly dissatisfied with it, there are few who were strongly satisfied with the administrative support in their schools.

BIOGRAPHY

NAME	Kuenga Choden
ACADEMIC BACKGROUND	- Bachelors in Arts General (Major Sociology) Government College for Girls, sector 11 Punjab university Chandigarh, India. - Postgraduate Diploma in Education (Economics and Commerece). Samtse College of education Samtse, Bhutan -Master of Economics Graduate School of Development Economics National Institute of Development administration Bangkok, Thailand
EXPERIENCES	01-1-2009 till date: Regular teacher under the Ministry of Education, Bhutan.